BETTER HEALTH CARE AT HALF THE COST

Fifty-Nine Years Of Medical "Progress"
An Insider's Perspective

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ISBN: 0-9615808-3-6
This book was produced in the United States of America

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GLOSSARY: *The meaning of terms as I use them here*

FOREWORD: An Insider's Perspective

To devise a better future, heed lessons of the past.

The early years

A little background may help you assess this idiosyncratic presentation. I was born in Gottingen, Germany, in 1932. Our family immigrated to the United States in 1936. My four siblings and I grew up in Weston (then a small rural town) near Boston. Our home was adjacent to a small dairy. As a child, I remember walking 25 cows a half-mile through the woods to graze around a local reservoir.

My closest friends grew up on the small (two workhorses, one cow) caretaker's subsistence farm of an Estate. The Estate Carriage House stored almost two-dozen immaculate horse-drawn carriages of every size, age and color.

I often helped Warren, our middle-aged neighbor and friend, collect the local household garbage and haul it to a nearby pig farm in his Model-A flatbed Ford truck.

We children were immunized against smallpox, diphtheria and tetanus, but there was no way to avoid frequent epidemics of measles, mumps, whooping cough, chicken pox, poliomyelitis and other childhood diseases.

In those pre-antibiotic days, sulfa drugs suppressed a few germs but life-threatening infections “ruled”. For example, Warren’s mother died of “blood poisoning” (bacterial invasion of her blood stream, then a common cause of death) just days after pricking her finger with a needle as she "darned" (repaired holes in) her family’s socks.

Although tuberculosis was a scourge in decline, TB hospitals and the TB wings of general hospitals remained full of sick patients. And special Heart Hospitals cared for young people severely ill with Rheumatic Fever consequent to streptococcal infections.

Entire hospital wards were cleared to make room for poliomyelitis victims during epidemics. Our last big polio epidemic was in 1956, just before effective polio vaccines became widely available. Many polio wards featured rows of bulky “Iron Lungs”—donated or supplied by charities like the March of Dimes. For when acute muscle weakness prevented polio victims from breathing effectively, many could still be "tided-over" by sliding the limp patient into that cylindrical "external" respirator with a soft air-tight collar about the neck and only the head protruding.

Once an Iron Lung was closed and activated, its large motorized piston slowly pulled and pushed on flexible rubber sheeting that sealed the foot end. That cyclical movement alternately reduced and raised air pressures around the paralyzed patient inside the tank in order to draw air into the lungs (via mouth and nose), and then push it back out.

This was an era of major public health activities. Every town had health officers. Temporary “quarantine” signs were stuck on many a front door including ours. With life-threatening infectious diseases primarily “treated” by bed rest, we saw innumerable “Hospital Zone, Quiet” signs.

Therapeutic bed rest might continue for years in a tuberculosis sanatorium, but the increasingly ill and breathless patients with pneumococcal pneumonia only had 4 to 5 days until "the crisis" when their immune system counterattacked with effective antibodies, or else they died. With the young and elderly especially at risk, pneumonia was known as “the old man’s friend” as toxic elderly folks usually became comatose and died without major distress.

The Early Years

By the early 1940's, our father, Arthur von Hippel, was head of a major Materials Research Laboratory at MIT. Our grandfather, James Franck, a Nobelist physicist then at the University of Chicago, was involved in the Manhattan Project that developed the Atom Bomb. After the Second World War, Franck was a leader among scientists seeking to limit the role of nuclear weapons.

My older brother Peter was an outstanding student so teachers were often pleased to have me on their incoming class list. But from second grade on, I was routinely sent to the principal's office. My mother concluded I was bored and managed a mid-term jump to third grade, where Miss Morrissey disciplined with a yardstick. Eventually, Miss Brochie, a retired teacher, helped me discover the pleasures of efficient reading, and my school performance improved.

During tenth grade, I noticed a repetitive pattern on the answer sheet of my preliminary (practice) College Aptitude Test, so I swiftly filled in the remaining answers and departed (long before grading by computers). Thereby, I achieved a perfect score without even understanding most of the questions. My teachers - obviously impressed – viewed my honest explanation as false modesty.

In 1949, I entered MIT, where many classes were taught by over-worked, poorly prepared graduate students or bored professors. Our statistics instructor simply stood at the blackboard with his back to the students for the duration of each class, writing out his notes in longhand as we copied them down. When I urged him to provide mimeographed copies of those notes and spend class time clarifying what they meant, he responded that we would learn more by writing them out ourselves—and kept writing.

This was another dismal example of how a lecturer's notes become the student's notes "without passing through the

minds of either". Having failed most of my weekly exams, I was happy for my D in Statistics, as this meant I didn't need to repeat. In contrast, the F's I earned in Organic Chemistry and Physical Chemistry (where my main interest had been the production of anonymous harmless explosions) forced me to take summer courses so I could graduate.

MIT's Nobel Laureate Economist, Professor Paul Samuelson, devised an unforgettable lesson on monopoly power by annually republishing his fat, costly, required Economics textbook after simply renumbering Chapter-end questions. As our assignments referred only to specific question numbers, we could neither utilize apparently identical texts of previous years nor sell our own books after enduring his course.

Only 1% of our MIT class was female. Many of our (initially 900) classmates flunked out each term. Some had unusual ways of paying for school. One performed abortions. Another raced jalopies. A third volunteered for several studies of injected radioactive tracers simultaneously—hoping thereby to panic professors doing those newfangled studies by becoming more radioactive over time rather than less.

Another entrepreneurial classmate got the MIT contract for disposal of radioactive waste, which by his telling and photos consisted of tossing radioactive barrels overboard in Boston Harbor, then shooting holes in them from his skiff until they sank.

After a couple of years, I married Mary, another biology student. She and I barely managed to graduate in 1953, with generous support from my parents and the cheery advice and assistance of Professor Myles Maxfield—who was especially helpful with Mary's senior thesis and very knowledgeable about medical schools.

For despite my bad attitude and miserable grades, I was accepted by many medical schools. Several puzzled MIT

classmates ran repeated calculations to determine exactly how much my pending move from MIT to Harvard might raise the average student IQ for both institutions.

Two years later, Mary abandoned Boston and me for modern dance in New York with Martha Graham. Our divorce vastly improved my life and medical studies.

During my years of training in surgery, I married Marianne Waelder—then a student at Vanderbilt Medical School—who soon became a pediatrician and remains "the light of my life." In 1965 we moved to Anchorage, Alaska's largest city, where our four children grew up.

CHAPTER ONE
A novice meets medical reality in Twillingate

During the third quarter of 1956, prior to entering my senior-year clinical rotations, I worked as an "extern" at a former Mission hospital on Twillingate Island in Notre Dame Bay, off Newfoundland's northern shore.

At the time, Twillingate Hospital served 35,000 inhabitants of small villages hidden along the deeply indented coastline. Their near-invisibility from the sea helped local fishermen avoid British tax collectors until 1949 when Newfoundland (with Labrador) joined Canada.

I shared duties with another Harvard Medical School classmate who brought along his wife. We usually had different assignments and saw little of each other. Our work was supervised by John Olds, a slender, brusque, Johns Hopkins Medical School graduate, whose small white-clapboarded home perched neatly on the hill behind the Hospital.

Twillingate Hospital provided my first exposure to the rewards and tribulations of personally delivering medical care. Despite my minimal applicable skills and lack of practical knowledge, I tried very hard to do everything perfectly. Needless to say, I screwed up a lot.

Fortunately, the medically under-served population of this isolated area accepted treatment failure as a fact of life, and were grateful that my efforts on their behalf so often helped. Among other duties, we occasionally refracted eyes for glasses, or pulled a rotten tooth.

Under Dr. Olds' innovative guidance, Twillingate Hospital had avoided bankruptcy in 1934 by becoming North America's first prepaid health-care system. For some years this plan was funded through an annual forty-four cents per-person assessment on each family living around Notre Dame Bay, plus

a yearly stipend of about $25,000 from Newfoundland's Government.

To put these health care costs in perspective - before World War II, local Newfoundlanders on the dole received six cents per day. And by the 1950s, twenty thousand families were hospital subscribers at 85 cents per member—to which the government added $45,000.

In the early years, tenuous hospital finances were repeatedly augmented by individual donations and interest-free loans—some from Olds himself. Fortunately, these sturdy fisher-folk were generally healthy and wisely avoided medical care whenever possible.

The rambling hospital building was a weathered wooden structure located just below the pond where hospital-owned pigs took delivery of hospital garbage. This pond was also the hospital's only water source, so we only drank coffee or tea. Early on, I had quaffed a half glass of cool tap water (after the sediment settled) and quickly developed the most amazing gastroenteritis—probably caused by Paratyphoid bacteria. Thereafter, I just drank coffee.

The hospital distilled or boiled enough water for food service, patient care and surgical scrub sinks. Local men usually drank tea while the women preferred coffee. A tea salesman had originated the local rumor that coffee shrinks the gonads. My small room in the Nurses Residence opened onto a sloping hallway down to the hospital.

We externs worked days, alternated nights on call, and covered each other during house calls. Many house calls took us to nearby islands - usually at night after the Hospital Clinic closed, walking with a guide along unmarked dirt lanes across intervening islands in the dark, then waking fishermen to ferry us across phosphorescent waters that blocked our progress.

These iceberg-laden North Atlantic seas were always near freezing so none of the fishermen could swim, nor did I ever

see life jackets. Thus warmly dressed fishermen who fell overboard usually drowned. Dr. Olds and I argued over how long one could swim in four-degree Centigrade water. I wagered that I could easily swim across Twillingate Harbor, about an eighth-of a-mile, but found little free time for such diversions.

Finally, one calm and sunny late September Sunday, I was off-call and everyone appeared to be in church (the Salvation Army was a major local denomination). So I put on my bathing suit and slipped quietly into the water to begin my usual effortless sidestroke across the Harbor. However, after swimming less than 50 feet, the world began to whirl so rapidly that I could neither proceed nor direct myself back toward shore.

Fortunately, I realized that icy water entering my right ear had produced this spinning—a normal inner-ear "caloric" response—so I quickly submerged the other ear until the spinning stopped, then proceeded on across, still using a sidestroke, but now with head held high.

Many fishermen die after falling into icy waters. Some older ones die immediately of cardiac arrest. Others may "panic" or appear inebriated—swimming aimlessly, often away from potential rescuers. Undoubtedly, some of that panic or "inebriated behavior" reflects vertigo from ice water entering the ear—though alcohol and other drugs are certainly prevalent near most seaports.

From his front window, Olds spotted me swimming across the Harbor, so he drove around and picked me up in the hospital jeep. This was an excellent idea, as by then I was moving very slowly, my legs entirely numb from the cold water. In fact, it was extremely difficult for me even to rise and stand unaided on that rocky shore, and I strongly suspect I could not have walked back alone around that Harbor to my warm room.

After several hours spent shivering beneath regularly re-warmed blankets on my bed—hugging a frequently replaced hot water bottle to heat my heart—I was back to normal. When Olds later paid our $25 wager, he mildly suggested that next time I have someone accompany me in a rowboat. I agreed, but anticipated no "next time." When my Twillingate tour ended, I gave him my $25 Japanese binoculars as thanks for the rescue.

Local fishermen used open double-ender seaworthy boats or dories, powered by heavy reliable cast iron "make-and-break" single-cylinder inboard engines that put-n-putted along, slowly twisting a large propeller to move the boat efficiently over the waves.

During one night house-call, our boat stirred up enough phosphorescence to attract a pod of beluga whales who bumped and rubbed the boat suggestively, causing it to tilt and veer. The alarmed fishermen shut off our engine and rowed frantically for shore. I grabbed the remaining (fourth) oar and tried to help.

But while I had often rowed using steel oarlocks, there were four possible ways to position an oar's loop of rope over the stout wooden rowing peg, and all but the last position twisted the oar from my hand. So before I could contribute, the whales were gone and our engine was cranked up and running again.

One house call took me past a home where lights burned late. To my idle comment "They must be having a party," the gloomy guide responded that they were holding the "Wake" for a patient I had treated several days before. Of course, the farther we traveled by land and sea, the more likely it became that the initial emergency had resolved, one way or another.

No matter how little we could do to help, all but the most destitute homes would share a tiny can of peaches or other goody to strengthen us for the return trip. For fruit was

critically important to those who subsisted on vitamin-depleted dried salt cod.

And at that time, the standard noon and supper meal, in or out of hospital, was dried cod, that had been repeatedly soaked to extract most of the salt, then boiled with brues—a hard, baking powder biscuit that when boiled became flavorless ("so one didn't tire of it")—all topped with melted pork fat for flavor and energy.

To supplement the oatmeal breakfast plus "fish and brues" diet, women picked and stored the luscious blueberries and cranberries that grew everywhere. For these rocky islands had long since given up their last tree to the local demand for timber and fuel. Not surprisingly, men who didn't fish usually worked off-island logging Newfoundland's interior forests.

Blueberries could always be picked when ripe, but cranberries—rich in Vitamin C and easily stored all winter—were treasured. In fact, it was illegal to pick cranberries before Cranberry Season officially opened. So everyone who "poached" cranberries quickly topped-off their illicit haul (in a big old Folger's coffee can) with a layer of "legal blueberries."

In the 1950's, most locals still spoke a heavily accented, 17th century Scots-English that remained difficult for outlanders to understand even if spoken slowly and clearly. For example, the day after cranberry season opened, many older women came to clinic with severe backaches.

Of course, by then I knew that these women—like my first Twillingate backache patient—would declare "I finds me back wonderful!" But on that initial occasion, I had been totally puzzled—finally congratulating the patient on her fine back before asking if she had any complaints. But she just sat there and looked at me strangely until a helpful nurse explained that "finds" means "it hurts" and "wonderful" means "a lot!"

The shortage of local timber often made it worthwhile for a person moving elsewhere to take his/her small wooden

home along. I never saw such a move, but each apparently involved a village-wide effort/party, with all adults hauling on ropes to ease the little building across driftwood log rollers into a calm sea. When the incoming tide then floated the house, it was towed by boats to the new neighborhood where partying resumed as the launching process reversed.

Our medical bag for house calls included a blood pressure cuff and stethoscope, assorted bandages and about eight different medications including Demerol or codeine-and-aspirin for pain, phenobarbital—which was not very effective for treating the high blood pressure that most adults eventually developed due to living upon salt-preserved food with minimal access to fresh fruits and vegetables (see *The Political Science of Salt* by Gary Taubes, Science, Aug. 14, 1998 pp 898-907)—a small Sixavit tablet for common vitamin deficiencies, spherical digitalis-leaf pills or digoxin tablets to treat heart failure, a penicillin-containing syringe, and small bottles of bladder mixture and stomach mixture.

I never learned what was in bladder or stomach mixture, but I knew enough to carefully fill (and immediately label) these bottles from their appointed jug. For the Hospital Pharmacy featured a long row of standard ten-gallon green-glass jugs with identical pinch-clamp hoses and small handwritten labels. And except for that label, the bladder mixture and stomach mixture jugs were indistinguishable from the Lysol jug between them, or from other nearby medical and housekeeping jugs.

At that time, cod and squid were still plentiful. Squid for cod bait were caught by briefly jigging a shiny barb-free hook over the side, then retrieving it with squid attached. As soon as the bait box was full, hundreds of hooks were baited as the weighted and buoyed long-line went over the side—soon to be retrieved with a large cod on each hook.

These cod were then split, cleaned, heavily salted and dried by wind and sun while more or less protected from rain and seagulls. In the fall, Norwegian schooners bearing replacement salt and other supplies sailed into Twillingate Harbor to fill their holds with best-quality fish. The rest were consumed locally.

For urgent daytime house calls on Twillingate Island, we always went by cab. Distances were not great, but that extra expense encouraged patients to attend our hospital clinic and kept us from being away longer than necessary. A cab cost the patient 50 cents, which included our short ride and a fifteen-minute house call. We never remained longer as few could afford more than 50 cents.

Naturally, the patients expected full value for their money, so ailing relatives or friends were routinely brought in to share the known costs and possible benefits of our fifteen-minute consultation. On several such occasions, the limited variety of comparatively safe medicines that we carried in our black bag proved advantageous.

One day I was truly stumped. The old man with severe arthritis had been confined to bed for ten years. Overnight, without injury, he developed a huge painless bruise from his hip to his ankle. As I puzzled, the taxi driver and several sick relatives still awaiting treatment in this tiny house, were obviously getting restless.

I had to leave the old man some medicine so I could tend to the others. But he had no infection, no pain, an exemplary stomach, an outstanding bladder, an enviable blood pressure and no heart complaints—which left just vitamins . . . Aha! Ahem. “Your father seems to have scurvy, due to a Vitamin C deficiency.”

Had there been more therapeutic options (and a recent Physician’s Desk Reference provided details on over three thousand newer pharmaceuticals), I could never have made my

diagnosis backwards in that fashion by eliminating all other available therapies—so scurvy might not have occurred to me within the allotted 15 minutes.

An old saying goes, "When your only tool is a hammer, the whole world looks like a nail." And once in a while (as in this case), it was a nail! In September, 2002, the World Health Organization (WHO) published its first Model Formulary providing comprehensive information on all 325 medicines in its Model List of Essential Drugs—intending thereby to improve patient safety and limit superfluous medical spending.

Many patients who came to Clinic had "blood poisoning". Usually a red streak extended from an injured or infected hand along lymphatic vessels on the inner aspect of their arm to the armpit. Often the feverish man with a red streak up his arm arrived with a ring of white paint around the upper arm, for it was widely known that red streaks could be stopped by white paint. The frequent therapeutic failure of white paint was considered evidence of belated application.

Fortunately, these streptococcal infections were all sensitive to penicillin, so our patients recovered quickly after a single long-acting penicillin shot, rather than dying quickly of blood poisoning as in pre-penicillin days. Modern treatment is simpler yet. Several small applications of over-the-counter Polysporin or Triple Antibiotic Ointment—rubbed into any small, increasingly tender, injured or infected area before a red streak has appeared—ordinarily solves the problem easily and cheaply.

Dr. Olds had come north in 1932, after completing one year of surgical internship. Olds soon found himself the region's only physician and surgeon, and gradually developed a great store of useful knowledge and good clinical judgment based upon his extensive reading and experience. But he remained open to suggestions, and my confident inexperience occasionally caused problems.

Now all patients differ, and similar-appearing problems may also differ; and while training and preparation remain essential, every physician has failures. That said, in the course of one Friday clinic, I treated about a dozen young children with severe diarrhea. As usual, their mothers were told to bring them back early if they didn't improve.

On Monday, a truly ill two-year-old returned. It soon became evident that now he also had an intussusception (a telescoping of higher bowel into the rectum). At surgery, that bowel appeared black and dead, even after being restored to its normal position. Olds wanted to drop the black bowel back into the peritoneal cavity in hopes it would recover. I objected, saying it surely looked dead.

So he opened the small bowel above this site and placed the damaged segment (which might otherwise have recovered) in a moist dressing on the abdominal wall. Thereafter, a great deal of fluid drained out. And since we had no equipment to determine which salts were being lost - nor was it at all clear in those days how fluid replacement should proceed - I flew blind, desperately adding or deleting this, that and the other, until the child died.

An old adage describes surgeons-in-training as "Frequently wrong but never in doubt." I can still recall how sure I felt when probably wrong. This death was another hard lesson about decisions made without understanding their limits, applicability or possible sequellae.

Olds had built or repaired much of the hospital's equipment. He performed both elective and emergency surgeries on all sorts of abdominal problems and many orthopedic conditions. And when necessary, he operated on chests, eyes or skulls. He even devised an unusually effective, posterior approach to back fusion.

His spinal fusion technique basically wedged the notched ends of a sturdy flat inches-long live bone graft (a rectangular

strip of outer bone sawed from the patient's tibia) between posterior spinous processes above and below the symptomatic vertebrae.

Intervening spinous processes were reduced to bone chips and packed around the graft. After six months in a body cast, these young men (mostly loggers) apparently had solid backs with few symptoms (but see also discussion of back surgery in Chapter Six).

Olds was a well-known adventurer and frequently went to sea. Summers he might travel around Notre Dame Bay in a jury-rigged hospital boat. Some winters he served as medic for the sealing fleet that harvested thousands of newborn seals out on the sea ice.

And like many who grew up during Prohibition (1920-1933), Olds was a heavy drinker—a problem that worsened after the death of his beloved first wife. Consequently, like other alcoholic physicians, he became "unavailable" after about 4 PM.

So at night, we students simply did our unsupervised best to deal with whatever happened. Fortunately, the hospital nurses, aides and orderlies were very competent and experienced, so things generally ran smoothly. And if trouble loomed, the staff often gave good advice if asked.

In particular, Gertrude, a 19 year-old nurse's aide who provided solo all-night care for 50-75 patients, taught me much about medications and patient care. And these hospital employees were also wonderful at soothing, evaluating and quietly preparing expectant mothers for delivery.

While at Twillingate Hospital, I "delivered" about 50 healthy babies without any of the medications, commotion and complications so commonly encountered in "Teaching Hospitals" of that day. Basically, the nurses called us five minutes before a baby was due and our presence was really a teaching moment and unnecessary formality.

Indeed, childbirths went equally well (or better) when we were unavailable. However, over the last decades, as nervous fathers have been welcomed into hospital delivery rooms, Caesarian births have doubled. Elaine Hodnett at the University of Toronto, recently reemphasized the importance of competent female companionship during childbirth (The Week, Oct. 10, 2003 p22).

Occasionally, things did go wrong, sometimes very wrong. One day a massively obese (over 300 pounds) middle-aged female requested repair of an enormous umbilical hernia, the contents of which, in retrospect, had lost their "right of domain" within her abdomen. Serene in our ignorance, we had achieved an impressively sturdy repair under open-drop ether anesthesia, when she unexpectedly suffered cardiac arrest.

Our efforts to resuscitate failed as usual, for effective cardiopulmonary resuscitation had not yet been devised. Contributing factors in this case included "light" anesthesia (incomplete relaxation makes it difficult to judge abdominal tightness); an excessively tight abdominal closure which gradually caused circulatory failure by compressing many venous channels through which blood normally returned to her heart; and the compacted viscera that prevented her diaphragm from moving adequately. So when the abdominal closure was completed, she could no longer breathe effectively.

On departing, Olds ordered us to transfer her corpse from the second floor surgery to the basement morgue via a steep and narrow staircase - there being no elevator to the basement. As assistant surgeon, it fell upon me to assist in this transfer. Being taller bearer, I had to go first, so I chose the lighter foot-end of the litter. Exerting every muscle to keep her up and level, we proceeded down the stairs. George, the orderly, kept the head-end as low as possible by stooping.

The first several steps passed uneventfully, though each step produced an increasing tilt. At 5 steps down, her sheet

slipped off to hang around my neck like a scarf. Two more steps and the tight turn at mid-flight landing were maneuvered with gradually folding ears as cold stiff ankles moved relentlessly forward alongside my head. Emphatic suggestions to George to lower his end were answered by desperate shouts to “lift 'er higher”.

The next three steps passed more rapidly as icy knees reached my shoulders. She left the litter and landed full astride my shoulders when I was three or four steps above the first floor. Together we burst into the busy thirty-bed ward through swinging double doors, then I stumbled and she rode me to the floor—a crushing experience for a budding young surgeon.

One fine autumn day, an elderly Twillingate man popped by Olds’ office to announce “The turrs are coming!” I asked, “How does he know?” Olds responded, “I have no idea, but he’s always right.” Pandemonium reigned as healing spinal fusion patients were cut out of their body casts and every barely able-bodied man rushed from the hospital to board a small boat.

Soon a mile-long line of skiffs and dories bobbed off the rocky cliffs of Twillingate Island. An hour or so later, we spotted them—endless flocks of little black and white puffin-like seabirds on their ancient annual migration past the Twillingate cliffs—flying with inherited insistence from one place to another.

Due to repeated delays, our rowboat was just barely offshore near the hospital, not far from the local Royal Canadian Mounted Policeman’s residence (Turr hunting was illegal, but our Mountie was preparing to shoot from a nearby boat). I held the boat steady while Olds carefully poured black powder into his ancient muzzle-loader and tamped the packing with his ramrod.

He had loaned me his old double-barreled 12-gauge shotgun, but for now I was at the oars—and we both hoped he

would make an impressive first shot. Shooting started far down the line. I kept him informed as the first flock neared. When they were overhead, he raised his musket and fired. The recoil knocked him to the bottom of the boat. A nearby splash confirmed that he had forgotten to remove the ramrod.

Eventually we shot a few turrs. They resembled dark chicken and tasted like fish. (see also "Doctor Olds of Twillingate" by Gary L. Saunders, 363 pp, 1994 Breakwater, 100 Water St., PO Box 2188, St. John's NFA1E 636)

CHAPTER TWO
Good Medical Politicians Are Rarely Fine Surgeons

Patients are often mistreated in hospitals.
Interns and residents learn from each other.

Those that can, do. Those that can't, teach! was the resident's aphorism about full-time Academic Surgical Program Directors during my residency in Boston. For at least back then, in Harvard Affiliated Hospitals, the top men were "Top-Notch Medical Politicians" rather than competent operating surgeons.

I readily admit that evidence for this declaration is scant and includes hardly ever having sighted a Director scrubbed-in and teaching surgery to residents during my nearly six years of general surgical training in Boston - and further admit that there truly were many highly qualified, and even some gifted Academic Surgeons in these United States at that time.

My point here is that surgical competence was sufficiently rare among major academic surgery teaching program directors in Boston that I would never have let one operate upon me—nor would I ever accept the average surgical director's opinion on whether my skills were still up-to-date, or on how I should conduct my practice. Yet such Medical Politicians are common amongst those who test and otherwise try to dominate busy surgeons in practice (see Chapter Ten).

Anyhow, long ago, during my medical school and surgery-residency days, Harvard's four most prestigious teaching and private-care hospitals were Peter Bent Brigham Hospital, Mass General Hospital, Boston Children's Hospital and Beth Israel Hospital. And for at least part of that era, the principal Professor of General Surgery in each hospital was Francis Moore (PBBH), PR (MGH), JF (BCH) and Jake Fine (BIH).

Moore had written a best-selling, widely praised, totally inane, pointlessly complex textbook "The Metabolic Care of the Surgical Patient". And whenever he lectured to medical students, he regularly stopped mid-sentence to declare that the most important thing a surgeon could do was THINK! - a word he then scrawled in huge letters across the entire blackboard, perhaps because he had run low on more useful ideas to share.

Soon after my graduation from medical school—while on a surgical rotation at a private hospital—I was assigned to assist Moore as he performed a breast biopsy on his own secretary (in my view, it usually is a good idea to avoid operating upon relatives or employees, and an even better idea to avoid examining the breasts of your employees). Anyhow, this operation began with the hospital's renowned senior pathologist already in attendance. But after one negative needle biopsy, Moore said "von Hippel, you give it a try."

I protested that I had no experience with needle biopsy at all, so he said "Just do exactly as I did." But when I obediently performed a needle biopsy in his flamboyant fashion, the needle broke off deep inside her huge breast. Clearly, this annoying complication would delay the procedure while we retrieved that needle.

But Moore appeared untroubled: And after saying "I'm certain this is cancer," he rapidly removed her entire breast as one definitive biopsy. Our young anesthesiologist and other physicians-in-training were truly impressed by his swift and decisive completion of procedure. I alone wondered, "Why the Hell did he do that?"

Tedious examination by that hospital's entire pathology staff revealed no abnormality other than my broken-off needle. *Comment:* Moore and I didn't like each other. He had once turned suddenly in class when laughter erupted as he scrawled THINK on the board—while I was still up and mimicking his exaggerated gestures.

At this breast biopsy, I was both inexperienced and less than helpful, which simply complicated the operation in those pre-mammography days. Fortunately, despite her unnecessary mastectomy, his secretary reportedly was deeply grateful that Moore himself had operated, and that she had no cancer.

PR and JF were young but up-and-coming medical-political geniuses with important mentors when appointed. However, both soon proved so inept as surgeons and teachers that they were relegated to full-time laboratory research.

A Harvard surgical resident's ditty about Jake Fine went "You may be fine with knife and suture but to me you're Jake the Butcher". Black humor (bitter irony) led some Jewish staff physicians at this Jewish hospital to point out that "Jake Fine *personally* killed many more Jews than Hitler."

Before PR replaced him, Dr. Churchill was the elderly, about to retire, Professor of Surgery at MGH. Despite one or two often-mentioned but merely incremental "firsts" in his career, we students found him boring. Churchill frequently entered the darkened observation area above the glass-ceilings of operating rooms at MGH in order to see how things were going.

I was initially unaware of his presence one day as I entertained the residents with some of his more ridiculous gestures and clichés. For the remainder of this hot springtime rotation, whenever we met, he would stop me and carefully re-button the size 16 collar of my student's tunic tightly around my size 18 neck.

Patients are often mistreated in hospitals

But it was insightful Mr. Zackoverich—my first patient as a senior medical student at PBBH—who inadvertently taught me that merely hospitalizing a patient in strange surroundings and unfamiliar hands is risky, and that in such circumstances, every patient wants and needs someone trustworthy to

interpret medical terms and ideas, and to assume overall responsibility for his/her care - just as a good wait-person accepts responsibility for describing and delivering decent meals.

Mr. Zackoverich, an apparently healthy retired man in his 60's, was admitted to the prestigious PBBH Internal Medicine ward for evaluation of an abnormally high left diaphragm that moved poorly when he breathed. This "interesting abnormality," initially discovered on a routine chest X-ray taken for tuberculosis screening, had caused him no difficulty, but it was viewed as a possible indicator of something more serious, perhaps even an "incurable" cancer.

Because Zachoverich had entered a 'major teaching hospital' as a diagnostic problem, many different doctors-in-training and several erudite medical professors came by to examine him, and display their standard "Internist's cognition and caring" as then taught on this ward - and to order tests.

Eventually, Mr Zackoverich realized that these physicians were far more interested in scoring an impressive diagnosis than in helping him. So after several days of tests—some inconvenient, some painful, all inconclusive—we had a chat. He said, "I want your office address. You're the only one who seems to know what is going on. When I get out of here, I want you to be my doctor." I was touched. And that night he died.

According to the chart, he had become irritable in the evening, and perhaps a bit disoriented by his persistently strange surroundings. A resident ordered him confined to bed and treated with sedatives. This made him more confused.

Someone else ordered intravenous fluids in case he was too dry. Unfortunately, while "You can lead a horse to water but you cannot make him drink" (if not thirsty), intravenous fluids usually keep on running more or less "as ordered" whether you are thirsty or not.

Soon they had to tie him down because he was shouting that he couldn't breathe. He kept trying to get out of bed until he died. Autopsy revealed no reason for the high diaphragm, not much heart disease, and death from acute fluid overload (far too much intravenous fluid!) which neither he nor any horse would ever have accepted voluntarily by mouth.

And that fluid had apparently been forced upon him without either "cognition" or "caring." Indeed, no one even bothered to ask if he was thirsty, nor offered him a drink. And such drowning is not rare.

About 18 years later, one of my first ten open-heart surgery patients was Dave T, a prominent Anchorage attorney. On his second postoperative day, he was doing remarkably well when a nurse gave him some cloudy intravenous fluid from a cracked bottle—persisting with her efforts to maintain flow until the IV filter was entirely plugged.

Although Dave seemed unaffected by the presumably contaminated fluid he had received from that I.V., our consultant in infectious disease—having gone through mounds of hospital trash to find the discarded bottle and demonstrate that it contained mold—elected to treat vigorously with a rather nasty anti-fungal agent.

By the following morning, Dave was a wreck, and we both worried that another strenuous anti-fungal treatment might kill him. He asked what I thought he should do. I responded, "Well, neither of us knows enough about treating fungus to win an argument. But if I were you, I would forget about the fungus and sign out of the hospital against advice. Your wife can take care of you."

Dave signed out and did well. I only wish I had given Zackoverich that same advice.

Interns and Residents learn from each other

When I began my surgical internship on the 5th (Harvard) Surgical Service of Boston City Hospital, our Chief of Surgery was Professor J. Engelbert Dunphy, a consummate medical politician and, allegedly, a competent surgeon.

Dunphy was another big disappointment, as he seemed uninterested in hands-on training. In fact, I cannot recall ever seeing him perform - or guide anyone through - a surgical procedure. My only memory of his presence on the ward is the day he dropped by to demonstrate a proper bedside manner and leaned against the bedrails of a demented shit-smearing patient, then strolled off with parallel brown stripes across the front of his jacket.

At this point (between our wars in Korea and Vietnam), the Cold War was in full bloom, with many residents being drafted unexpectedly by local draft boards. So to ensure appropriate staffing of our Surgical Service, Dunphy decreed that no resident would be reappointed for the following year unless he first volunteered for the military and then was deferred to complete his surgical training.

Almost everyone volunteered except me. And soon Dunphy left for a more prestigious job in San Francisco. So with several medical schools and many young doctors available for draft board selection in Middlesex County, I completed my remaining residency years without being drafted.

During the rest of my time at Boston City Hospital, we only had temporary Surgical Chiefs—first Charles Lund and then Mel Osborne. Lund was known for having treated many victims of Boston's deadly Coconut Grove nightclub fire, in which nearly 500 lives were lost. He was an elderly, pleasant, unpretentious man who showed us how to do split thickness skin grafts.

Osborne was a smooth-talking surgeon who enjoyed fly-fishing and taught us little. In effect, Dunphy's departure left us

unsupervised at City Hospital except by residents ahead of us in training - some of whom were far more skilled than others.

Furthermore, with modern surgery still pending, remarkably little was then understood about why operations sometimes failed and sometimes succeeded. But we all remained busy and learned what we could from our many surgical and non-surgical disasters.

As better surgical residencies were scarce, and I was not an outstanding candidate, my only realistic option was to complete my general surgery training at the City. Yet despite making tremendous efforts for 63 months, I did not consider myself a well-trained surgeon when I finally left City Hospital.

For while we cared for many derelicts and sometimes helped extremely ill people, the number of “big” operations was limited—and there was major competition for "big" surgical cases between and within the surgical services of Boston University, Harvard and Tufts.

Fortunately, I was merely completing my general surgery residency in order to qualify for training in chest surgery. Thus I never felt any pressure to do more surgery than necessarily came my way. And because surgery is never risk-free, I assiduously avoided doing unwarranted procedures.

Indeed, based upon my City Hospital experience, I developed a life-long reluctance to do more than seemed essential for a satisfactory outcome. As we used to say (though, like all aphorisms, it was not always true),“The best is the enemy of the good” (Voltaire?).

During my residency at Boston City Hospital, I especially benefited from two critically important (for me) rotations through the Overholt Thoracic Clinic under the primary tutelage of Wilford Neptune. And while I learned a lot from all five Overholt Clinic partners, Drs. Neptune and Overholt were among the finest surgeons and gentlemen I ever worked with.

Like Dr. Franseen (see Chapter Five, Electrocoagulation),

these men were highly respected and very successful in private practice. And they always responded graciously and helpfully to each resident's questions and suggestions.

In the late 1950s, chemotherapy was finally controlling some tuberculous lung infections, but many TB patients still required years of "in-patient" care (primarily "bed rest" in a tuberculosis sanatorium), with occasional chest operations to drain or remove grossly infected lobes or entire lungs. And such operations often required major chest-wall-reduction surgeries such as plombage or thoracoplasty to better fit remaining lung or obliterate infected pleural spaces.

Under such circumstances, even Boston's most important Medical and Surgical Academic Professors—who would never have asked Overholt or Neptune to address their conferences - still wanted Overholt Clinic Chest Surgeon care for themselves or a relative.

CHAPTER THREE
A Resident's "Life" At The Boston City Hospital

Some sugars prevent bacteria from settling down. Any action or inaction may lead to catastrophe

In June of 1957, I graduated from medical school. From then until September, 1962 (when I completed general surgery training), I spent much of each year at Boston City Hospital, where we worked, on average, 120 hours/week.

Although our internships were mostly spent at City Hospital, we residents were intermittently assigned to smaller Boston-area or outlying hospitals for 1- to 3-month rotations.

Many of these assignments represented a nice break and some were even useful, since the surgical staff at every hospital tended to do things differently. This allowed us to evaluate many alternatives in surgery and patient care. Naturally, each group viewed their own methods as safest and most effective.

But Boston City Hospital's ambiance and work experience were unique. Indeed, any reader who has not endured training in a large City Charity Hospital is advised to suspend disbelief, withhold judgment, and simply hope that things have gotten better. Needless to say, mine is a dated report, for I never returned after completing City Hospital's (somehow "fully accredited") internship and residency program.

The Hospital itself was an unattractive group of hulking (7-10 story) gray masonry structures covered with pigeon excrement. Some of those buildings formed outer parts of a huge walled compound near the City Dump. Other buildings were entirely inside that compound. As one might expect, nearby overcrowded, dilapidated tenements were mostly occupied by disadvantaged minorities.

Ordinary background noises included loud traffic and the rumble of passing elevated trains interspersed with ongoing screams and shouts of drunks in delirium tremens and the wail of ambulances delivering Boston's wretched, poor, homeless, hopeless, drunk, unfortunate, ill or injured to a sprawling chaotic intake area known as the Emergency Room.

That Emergency Room alone deserves book length treatment—from a huge cop named McSomething who always vanished when a patient became violent, to bored intake personnel filling out forms – often without looking up - while inquiring which part had been stabbed or shot so they could call an appropriate surgical department.

Notably, one worker actually screamed when her client responded to her routine question by turning to reveal a knife protruding from the back of her head. Especially in this area, we had to look out for ourselves and for each other.

Many a drunk remained amorous or combative after a nightstick whack to the head that necessitated scalp repair before jailing. So when my sweet little Marianne had ER duty, she always hung a full, slim-necked, easily hand-held, heavy-glass intravenous bottle nearby, as we deemed these ideal for decking aggressive drunks.

The unexpected was usual: For example, one day the charge nurse complained to me that two of her orderlies were getting beaten up in room 10 by a hysterical paratrooper. The agitated soldier had his back toward me when I looked in, so I grabbed him with a double hammerlock (passing my arms under his arms and placing my hands behind his neck).

Not surprisingly, he came totally unglued. My only option was to hang on tight, so I drove him face-down onto the floor while orderlies vanished for parts unknown to get a straitjacket. Problem was, it took them 10 or 15 minutes to recover, get organized and return. In the meanwhile, I had him face-down in the main corridor where the usual heavy flow of

patients walking or being rushed past in litters continued as I (in my white doctor's suit) occasionally thumped his face on the concrete floor to help him relax.

And when I finally got back to the surgical ward, pushing a litter bearing yet another "New Admission", the resident in charge yelled, "What took you so long?" I didn't answer.

You must take for granted that we worked in a corrupt City for a corrupt Hospital Administration where corrupt City Council members and other corrupt politicians routinely filled their station wagons with turkeys, roasts and other food items from the hospital kitchen to distribute to their districts near election time or before holidays.

And assume that all these worthies felt free to interfere in patient care despite their profound ignorance of matters medical. Indeed, at any moment, a resident might be told to admit some politician's homeless relative or friend to a badly needed surgical bed for the winter, or to admit a politician's aged in-laws until the honorable gentleman and his wife returned from a prolonged City-sponsored Florida vacation.

On the other hand, a dapper psychiatry resident (who always carried an umbrella) regularly had acutely inebriated young males wheeled to his own room for "urgent psychotherapy". And the male "Charge Nurse" in Urology (who "advised" and played golf with the Mayor and/or other important politicians) simply altered any doctor's order with which he disagreed. But given treatments available at the time, perhaps he was right to routinely pack sugar into infected wounds.

Some Sugars Prevent Bacteria From Settling Down

Over recent decades, researchers have identified lectins (specific bacterial surface proteins) that secure invasive bacteria to cell-surface carbohydrate in the airway, gut or urinary tract. This adhesion is necessary for bacteria to infect

exposed cells. Human breast milk contains complex carbohydrates that prevent bacterial lectins from binding to cell surfaces.

Food technologists have shown that a thin film of cow-milk-extract sprayed on fresh cow carcasses can keep those raw surfaces bacteria-free without refrigeration for weeks. And veterinarians have controlled chronic equine uterine infections that caused repeated abortions by irrigating the mare's uterus with mannose (another sugar).

Children who regularly chew xylitol gum have far fewer dental cavities or ear infections because that five-carbon sugar prevents bacteria from attaching to teeth or throat surfaces. And when women drink cranberry juice proanthocyanidins with similar anti-adhesion properties, they minimize bacterial retention within their urinary tracts (the beneficial effect begins within 2 hours and may persist for over 8 hours).

Glycoproteins extracted from cow's milk also seem to reduce survival of Helicobacter pylori bacteria in the stomach (see also Chapter Four). Another anti-adhesion compound (polyphenol oxidase) found in potato and apples, keeps many harmful bacteria from adhering to the intestinal lining. In some South-East Asian countries, a potato peel extract is often smeared on burns to prevent infection (New Scientist, 29 Nov. 2003 pp34-7).

Naturally, the many hundred intern and resident physicians, and the thousands of hospital employees, and uncounted thousands of patients constantly passing through City Hospital's in-patient and out-patient services, all had different problems, needs and concerns.

Thus any of the above might suddenly have a reason to respond even more strangely or violently than usual to life's daily pressures—here magnified by endlessly stressful and often hostile interactions. Many viewed politeness as a sign of weakness. So while any patient's heart-felt "Thank you!" was a

startling and less than yearly occurrence, threats were more common.

City Hospital had a huge budget, from which each administrative layer of the city and the hospital diverted what they could. Everyone understood this. So nurses might draw attention to the need for hospital fumigation by offering extra desserts to whichever patient killed the largest cockroach for the daily display.

Naturally, the fumigator finally hired was our no-good Administrator's totally inexperienced next-of-kin who simply went from room to room and ward to ward, shouting "Fumigation! Leave the room!" before spraying poison widely around those too sick or injured to flee. Within days, two of our postoperative patients died of liver failure. And when I refused to alter their death certificates from "fumigant poisoning" to "natural causes", the Administrator did it for me.

Imagine peeling paint along long dreary corridors - underpaid, hugely obese food service workers snacking from half-gallon cartons of vanilla or chocolate ice cream—and stinking elevator shafts where elevator operators routinely stopped empty elevators between floors to urinate through the inner door grille. Those operators often abandoned their elevators in the basement to go for lunch or place bets with "Pinkie"—the hospital security guard and bookie, whose fief was the hospital parking lot.

As an obviously fresh intern (in a brand new, clean white coat), I once entered an elevator where the tall and hugely obese operator said "Hi ya, Doc" and slugged my arm. I carefully explained that the next time this occurred, I would slug him right back. Soon thereafter he again smote me as I entered his elevator.

This time, I was right behind the famous neurologist, Professor Denny-Brown, and some student nurses. As promised, I punched him as hard as I could, nearly spraining

my wrist because my fist bent so far around while deeply indenting his fat belly. The elevator man fell back with a crash against the brown sheet metal wall. The entire elevator shook. A student nurse screamed. Denny-Brown said “My word!” I said “UP!” And up we went with no one making another sound. The big elevator man and I had no further problems. Indeed, we remained on good terms thereafter.

Not infrequently, I had to hijack an abandoned elevator from the basement in order to move a critically ill patient to surgery or X-ray. On such occasions, I usually abandoned the elevator on an upper floor so our absent operator could get his much-needed exercise. Though all our interns and residents were licensed MDs, City Hospital pay was low enough ($100.00 a month my first year) that many married physicians qualified for—and some went on—welfare.

Therefore, at one point, we all got a $10 a month raise, just to avoid adverse publicity for the hospital. The hospital administration sold us our health insurance but apparently failed to pass the premiums along to Blue Cross. Consequently, Marianne and I—after both being “fully insured” for over a year—still had to pay the entire $400.00 bill when our first child was born - NOT at City Hospital (although City dental resident's did a good job when extracting my wisdom teeth).

Because lab technicians received far more pay than residents, the hospital delegated all possible routine chores like testing urine or drawing blood, to the doctors. Some doctors found it especially annoying when night-shift lab technicians intentionally dropped the fragile glass tubes containing laboriously drawn blood samples in order to reduce their own analytical toil and return more swiftly to slumber.

Other aggravations included X-ray technicians who refused to take the portable X-rays needed on extremely ill patients because they would soon be going off-duty. Many residents found these behaviors unbearable, but I resolved

them easily by grasping the offending technician's shirt tightly at the throat and lifting him off his feet while explaining, "My patient is very ill and needs your help NOW!"

The X-ray Department locked its doors promptly at 5 PM every weekday and usually remained closed for the weekend, despite the fact that many recent films of critically ill patients had not yet been dried, analyzed or made available to the patient's physician. I quickly developed a considerable following among residents in various services as I unscrewed the heavy metal double-door's hinges to reopen the X-ray Department every evening.

Sometimes groups of interns and residents waited impatiently for my nightly extension of the X-ray Department's posted schedule. Presumably, this non-destructive maneuver, which involved leaving one long screw in each middle hinge so the metal double doors would rotate up to a near-horizontal position—saved many lives. Fortunately, those loosened doors never fell on anyone

Only the few residents who played the numbers with Pinkie were allowed to park in the City Hospital parking lot. On snowy days, tow trucks often plucked our cars from nearby streets. Retrieving an impounded auto could cost much of a month's salary, so one snowy day I chased Pinkie into his locked security hut and amputated his chain that blocked the parking lot entrance. Over the next days, City Administrators repeatedly paged me, but I didn't bother to respond.

Incidentally, several times each day our "Emergencies-only" Hospital loudspeaker system for paging physicians was preempted by nuns and priests for a string of Hail Mary's or lengthy prayers in Latin. Eventually, even those who (like me) were "religiously challenged" (and I had also been expelled from High School Latin class), could mumble those foreign language prayers like a born-Italian Priest.

At the annual City Hospital dinner dance, my fellow residents twice recognized me as winner of the "Meanest Resident Of The Year" Prize (in absentia). This truly was an unexpected honor—partly because I had no idea that such an award existed—but also because I was allegedly selected by general acclaim over many hundred other not-so-nice resident doctors then working at City. My initial prize was another chain taken from Pinkie. The following year I received a hand-lettered scroll that we soon lost.

Because hospital food was often toxic, we posted daily sign-up sheets in a public lobby to keep administrators, food inspectors and the public informed on how many physicians currently suffered from Hospital-food poisoning. The Hospital patients and our doctor's cafeteria usually got comparable "food" with equally explosive outcomes.

Doctors-in-training often develop a strange sense of humor, as well as "an urge to get even". As a humble new intern, I was once trailing our group on rounds when the Chief Resident barked, "von Hippel, Go fetch a rectal glove!" Somewhat annoyed, I went for a glove and en route created a tiny hole in the latex index-fingertip.

Our Chief Resident then described how easily he could feel whatever-it-was on rectal. When he finished, some of us may have snickered, for his index finger had come entirely through the latex and required prolonged scrubbing.

One day soon thereafter, I was pulling on a long retractor from my usual remote location as third or fourth assistant (until operating-table-mounted self-retaining "iron intern" retractors became cheaply available, interns did little else but "retract" in the Operating Room) as the Chief Resident explored an anesthetized patient's distended abdomen.

I heard a muffled sound and he quickly brought his hand out, covered it with a towel and said, "von Hippel, put your hand in here and describe this finding."

“No Thanks!” I responded.
He acted puzzled. “Why not?”
I said, “Because I just heard the gut pop and the belly is now full of shit so you want to give me the credit.” He chuckled as our difficult operative procedure proceeded to its dismal conclusion.

At another hospital, a bored Arab anesthesiologist amused himself by pouring ether into my scrub shoes as we worked. I slipped my shoes off without disturbing the flow of surgery, and surreptitiously filled an irrigating syringe with bloody fluid. When the Arab next stuck his head in the door to speak with our anesthesia resident, I filled his open mouth with bloody fluid without anyone else noticing. Thirty minutes later, he was still washing his face at the sink as we wheeled our patient to the recovery room.

Any action or inaction may lead to catastrophe

One patient had a urine catheter placed to collect a 24-hour urine sample for some long-forgotten reason (City was, after all, “A Teaching Hospital!”). The initial collecting bottle—a recently emptied intravenous fluid bottle—soon filled with urine. Once disconnected from the Foley catheter, that full bottle was placed on the bedside table by an aide, pending its retrieval for analysis.

When the already overwhelmed nurse—who had just come on duty—was told that the patient’s intravenous bottle had run dry, she checked the “vitamins-added” label on the urine-filled IV bottle—found it in accordance with doctors orders—and ran that freshly collected urine into the patient’s vein until he died of widespread hemolysis (red-blood-cell-ruptures) caused by his own dilute urine.

My point? Anything you do, or fail to do—including a simple urinalysis—may prove fatal. More specifically, anything that can be misconnected eventually will be misconnected, in

the worst possible way. So insist on incompatible connectors for incompatible systems and try to avoid unorthodox uses of equipment (or at least flag any aberrant usage or unusual content with a prominent label)!

Tracheotomy was formerly a common operation—usually performed under local anesthesia—in which a short curved metal tracheostomy tube was inserted through the front wall of the windpipe (low at the front of the neck). The resulting new airway could markedly improve a patient's breathing if there was an upper airway obstruction. It also made possible frequent suction-tube-removal of thick tracheal secretions.

The tracheostomy procedure could be straightforward and helpful as long as air thereafter taken in remained warm and fully humidified (so secretions wouldn't dry into crusts and clog the airway). However, in my experience at City, *tracheotomy was invariably fatal* because it left the patient no longer able to cough, which created yet another responsibility for the already overworked nurses. And many nights, on many wards, *there was no night nurse on duty.*

CHAPTER FOUR
Peptic ulcers increased and decreased while health care costs just rose

Gastric freezing. Flexible tube endoscopy quickly became popular. How will we know if too many procedures are being done? Prevention creep. Assembly-line surgery. Nor was Big Pharma left behind. Cheap vaccines and quick cures harm everyone but the patient. Even when two Australians discovered Helicobacter pylori, nothing changed

When I entered medical school, ulcers of the stomach or duodenum (the intestine just beyond the stomach) were still common, often serious, complaints. It was widely understood that these frequently painful erosions into or through the gastrointestinal lining were caused by too much stomach acid or by some inherent weakness of the stomach lining.

Peptic ulcers quite often eroded bowel-wall blood vessels. The resulting blood loss might be minor and chronic, causing anemia - or major and life-threatening. Major blood loss into the stomach or intestine led to vomiting of fresh blood or copious black smelly diarrhea.

Deeply excavated ulcers occasionally extended right through the stomach or duodenal wall. Such a “penetrating” or “perforated” ulcer might erode into adjacent tissues or release stomach air visible on X-ray (along with bacteria-laden stomach contents and acid digestive juices) directly into the abdominal cavity.

Once in a while, a small perforation spontaneously sealed when adjacent inflamed tissues stuck together, but large perforations were generally fatal since ongoing digestion of

any healing response ensured widespread peritoneal infection unless (early) surgical repair of the leak was successful.

Peptic ulcers and other upper gastrointestinal complaints were mostly evaluated by X-ray studies using swallowed barium sulfate to outline the ulcer defect or delineate some other abnormality. Ulcer treatment consisted of antacids, frequent bland meals including lots of cream; plus, of course, bed rest. When medical treatments failed, as they often did, ulcers were attacked with a variety of surgical procedures.

These might include partial stomach removal ("partial gastrectomy") and/or division of nearby vagus nerves ("vagotomy") to reduce acid production—and/or other revisions to expedite food passage (e.g., "pyloroplasty") or to variously reroute its descent from the stomach. As one might expect, such major operations were not always successful.

Sooner or later, many patients underwent further major surgery, and despite (or because of) such heroic interventions, quite a few died. As a surgical resident, I attended innumerable non-illuminating meetings devoted to repetitive discussions of gastric and duodenal ulcers—their causes, diagnosis and treatment.

At the time, it was widely held that interesting modifications and good results from ulcer surgery "*separated the men from the boys"*. Indeed, for more than a century, surgeons achieved international fame by devising mostly minor but widely advertised variations on ulcer operations.

In marked contrast, cancers came in unpredictable guises with unknown degrees of tumor cell spread before (or perhaps as a result of) surgery, so cancer operations often had poor outcomes even in "the best of hands".

Because surgical results were often unsatisfactory, new advances in ulcer treatment were eagerly awaited. Hence there was great excitement when Owen Wangensteen, a renowned surgical professor in Minnesota, developed Gastric Freezing—a

new, low risk, non-operative way to reduce acid production by the "ulcer susceptible stomach."

Gastric Freezing

Wangensteen—by reputation a formidable, demanding boss—trained many surgeons who went on to develop their own respected academic surgery programs. So not long after his impressive results were reported at various National Surgeon's meetings, almost every hospital in the country built or purchased its own gastric freezing machine.

This simple device (a small freezer and pump) moved icy ethanol through a two-channel tube (inserted via the patient's mouth) into a large bag filling the patient's stomach, then back to the freezer for re-cooling. But soon we heard rumors that no gastric freezing machine except Wangensteen's had ever been used more than once to freeze an ulcer patient's stomach.

For it rapidly became evident that a completely frozen stomach not only quit producing acid, it also fell apart within a day or so. Since gastric freezing therefore killed the patient, those involved vowed "they would never try that again!" (a commonly heard vow in those days). Nor did we or other hospital-based groups desire or have an opportunity to publicize our single disastrous result.

So what could possibly have induced a widely respected, presumably honorable surgeon like Wangensteen to promote such an obvious flop? Well, according to the residents' grapevine at various surgical meetings, Wangensteen's patients actually did rather well. And most produced less acid—at least initially. Some even underwent a second "freezing" to further reduce their acid output.

But it seems that residents assigned to "gastric freezing" merely cooled those stomachs without fully freezing them since, rightly or wrongly, they assumed that a catastrophic

result on "The Boss's pet project" would end all chances for a brilliant academic surgery career of their own.

Nor could they explain that reluctance to Wangensteen, who very likely suffered from Aging Academic Syndrome—a common disorder that only becomes manifest when waning judgment allows unfounded self-esteem to fling a spectacular long-shot at the Nobel Prize as time runs out (think of laetrile, krebiozen, and all those "Meaning-of-life" books by Illustrious Professors who have become legends in their own minds).

Peptic ulcers remained significant surgical problems for another couple of decades. During this time, flexible yard-long endoscopes were developed that allowed careful visual inspection and some manipulation of nearby gut through the mouth or via the anus.

Flexible-Tube Endoscopy Quickly Became Popular

Flexible tube endoscopy was the first significant diagnostic (and sometimes therapeutic) "invasive procedure" that could usually be carried out safely by non-surgeons after brief training. As a result, ambitious young internists flocked to perform endoscopy. And before long, "Gastroenterology" (disorders of the digestive system) joined Cardiology (heart problems) and Nephrology (kidney disorders) as another exclusive, technology-driven sub-specialty of Internal Medicine.

Not surprisingly, a regular endoscopic inspection from below soon became the "gold standard" (or mother lode) of care for the older executive and other well-to-do folk, regardless of symptoms or family history of colon cancer. After all, you never knew what valuable information might be uncovered by inspecting life's dark and smelly recesses with a long, profitable and usually harmless, lighted tool.

Before long, few patients complaining of heartburn could receive their prescription for some new "billion-dollar acid-

blocker drug" without first undergoing a "stomach inspection and biopsy" by endoscope from above. Although abnormal findings were widely trumpeted, routine colon or stomach evaluations usually just confirmed pre-procedural presumptions such as an irritated stomach or benign colon.

Some gastroenterologists also managed to pass tiny tubes up bile or pancreatic ducts for X-ray studies. A few even accomplished via-the-endoscope duct drainage procedures—thereby eliminating the necessity for a major surgical exploration. Soon these specialists—having occasionally achieved surgical results—were charging surgical rates.

Consequently, their compensation for hours actually spent doing a procedure (not including time between procedures) suddenly jumped to ten times the hourly rate charged by office-based internists. Before long a routine colonoscopy charge exceeded $1000, and some gastroenterologists performed five or ten of these examinations in a morning.

This was a big fiscal leap, for in contrast to comparatively large fees received by surgical specialists for operative procedures, internists and family practitioners had long prospered by "the small bite applied often." Because few surgical practices were as busy as a medical office, comparatively high surgical fees had traditionally carried surgeons of varied talents or specialties through slow times when few patients were referred.

Or perhaps those high fees just allowed more surgeons to practice in pleasant urban areas than work available would justify. But some surgeons were nicer or possibly more competent than others, so referring doctors and patients deserved a choice, right? And since sick or injured persons often needed surgical care at midnight, it made sense for any district to keep extra general surgeons on tap.

Nevertheless, older internists often felt disrespected because insurance reimbursement rates for hours they devoted to "medical cognition and caring" (see Chapter Two) were now so much lower than the hourly charge for a surgeon who was "merely cutting and sewing". In addition, surgical work was usually performed in hospital facilities with the help of hospital-based nurses, while the fees of internists or family practitioners in privately financed offices also had to support their nurses and other essential employees.

New surgical procedures usually seemed to justify high fees as only a few surgeons could successfully accomplish such a “rare, risky and intricate” procedure. Yet rapid technological advances and increasing experience regularly resulted in more rapid, refined and reliable procedures that soon were widely taught and increasingly available.

Consequently, beneficial new operations - as well as many irrelevant procedures that eventually proved useless or even harmful, such as "Internal mammary artery ligation" or "Pericardial poudrage" for coronary artery obstructions (the former never made any sense, the latter never drew additional circulation to coronary arteries from pericardial arteries) - were soon performed routinely by well-trained teams in publicly funded facilities.

Soon the income earned by invasive-procedure-driven Internal Medicine Subspecialties like Gastroenterology and Nephrology (with its government-subsidized dialysis facilities) and Cardiology, equaled or surpassed remuneration from surgical interventions. In addition, using your own office-based costly equipment often allowed huge increases in total charges per procedure.

A nice Cardiology office in the 1960s would have needed a fine stethoscope, a mercury-manometer blood pressure cuff, a nicely varnished home-made portable two-step wooden

stairs (for exercise tests), and a heavy electrocardiogram machine on wheels.

In contrast, modern Cardiologists may divide their time between one or more Hospital Heart Catheterization Laboratories and their own group's Cardiology Office Suites. Naturally, all such sites require hugely expensive equipment to visualize the heart, including Computed axial tomography (CAT) Scan (X-rays), MRI (Magnetic Resonance Imaging), Ultrasound and Isotope-based imaging or testing technologies that might cost and net millions of dollars a year (though they often failed to provide more helpful answers than the old wooden two-step and EKG on wheels).

Those modern Cardiology Office-based machines and technicians usually just replicated the Hospital machines and services that maximized Cardiologist incomes at low patient risk, while more "risky" catheterizations remained in Hospital.

Cardiology also spun off new subspecialties to compete or cooperate with invasive radiology and its new subspecialties, as well as with cardiac surgeons. Yet despite such competition for patients, the referral patterns and products offered by each group were different enough so there was no discernable downward pressure on charges for various procedures.

As initial consultants for all heart patients, Cardiologists often self-referred low-risk eligible patients for the coronary artery dilations (aka "angioplasties") even while surgical bypasses offered superior outcomes (Lancet, Sept. 28, 2002, pp965-70).

Initially, the main advantage of angioplasty was less postoperative pain and shorter postoperative hospitalization, if all went well. Yet even as angioplasty equipment, skills and outcomes improved and procedure times declined, equipment costs and cardiologist's fees only went up.

Charges were also likely to rise, rather than fall, if the number of patients referred for a procedure *declined* for any

reason, since high and more-or-less fixed overheads had to be satisfied in order to prosper in technologically demanding subspecialty practice. Many such examples of no direct price competition, as well as the general insensitivity of price to demand, reveal how much the economics of specialty-driven health care resembles that of other natural monopolies like electricity, gas, water, wastewater, garbage and phone utilities.

Local gasoline prices also rise more rapidly and remain higher far longer than the per-barrel price of oil would justify with truly free and fair competition. Of course, International oil prices are openly manipulated through public agreements between oil exporting States - and on top of Big Oil's current price, oil speculators struggle to maximize prices they get too.

So does the international fungibility (exchangeability) of oil usually keep local oil prices from becoming too outlandish? Or should local health-care and local oil/gas prices both be regulated or not regulated in similar fashion for reasons that range from social justice or "medical care as a right" to the environmental impacts of hydrocarbon extraction and utilization?

Of course, heart surgeons and cardiologists—unlike oil and drugs—are not strictly fungible since different nations produce, license and restrict medical specialists somewhat differently. Nonetheless, it has occasionally proved profitable to send large planeloads of patients from Europe for elective surgery by competent high-volume providers in Texas.

Even where there are no significant differences in prescription medicines or surgical standards, say across the border between United States and Canada, Big Pharma companies wield hefty political contributions and heavy-duty lawyers to keep Americans from getting free access to low-cost Canadian drugs.

“Canadian economist Steven Morgan points out that Canadian prices are not lower than prices American bulk

purchasers typically pay for medicines. However, they are significantly lower than the inflated prices that Americans without drug coverage pay . . . Canada uses government muscle instead of market muscle to keep drug prices tolerable for everyone."

"Canada's federal Patented Medicine Prices Review Board limits prices for new breakthrough drugs to the median rate charged in seven industrial countries and it pegs other patented drugs to these prices. (In addition) Provincial Governments add their own controls." (see "Importing Government" by Deborah Stone, The American Prospect, Nov. 2003, p21).

A *cartel* is "an alliance of business companies, formed to control production, competition, and prices." Most Americans, Canadians and Japanese tolerate and even appreciate the stable, artificially restricted and inflated, cartel-controlled prices of diamonds. For ring-size diamonds are actually plentiful and would be inexpensive were market forces to prevail.

But then how could fair maidens measure, compare and display their suitors or landed mates? Obviously, this doesn't apply to health care costs because it would be far more difficult for others to assess your potential as a caring mate—or appraise your likely success in life—by the size or cost of tablets, capsules, injections or suppositories that you consume.

It is especially ridiculous that working *uninsured* Americans pay the highest retail markups on essential drugs. For despite all the phony Industry claims, those high retail (middleman) profits contribute nothing to drug research (ask your druggist). And while Pharmacists of yore had to recognize, remember, pick, dry, test, weigh, mix, grind and dispense - modern druggists need only to wash their hands, count to 100, and lip-synch computer printouts.

Freedom depends upon access to reliable information. Open access to Canadian drug prices showed Americans that they were getting screwed. Hence Canadians were not impressed when Bush's FDA Commissioner Mark McClellan criticized Canadian price controls *on behalf of Big Pharma.*

For it was Canada's controlled retail prices that encouraged Americans to import $650 million of Canadian drugs in 2002. Some U.S. states even initiated their own programs to purchase drugs from Canada in bulk (see Lancet, Nov. 29, 2003 p1816).

And since Big Pharma has prevented U.S. drug prices from being controlled, wherever price competition can be minimized, the routine markup toward a high "suggested retail price" will vastly increase a pharmacist's preference for selling the more costly patented drug over a comparable generic.

Incidentally, a "rip-off" refers to being "cheated, tricked, or exploited"—as when something is not worth the price asked or paid. So just how abusive, annoying or disruptive to the American economy must monopolistic Corporate behaviors and jacked-up retail-drug-prices become before they invite careful investigation, prosecution for anti-competitive activities, and price regulation?

Naturally, no one even asked such a question while Bush's Republican Government - so obviously "of, by and for" The Corporations rather than The People - was still in power. As someone said, "Big Corporations will pretend to be people until "the first Corporation - and its CEO - get executed in Texas."

How Will We Know If Too Many Procedures Are Being Done?

Western European countries as a whole use far fewer invasive Cardiological procedures per million inhabitants than the USA. However, German figures for Cardiological procedures are the highest in Europe and most closely

resemble those in the USA. Hence the German experience has relevance to this discussion.

The authors cited below view the German medical profession as having been fragmented by specialization and the pursuit of profit rather than remaining unified as advocates of patients entrusted to their care. They observe that national expenditures on health care (Germany ranks second highest in the world after the USA) bear no relationship to the measured success of preventive treatment.

In Germany, as in the USA, cardiologists performing technological procedures have earned far higher fees than non-invasive cardiologists, ever since the 1960's. And invasive treatments have been accorded greater prestige than efforts to develop comprehensive care for heart patients.

Although ten percent of the entire German health care budget is already devoted to cardiology, an association of German cardiologists reportedly believes that many more Germans might benefit from heart catheterization procedures.

Yet "one striking finding is that case fatality rates of patients with myocardial infarction are increasing slightly in Germany. In view of the high rate of invasive procedures in Germany, one would have expected a decline in case fatality" (see Lancet, Nov. 23, 2002 p1695).

Even taking a patient's history was recently derided by one German scientist as "a matter of psychosomatics." So some Germans apparently believe that a careful history and physical examination should be replaced by expensive invasive tests which in theory can achieve far more accurate medical diagnoses (while ignoring the history, functional and human factors that lend clinical significance to those findings).

So the authors ask if costly and somewhat risky diagnostic angiography (heart catheterization for dye studies of the coronary arteries) will soon become a screening

procedure (like mammography) for the German population at large?

To date, the German Health Ministry has avoided direct confrontations with physicians, hospitals, insurance companies, and the pharmaceutical industry—describing the wealthy and politically powerful German health care industry as a "basin of sharks" better escaped than confronted (see The soft science of German cardiology; Lancet June 8, 2002 pp2027-9).

In the USA also, every new intervention or technology that becomes available is soon applied in every possible new and remunerative way to help amortize the costly equipment and education that allowed it to happen. On that basis, many privately financed Computerized Axial Tomography or CAT scan facilities were soliciting patient self-referrals for total body CAT scans to reassure (or justify further expensive and risky testing of) the "worried well" (see "To your health?" Science News, Sept. 20, 2003 pp184-6).

Similarly, New York initiated a Tobacco-Settlement-Fund-supported early lung cancer detection program in 10,000 heavy smokers that may make it more difficult to ever learn the true value of spiral CT scans (if people come to accept the assumption of benefit). Just as a National Cancer Institute trial of bone marrow transplantation for ovarian cancer "had to be abandoned because eligible patients did not want to participate in the study—they wanted bone marrow transplantation." (see Lancet, June 15, 2002 pp 2108-11).

Business Week (Feb. 10, 2003) refers to a Johns Hopkins computer model study published in JAMA on cost effectiveness of spiral tomography screening of 100,000 smokers and ex-smokers. The procedure was judged not cost-effective as it would cost $116,300 per year of life saved in current smokers over 60, and $2.3 million per life-year saved for ex-smokers, *while putting 1186 people through the cost, discomfort and risk*

of unnecessary biopsies.

Nevertheless, as with breast and prostate cancer screening tests, there was increasing pressure on Insurance Companies to pay for such tests, despite no agreement on whether occasional benefits were worth the cost, worry, inconvenience and additive risks of doing so many unnecessary procedures.

Of course, every new, possibly useful or maybe cost-effective test , drug or procedure makes health insurance that much less affordable for most workers who understandably, but illogically, may still want every available test or treatment regardless of cost and risk.

In August, 2003, Medicare said it would propose significant cuts in payments for anti-cancer drugs, while offering a modest increase in payments to cancer specialists who provide such drugs in their offices. For Medicare alleged that these oncologists charged Medicare patients $700 million more for medicines each year than the widely available market prices of the medications they provided. Presumably, this mark-up for old folks on Medicare was just a fraction of all markups by oncologists for their delivery of anticancer medications.

Wennberg and associates (at the Center for the Evaluative Clinical Sciences of Dartmouth Medical School) find that the consumption of what they call “supply sensitive services” increases with their availability. So as more physicians and hospitals become available, there are more visits to the doctor and hospital, more referrals to specialists, more diagnostic tests and more scans, without any detectable improvement in overall health (Dartmouth Alumni Magazine, Nov/Dec, 2003 pp 40-45).

Apparently, instead of Health Care being based upon a scientific assessment of medical need, “the supply of resources drives the frequency of use.” Hence the Dartmouth group

estimates that *over-treatment alone wastes $420 billion/year—or 25% of total annual American health-care costs* (dartmouthatlas.org).

Yet everywhere, regardless of staffing, technology, or the financing of health care, evidence-based treatments that are known to be effective, such as immunization against influenza, or prescriptions of known life-saving drugs like beta blockers after a heart attack, remain underutilized.

Thus people demand more technology and services, and physicians preferentially train to provide the most advanced and profitable studies or treatments. According to Wennberg, "Academic medical centers have lost sight of the fact that they are supposed to be building the scientific basis for medicine, not pushing treatment that will make a lot of money."

Indeed, Medical Schools make little (if any) effort to influence the uptake of scientifically proven ideas or to encourage the abandonment of ineffective traditional practices. A recent Institute of Medicine report indicated that, on average, *it takes about 17 years for confirmed findings to significantly alter clinical practice.*

As pointed out by Brazier and Johnson in their article "Economics of Surgery" (Lancet Sept. 29, 2001 pp1077-81), "The take-up of surgical techniques will always be affected by the way hospitals and surgeons are remunerated. *Affecting practice requires a realistic system of reimbursement that reflects evidence on cost effectiveness."*

The New York Times (3/16/03) reported on studies by Eric Schneider (Harvard Medical School) suggesting that of one million angioplasties (a ***sometimes*** life-saving or heart-muscle-salvaging catheter-based effort to reopen narrowed coronary arteries) performed annually by cardiologists in the United States, *up to two-thirds had no medical justification,* being done to reassure the patient or prevent future problems (hence a ***prevention creep*** indication unsupported by evidence), or to

enhance physician income.

One local cardiologist mentioned that the speaker at a national Cardiology meeting asked cardiologists to raise their hands if they thought too many angioplasties were being done. Almost all hands went up. The speaker then asked "Anyone who has ever done an unnecessary angioplasty - please raise your hand." Allegedly, few if any hands went up, which led speaker and group to conclude they had a problem.

Major insurers or HMOs could easily examine their own patient records to confirm whether the above-mentioned figure of about 650,000 unnecessary angioplasties per year is approximately correct. Confirmation is also needed for another study by Peter Rothwell suggesting that about 100,000 carotid artery endarterectomies (surgical neck-artery cleanouts) of the 150,000 carotid endarterectomies performed yearly (at an average cost of $15,000 each) were contraindicated.

For if they truly were unnecessary, those angioplasties and endarterectomies alone would account for many billions of health care dollars wasted annually. And those estimates do not include any *"risky procedure adverse outcomes costs"* borne by the patients and society at large (e.g., heart attacks, strokes, other disabilities or early deaths).

These estimates support my long-time reluctance to perform carotid endarterectomies at all. For as far as I could tell, the immediate risk of a new stroke usually outweighed any statistical benefit in disease prevention. And the very few patients whom I thought might be candidates for this procedure were sent elsewhere for evaluation and treatment.

Prevention Creep

All physicians have encountered significant examples of prevention creep. The creepiest example I ever saw was in the late 1960's when Dr. Gary Archer of Anchorage devised his own highly original "Indications for inserting a balloon pump"

(then a costly technology) into his patients' aortas.

For Dr. Archer aggressively insisted that any patient who underwent several hours on a balloon pump *adjusted-to-Archer's-specially-devised-balloon-pump-settings,* ***thereby gained full future protection from heart attack.*** Not surprisingly, despite having no evidence for such an absurd claim, Archer performed many balloon pump procedures at the private Alaska Clinic/Teamster Hospital where he worked.

While Archer was well-known locally as a prominent Alaskan "internist, cardiologist and Businessman" - and was obviously a bright guy - he never took any formal Internal Medicine training, nor any formal Cardiology training.

Yet he allegedly was allowed to challenge - and then loudly announced that he had passed - the ordinarily very difficult Internal Medicine Board Examination, allegedly (he told me) because he referred so many Alaska Clinic patients to a prominent Board Examiner in Seattle. I never heard that anyone ever tried to confirm any of Archer's outlandish claims.

Assembly-Line Surgery

Each new subspecialty progressed within a few years from a few pioneer practitioners doing occasional difficult and dangerous procedures, to the plethora of technologically trained physicians regularly completing those now-routine and relatively safe diagnostic tests or therapeutic interventions.

Thus video-assisted arthroscopy enables and expedites various orthopedic operations on the knee, while laser-based tools make ophthalmic surgeons increasingly effective and prosperous. Indeed, many specialists routinely perform enough highly remunerated procedures a day to gross over $50,000 per week.

Of course, such high volume or "assembly-line" surgery is hardly news. Indeed, mission-hospital ophthalmologists performed free assembly-line cataract extractions over 50

years ago. And Denton Cooley, a famous Texas heart surgeon and teacher, allegedly oversaw nine operating rooms simultaneously.

In this way, Cooley personally cleared more than 50 million dollars a year—comparable to the income of a modern Corporate CEO, sports super-star or other entertainer—or so newspapers of the 1980's implied when they reported that after failed investments left Cooley $250 million dollars in debt, he said those debts would be repaid within 5 years.

Nor Was Big Pharma Left Behind

Pharmaceutical manufacturers struck "pay dirt" too, as mechanisms of stomach acid production became sufficiently clear for Big Pharma to patent and market multiple new "billion dollar drugs" (as market analysts affectionately describe them) that finally suppressed stomach acid production relatively safely—though some of those drugs had unwanted side-effects - such as symptomatic intestinal bacterial overgrowth (due to lack of stomach acid) and even testicle shrinkage - that were not prominently mentioned.

"Trade Secrets" Rule

"BIG" Pharma/Chemical/Pesticide/Herbicide/Oil/Gas Sugar/Agriculture/Mining/Food and the rest have such huge political clout that even top level Government Agency employees rarely dare to contest, and are hardly ever able to invalidate, a Corporate "Trade Secret" claim. Indeed, any sign of such dedication to the Public Welfare has usually resulted in rapid termination of that employee.

So while our Government may gain some access to important information on major adverse effects of new drugs, chemicals, pesticides, herbicides, Fracking Chemicals and so on, almost all such information provided by Corporations arrives as "Trade Secrets" for permitting purposes only – and

generally cannot be released without Industry permission.

Not surprisingly, most applications to the EPA for marketing new chemicals contain trade-secret claims “that do not appear to be justified”—making it impossible to evaluate the regulator’s decisions (see Disclosure in Regulatory Science, Science, Dec 19, 2003, p2073).

Many lawsuits have been threatened or filed by industry against researchers or their institutions, when those responsible for clinical trials tried to report unfavorable outcomes with patented drugs or vaccines (Lancet, Nov.11, 2000, p1659).

On the other hand, it is not yet possible for a manufacturer to simply produce and declare some new chemical entity "A Billion Dollar Drug”—especially one that hardly differs from other medicines already being marketed.

In an average year, only about three truly innovative new drugs reach the market. The others are mostly similar me-too drugs developed to ensure each Big Pharma Company a drug presence in every hot-selling category. For such additional drugs add little to marketing overhead since every Big Pharma firm already makes major efforts to convince every possible physician that its drugs have advantages over very similar but less costly medicines already available.

And surprisingly, developing and sustaining a major change in physician prescription habits is neither difficult for a drug company to achieve nor particularly price-sensitive. For good medical care is a moving target, and all physicians hope to remain (or at least to appear) up-to-date. Not incidentally, while doctors receive Drug Corporation blandishments, their patients pay for medicines then prescribed.

Furthermore, both doctors and patients may *incorrectly* believe that more expensive drugs like Vioxx or Celebrex—which can cost an arthritis patient thousands of dollars per year—have proven themselves safer and more effective than

motrin or advil, or aspirin or even tart cherry capsules (see Chapter twelve)—just as they expect more from a new Lincoln or Cadillac than from an old Ford or Chevy, or a bicycle.

So we routinely see young, handsome manufacturers' representatives—formerly known as detail men (or women, many of whom were once cheer-leaders) waiting patiently in every busy medical office to deliver compliments ("Oh, Doctor! So few physicians really understand that!"), medical updates, gifts and lunch or dinner invitations which are often gratefully accepted by lonesome physicians or those too busy to keep up with their reading.

And on their rounds from one medical office to the next, these reps repeatedly detail the many advantages of their latest pharmacological blockbuster over all competing remedies. At the same time, they offer "inducements" (fully funded invitations to medical meetings in pleasant far-away places, or payments to physicians for simple but pointless literature surveys, or a few hundred dollars for an unnecessary consultation, or other such indirect rebates—plus plenty of free samples of costly new drugs—since doctors and their patients both appreciate a costly freebie that reduces the apparent cost of an office visit (and hooks the doctor into prescribing the new, more expensive product).

In addition, manufacturers' reps have long supplied exhibits and provided generous financial support for local and national medical meetings, along with costly meals and drinks, promotional pens, knives, other giveaways, prizes and so on. And over time, many of these reps become appreciated, trusted and supportive friends as well as regular golf or fishing buddies for many doctors.

The largest, most profitable Pharmaceutical Corporations maintain a worldwide workforce of over 100,000 people. And while major pharmaceutical manufacturers are not tops in total revenues, they are extremely profitable. In 2001 Pfizer

was ranked 127th in total business revenues (over $32 billion) but seventh in profitability.

Overall, the pharmaceutical industry admits to being the most profitable "legal" business sector, averaging over 16% of total revenues as profit—which is even better than the 11.6% profit that finance companies average through extortionate credit card rates, while beverage manufacturers average 10% profit on their sales of sugar-water or firewater.

On July 22, 2003, Abbott Labs—a drug and medical products giant—pleaded guilty to a felony obstruction of justice and paid $600 million in criminal and civil fines for bilking Medicaid and Medicare. Two years earlier an Abbott joint venture was fined $875 million for a similar scheme and in 2000 Abbott settled with the FTC for paying a rival drug-maker to keep a generic product off the market.

Presumably, those huge Big Pharma profits convert otherwise major fines and bribes into ordinary business expenses, as they apparently did not alter Abbott's behavior.

Cheap vaccines and quick cures harm everyone but the patient

In 2000, the global value of prescription drugs sold was over $320 billion—up 11% over the previous year. And 46% of those sales were in North America. Over the first decade of this century, mergers of drug companies were expected to reduce the number of major drug manufacturers from 30 to 12, as a way to replenish products on offer, cut costs and maintain growth and profitability. (Lancet, Nov 16, 2000, p1591)

But don't expect any mergers to result in cheaper drugs. The more likely scenario is that in their push for growth and profitability, these new Mega-Pharma entities *will discontinue many additional essential vaccines* (since vaccines return only ordinary profits and represent just 2% of the global pharmaceutical market—roughly the equivalent of one successful ulcer drug) *and other essential drugs that only have*

small markets and might therefore be of little interest to generic manufacturers.

In other words, we can reasonably expect forthcoming drug company mergers to be increasingly hazardous to our health (see also Financing of vaccines, Lancet, April 8, 2000, pp1269-70, and The intangible value of vaccination, Science, 9 Aug. 2002, pp937-8).

Antibiotics are yet another critical drug category that Mega-Pharma is abandoning in its addictive rush for greater-than-ordinary profits (see Drug companies snub antibiotics, Nature, 18 Sept. 2003, p225). For from a drug company's perspective, vaccines and antibiotics have a huge disadvantage, they prevent disease or cure people within a few days.

Mega-Pharma would far rather develop just another unremarkable "me-too" acid-reducing or lipid-lowering drug, or just another unremarkable anti-inflammatory agent for rheumatoid arthritis, or just another unremarkable anti-retroviral drug to suppress HIV infection, for such palliative drugs can be hyped for lifelong use (see Antibiotic pipeline runs dry, Lancet, Nov22, 2003 pp1726-7).

In theory, the costs of bombers or warships or highly mobile armored land-or-sea tanks could rise to a point where we could barely afford one of each (which likely wouldn't work). Similarly, Big Pharma could theoretically keep merging and concentrating their lobbying, lawsuits and sales efforts on ever fewer and less essential but more profitable drugs until finally they have all merged and now produce just one hugely profitable pill that no one can afford and which, it turns out, no one needs because it merely works by hype as a placebo.

At present, many academics lend their tattered prestige and credibility to overtly-political, monopolistic Big Pharma firms—even though the over-promotion of dubious copycat drugs helps sustain huge overcharges for medicines—and even though Big Pharma's lawsuits, and its shameful lobbying of

politicians and physicians, documents far greater concern for profits and stock prices than for drug safety and efficacy.

Yet academic researchers could easily undermine this self-reinforcing, greed-driven corporate misbehavior by working out independent low-budget deals with small biotech firms or generic drug manufacturers—and thereby gain renewed respect for academia, as well as for drug development and manufacture.

The discovery, investigation and manufacture of penicillin was a proud example of how to proceed without Big Pharma dollars, hype, lobbying, lawsuits or other involvement. After all, funding would still flow through government research grants, health-related foundation programs and non-profits, as well as through venture capitalists hoping to support and share in major discoveries.

Amongst its multitude of antisocial schemes and activities, Big Pharma manipulated academic clinical trials of new drugs until they became important independent profit centers for Universities. This alone ratcheted up costs for drug development to a point where only wealthy Big Pharma companies could afford such trials.

However, Big Pharma firms have recently become so distracted by their focus on plotting new pathways toward short-term gains, that they are increasingly bereft of new drug ideas. Hence instead of sustaining great research and development programs themselves, they wait for the unnecessarily high costs of drug development and clinical trials to crush the small start-ups that increasingly invent and/or develop exciting new drugs.

At that point, wealthy Big Pharma firms cherry-pick the most likely blockbuster drugs cheaply while other promising drug ideas just die (see also Chapter Eleven, and Influence Peddling in the Afterword).

James Surowieki points out that Merck “One of history’s

most innovative corporations . . . devotes three billion dollars a year and ten thousand people to the research and development of new drugs . . . eking out less than one product a year." He finds a deep sense of anxiety in the industry about their "pipeline problem" as lucrative patents expire with no new blockbusters in sight.

The result has been a mania for mergers, despite ample evidence that pharmaceutical "research and development doesn't scale—that bigger may be worse." Indeed, Surowieki suggests that when it comes to developing really innovative products, such huge corporate amalgamations have been tested and have failed.

Yet none seem interested in "tossing out the test tubes and becoming pure distributors." For if Big Pharma admitted that their own research expenditures were largely redundant, they could not justify the huge expenditures on marketing, advertising or physician-and-politician-payoffs that underlie those great profits extracted from the sick or "worried well."

Surowieki visualizes Big Pharma's future as "marketing, distributing and perhaps even underwriting the costs of smaller producers." But my own guess is that when a reasonably effective Single Payer takes over American Health Care, the entire hype-and-bribe-driven Big Pharma enterprise will collapse with little adverse impact and huge health-care savings for Society (see New Yorker, Feb 16/23 2004, p72).

Even When Two Australians Discovered Helicobacter Pylori, Nothing Changed

Prominent medical researchers have written "Academia and Industry are symbiotic." This is undoubtedly true. Furthermore, because Big Pharma has the bucks, it makes the rules. And their bottom line is "We support academics that help us to develop blockbuster drugs. Then we promote those drugs relentlessly to develop a consensus position that can

overwhelm or delay more effective or less costly therapeutic alternatives. And beware! For our greed is infectious!”

Maybe that is why we had to wait until 1982 for Helicobacter pylori to be discovered in the stomachs of patients with gastritis and stomach ulcers by Dr. Barry Marshall and Dr. Robin Warren of Perth, Western Australia.

"At the time, the conventional thinking was that no bacterium could live in the human stomach, as the stomach produced extensive amounts of acid of a strength similar to that in a lead/acid car battery."

"Marshall and Warren rewrote the textbooks with reference to what causes gastritis and gastric ulcers. In recognition of their discovery, they were awarded the 2005 Nobel Prize in Physiology or Medicine."

More specifically, Marshall and Warren discovered that "Gastroduodenal ulcer is usually associated with an invasion of the stomach or duodenal lining by Helicobacter pylori bacteria. They even demonstrated that swallowing a fresh sample of Helicobacter pylori (just recovered from an ulcer patient’s inflamed stomach) induced similar chronic inflammation in the volunteer researcher’s own stomach—and that antibiotics could eliminate this gastritis condition (often associated with ulcer and even stomach cancer) by clearing the stomach and duodenum of these bacteria" (see Lancet, March 3, 2001 p694, and Wikipedia).

Yet this straightforward connection was one that Big Pharma—and the academics they held in thrall through research grants—and all the practicing physicians that those manufacturer’s reps befriended—first missed and then ignored for as long as possible, thereby delaying definitive antibiotic therapy in most patients for many years. At which point, a true cynic might reiterate “A cheap definitive treatment harms everyone but the patient.”

Accordingly, one might also expect that curative

treatments would often be delayed until a patient undergoing symptomatic treatment ran out of money and insurance coverage. And my long-ago observations certainly support that thesis. For becoming destitute quite regularly preceded patient referrals from Osteopathic Hospitals in Iowa towns to The State University of Iowa Hospitals in Iowa City for definitive care.

As for the modern treatment of peptic ulcers, it was the U.S. Center for Disease Control or CDC, and **shamefully, *not Medical Academia!*** that finally publicized and promoted the generally curative and far less costly antibiotic treatment for peptic ulcers to practicing physicians, and even to consulting gastroenterologists, many of whom had simply continued to prescribe their friendly manufacturer's rep's latest "billion dollar" symptom reducing (palliative but non-curative) acid-blocker drug, and were either unaware of—or worse yet, not interested in—the bacterial basis for most peptic ulcers.

Only after medically treatable bacterial infections were (finally) publicly identified as the primary cause of peptic ulcers, did persistently symptomatic stomach or duodenal ulcers become increasingly rare. Indeed, surgery for stomach or duodenal ulcers almost vanished after the CDC's widely circulated endorsement of relatively brief and inexpensive antibacterial treatments.

As for those billion-dollar acid-blocker drugs—they continue to be heavily promoted, but these days are mostly prescribed for acid reflux associated with *hiatus hernia*—a common condition that develops in the elderly as tissues that normally restrained the upper stomach below the diaphragm loosen or are stretched by obesity.

Inexpensive Tums made of powdered limestone (calcium carbonate USP, sucrose, etc.) offer similar relief from heartburn (USP means that unlike calcium supplements prepared from cattle bones, hardly any toxic lead and

absolutely no "Mad Cow Disease" can be found in limestone—see also Glossary).

Serious stomach or duodenal ulcers still develop sporadically, especially in patients predisposed to such problems by medications such as steroids (e.g., prednisone) or various non-steroidal anti-inflammatory drugs (NSAIDs) including expensive and rather risky NSAIDs like Vioxx (withdrawn from market) or the similar Celebrex.

Incidentally, prescriptions for NSAIDs cost about $7.75 billion yearly, and over-the-counter NSAIDs add another $2 billion, of which aspirin accounts for 20%. Lisa M. Schwartz and Steven Woloshin at Dartmouth Medical School propose that drug ads include a simple table outlining risks and benefits.

For instance, a table comparing Vioxx with ibuprofen would show “that for both drugs, 9% of patients reported excellent relief of symptoms, while 48% and 41% respectively, reported fair, poor or no effects.” Such a table becomes even more informative when risk is added.

Thus when 6576 women taking Tamoxifen—which is “advertised as a preventive treatment for breast cancer”—were compared to a control group of 6599 women, the Tamoxifen group had 92 cancers while the controls had 178. However, 33 other women on Tamoxifen developed uterine cancer versus 13 in the control group, and 53 on Tamoxifen developed serious blood clots (strokes, etc) versus 26 in the control group.

For those at high risk of breast cancer, AstraZeneca (Tamoxifen’s manufacturer) still sees benefit. On the other hand, Sidney Wolfe of the Public Citizen’s Health Research Group points out that when so few get the benefit and so many are exposed to the risk, “the risks outweigh the benefits.”

And all sides agree that the results of clinical trials vary greatly, “and that the general population may respond

differently than selected patients in carefully controlled clinical trials" (Business Week, Feb 9, 2004 pp84-5).

CHAPTER FIVE

Electrocoagulation is Quick, Simple, Safe & Cheap

It Cures Skin Cancers and provides more attractive results

This chapter provides details on an important but rarely utilized technique so surgeons can determine its relevance for their work.

Skin cancers originate from skin. How much surrounding tissue should one remove? Bipolar electrocoagulation technique

Clifford Franseen was a respected general surgeon in Boston who devised many innovations in patient care. Because he avoided medical school or hospital politics and wrote few articles, his teaching efforts mainly benefited the few Boston-area surgical residents fortunate enough to assist in his private practice.

Dr. Franseen was a meticulous surgeon who sought to understand and control every aspect of each procedure. Like other experienced surgeons, he tried to prevent post-operative infections by appropriate skin antisepsis and gentle handling of tissues. He also held conversation to a minimum during sterile operations, and required us to laugh only on inspiration.

For Franseen knew that each hearty guffaw through the cloth surgical masks of that day, could broadcast bacteria widely. At first our loved ones giggled when we substituted "Eh! Eh! Eh!" for "Ha! Ha! Ha!" But inspiratory chuckling quickly became second nature during apprenticeships on his service. Because or in spite of such quirks, his operations went smoothly and his patients did remarkably well.

However, Franseen's lasting legacy was his daily demonstration that skin cancers other than melanoma, were easily and permanently eliminated from their site of origin by electrocoagulation.

Skin cancers originate from skin

The three major types of skin cancer are melanoma, squamous cell skin cancer, and basal cell skin tumors or cancers. Skin cancers often arise on skin surfaces that have been injured or overexposed to strong sunlight. Arsenic, coal tars and chemicals in cigarettes increase the likelihood of developing squamous cell skin cancers.

Melanomas originate from skin pigment cells and vary in color from light brown to nearly black. *An occasional melanoma may display no pigment, especially if it arises from the non-pigmented surfaces beneath a fingernail.* Because melanomas pose great risk of early spread and ultimate fatality, Franseen favored the standard wide, sharp-surgical removal of apparently still localized melanoma.

Franseen also strongly advised against electrocoagulation of melanoma. His unexplained but urgent recommendation may have reulted from bad experience. Or maybe he worried that locally generated heat and steam would cause loose melanoma cells to spread through blood or lymph channels.

In any case, Franseen demonstrated on a daily basis that his unique bipolar electrocoagulation procedure offered the simplest, most reliable *CURE* for squamous cell skin cancers - which are far less likely (than melanoma) to seed distant body sites - and for basal cell tumors or cancers (which expand and invade locally and hardly ever send off metastases).

Indeed, Franseen's routine procedure—the immediate destruction of the entire contiguous squamous cell or basal cell cancer by direct heating with a radio-frequency electrical current after diagnostic biopsy—proved so simple and definitive that many of us never returned to the common "**complete sharp excision**" for removal of squamous or basal cell skin cancers.

How much surrounding tissue should one remove?

"*Complete sharp removal*" of a skin cancer ideally means cutting out adequate margins of normal tissue on all sides and underneath the cancer—thus removing it all in one chunk—followed by suture closure. Given that definition, one can easily see how several related problems might increase the likelihood of local cancer recurrence.

First of all, *what are adequate margins?* A surgeon can never be sure that enough normal tissue has been taken to include all contiguous tumor unless she also removes a substantial amount of normal tissue - all in one piece. But there are many locations—like eyelid, nose, lip, penis or tongue—where removing substantial amounts of normal tissue would be unacceptable or impossible (see my examples below).

Furthermore, only careful microscopic examination of many tissue sections can clarify whether the margins removed were adequate. These examinations by pathologists can be tricky, tedious, tenuous and costly. Consequently, neither a good report such as "Margins clear of tumor" nor a bad report, "Tumor extends to biopsy margin" may accurately forecast an actual cure or later local cancer recurrence.

For example, it can matter whether all tissue was removed in one piece or additional bits were removed and sent along because one cancer margin seemed too close. And how was the removed tissue marked for orientation and then handled? And how were the microscope slides prepared? How large was the specimen? Were enough sections examined? Might a bit of tumor from the same, or even another person, somehow have floated onto the wrong slide?

Consequently, regardless of the margins report, all of a surgeon's follow-up options (Whether or not to go back for wider removal. On which edge? How much deeper?) may be unclear or impractical. So later decisions on whether to re-operate and cut out some or all of the wound—or whether a course of X-ray treatment might reduce the risk of recurrence,

are often inappropriate.

In other words, once a site of sharp skin-cancer removal has been sutured shut, one can never be positive that the closed wound contains no residual live tumor cells which might invade deeply or spread widely before again attracting attention.

In contrast to such "sharp removal problems," Franseen simply took a small biopsy of the typical squamous or basal cell tumor—usually to be reported later for the record—and directly destroyed the rest.

Bipolar Electrocoagulation Technique

Franseen's definitive ***bipolar*** electrocoagulation technique uses a standard operating-room Bovie radiofrequency unit with a large, dinner-plate-size "grounding" electrode coated with conductive jelly under the patient, against his/her bare skin, to ensure free exit-flows of electric current and thus avoid exit-burns (as might occur using a small or poorly conductive grounding plate *during the high-current "electrocoagulation" electrical flows*).

In contrast, a monopolar fulguration arrangement only uses low-power (no need for a grounding plate) in order to create localized superficial burns. Dermatologists *"fulgurate"* skin tags and other benign, superficial skin conditions.

The surgeon performing electrocoagulation supplies her/his own selection of appropriately bent, flat head nails whose shafts slip-fit securely into the Bovie electrode handle. The smooth, round, flat steel nail head surface selected for any procedure should be smaller in diameter than the narrowest surface diameter of the tumor or cancer to be coagulated.

Also needed are an antiseptic wipe, a small syringe with a fine-tip hypodermic needle containing local anesthetic, and a small scalpel (for biopsy and scraping soft trash aside).

Franseen used an *epinephrine-containing local anesthetic*

as a way *to prolong local anesthesia and minimize bleeding*. And following coagulation of large or deep tumors—for control of any delayed bleeding—he occasionally left that syringe so someone could inject more epinephrine-containing anesthetic solution (as a convenient alternative to finger pressure). I never encountered nor heard of post-electrocoagulation bleeding, so this was surely rare.

Procedure: Apply antiseptic wipe near skin lesion to be coagulated—introduce local anesthetic under lesion—take a small biopsy and apply bent nail (properly curved so nail head lies comfortably flat on the tumor) for a test burn that also stops any bleeding at biopsy site.

Too much current will immediately spark/char the surface—too little current merely heats the area—while the proper Bovie current setting with steady full-nail-head contact on one spot creates a discrete, nail-head-sized patch of coagulated cancer (with a "splut" sound) within 1-2 seconds.

This initial limited electrocoagulation turns a nail-head-sized patch of formerly firm live tumor tissue into *loose mush* resembling toothpaste (soft, clearly different, and easily scraped aside with the round edge of a small scalpel blade), allowing cancer extensions to be easily seen and coagulated.

To repeat, that "mush" shows the true power of Franseen's method—which depends on the fact that skin cancers grow by expansion rather than by infiltrating nearby normal tissues. So since skin cancers neither create collagen fibers nor invade nearby fibers, *electrocoagulation (a discrete localized burn) quickly converts a nail-head-size patch of cancer cells into soft pale mush that looks entirely different from the surrounding leathery scrape-resistant margin of burnt, collagen-supported "normal tissue" (just another ordinary thin, dry, black, charred-meat surface).*

Only Franseen's method makes every extension of toothpaste-like coagulated tumor visually obvious and easily

traced for further coagulation (scraping aside obscuring mush) until the remaining electrocoagulated surface is obviously normal tissue, sealed under a thin charred layer.

This is quite unlike *ordinary sharp excision* where annoying bleeding commonly occurs and efforts made to control that bleeding from various little blood vessels easily distorts and obscures critically important small extensions of a malignancy.

In other words, electrocoagulation amplifies the visual and tactile contrast between normal tissue and epithelial cancer - allowing one to quickly see, follow, coagulate and remove every bit of tumor from any margin.

As an additional bonus, the final burnt (dehydrated) surface will be smaller in diameter than the initial tumor since, as mentioned, *expansile* ***skin tumors primarily displace - and do not deeply infiltrate - adjacent, visually normal tissues*** (which is fortunate, for were normal-looking tissues to be deeply infiltrated by tumor, they too would require destruction - without offering any clear visual demarcation between the tumor's edge and normal tissue).

By sacrificing only a thin margin of healthy normal tissue, electrocoagulation significantly improves the final appearance after healing, compared to "sharp excision".

More importantly, *by avoiding any surgical skin closure, and especially by not swinging flaps* (as plastic surgeons too often do to enhance their operative charges and early postoperative appearances), *only electrocoagulation* ***reliably prevents*** *inadvertent retention and burial of living tumor cells.*

As mentioned, any residual malignant cells after sharp excision may grow undetected until they later become obvious as a significant deep recurrence that often involves important underlying tissues or structures.

In contrast, following electrocoagulation of a skin cancer, any residual tumor (not already a discontinuous "metastatic"

tumor before coagulation began) can only recur at the surface where it would be easily recognized and re-coagulated.

Of course, such a local recurrence would represent tumor that was missed during the first electrocoagulation. But a quick final 'inspection and coagulation" of the entire tumor-free burned surface practically guarantees “No local recurrence!”

In fact, I never saw nor heard of a local recurrence after a Franseen-type electrocoagulation. And I was especially impressed by how rapidly even deeply excavated electrocoagulation burns healed without infection—beneath the protective dehydrated bacteria-resistant burn surface that sealed underlying tissues.

Indeed, such Franseen-method electrical burns reliably filled-in within weeks to become hardly noticeable dimples. Of course, much of that "filling-in" reflects the return to normal position of tumor-displaced tissues.

One woman I treated had a heaped-up, round, one-centimeter-in-diameter squamous cancer on the bridge of her nose. Had I simply used sharp removal and closure, she would have lost her entire nose. Instead, I simply electrocoagulated her cancer, alternately coagulating tumor and scraping aside the soft toothpaste-like electrocoagulated cancer with the sharp edge of a small curved scalpel blade.

At the end of this minor operation, the freshly charred tumor base was far smaller and more attractive than her initial cancer, which she alleged arose in less than a month. A week or two later, I lifted out a loose bit of dead nasal bone from the base of the wound, which thereafter healed promptly—leaving a small dimple on a once-again cute nose.

Another patient entered our resident’s clinic with a similar-size cancer (cancer means “crab” in Latin) on the right side of his tongue, about an inch back from the tip. The least-radical “sharp removal” of this tumor would have meant removing half of his tongue, leaving him unable to speak

clearly or chew and eat easily. Yet even such an extensive, bloody and disfiguring procedure would not have cured his cancer. However, with electrocoagulation, I was easily able to identify and destroy a single deep extension of toothpaste-like coagulated cancer (a leg of that crab), following it well across the midline, nearly to the opposite tongue surface.

His deep tongue burn healed completely after several weeks, leaving just a noticeable dent in the side of his tongue. About a year later he was healthy, and spoke and ate normally—despite my having destroyed both of his tongue's main arteries as I eliminated his cancer and burned its bed.

Not surprisingly, prominent Boston surgeons asked Franseen to treat their own skin, tongue, lip and other epithelial cancers, though they themselves continued to teach and perform the old tried-and-truly-inferior method of sharp excision that they had all been taught. As a result, forty years after I first learned Franseen's electrocoagulation technique, sharp excision remained the "gold standard" for removing skin cancers.

Franseen got few if any patient referrals from these grateful and well-known surgeons (who didn't use his technique because they didn't know how, though he would have been delighted to teach them). But their high standing in local medical circles essentially prevented them from referring problem cases to him—especially in Boston, where several medical schools release many more physicians into local practice than the available patient load can justify.

In the spring of 1963—after I finished an optional, unpaid but coveted six-month fellowship in the pathology department of the New England Deaconess Hospital (to improve my diagnostic and therapeutic skills)—we moved on to Iowa City where Marianne and I both completed our specialty training. While training there in Thoracic and Cardiovascular *(Chest, heart and blood vessel*) surgery as a junior surgical staff

member, I also had regular "Staff night-call" overseeing general surgery and orthopedic residents.

At that time, major surgical cases were routinely sent in by general practitioners from all over Iowa to various State University of Iowa taxpayer-supported teaching programs such as Thoracic and Cardiovascular Surgery, Orthopedics, Eye Surgery and so on. Due to that heavy volume of referrals—and despite the Harvard Medical Complex's self-image as "Medical Center to the World"— ordinary Staff surgeons in Iowa City were frequently more experienced and capable than their underutilized Boston-area Academic peers.

My teaching position with General Surgery residents led me to suggest (at a regular Surgery Department meeting) that they switch to Franseen's technique rather than continue to use sharp removal and closure for skin cancers. These Iowa Staff Surgeons were initially unreceptive, but finally offered to send me "three lip-cancer patients" on condition that I present all three with photo follow-ups when fully healed.

Although lower-lip cancers were quite common among Iowa's sun-exposed farmers, patient referrals came very slowly. Finally, one year later, *I had electrocoagulated and cured three extremely extensive* lower lip cancers. So at our regular Surgery meeting, as requested, I presented biopsy reports plus before-and-after photographs of all three cases—nicely healed, each with some indentation of the lower lip, good lip movement and no drooling. The only response my presentation elicited was "Three cases don't prove anything!"

Comment: A single demonstration or logical discussion rarely convinces other doctors to do things quite differently. Medical and religious "knowledge" seem to occupy the same risk/reward brain areas. Indeed, once a person becomes heavily invested, and even convinces others, it becomes awfully hard for them to change to "something better." Is this just another sunk-costs situation?

Of course, I still recall how outraged I felt, after finally learning to do an appendectomy, when I watched another surgeon do it quite differently. And how much it expanded my view of surgery when his patient got well as quickly as mine.

Ordinarily it takes repeated good outcomes - or the bribery and "friendship" of good-looking Big Pharma drug reps, or an “Authority's edict", to bring about any change in comfortable habits. Which allowed Wangensteen's “Long-Time Medical Leadership” in a difficult problem area to lead so many American surgeons up that wrong mountain and over the cliff.

Yet even after Helicobacter Pylori was THE known cause for multiple gastric problems, the case for *inexpensive* short-term antibiotic treatment, rather than *costly ongoing* acid-inhibitor therapy, finally had to be made by U.S. Government publicity, supported with scientific proof.

A Single Payer could likely institute electrocoagulation and other medical advances more quickly on a scientific, rather than a medical/political basis. For most doctors simply lack the confidence to voluntarily change established ways before many others do.

A final comment on electrocoagulation: I tried to interest Alaskan physicians in learning to electrocoagulate skin cancers soon after we arrived in Alaska. But again, it took a lot of time for me to become medically credible. Consequently, no Alaskan surgeon did Franseen-type skin-cancer-electrocoagulations when my own first basal cell cancer appeared, which was sharply excised.

After my retirement, without easy access to a Bovie unit, I simply sizzled (without scraping) two or three other small basal or squamous cell tumors on my own forehead, using an appropriate-size nail heated on the stove. This primitive but efficient approach worked for me (without biopsy or local anesthesia).

However, Marianne considered it “gross” and I urge others not to attempt this branding-iron approach unless they have had considerable experience burning off skin lesions. And though old folks tend to feel less pain, I didn’t particularly enjoy it either.

My most recent forehead lesion - several years ago - was simply scratched off by fingernail - with salt then rubbed into the raw area. That truly minor procedure was easily repeated three times before the superficial lesion never returned. *But as those Iowa City General Surgeons surely would have pointed out, "One case doesn't prove anything!"*

CHAPTER SIX
Physicians Face Many Difficulties, Not Least Themselves

Medical training includes requirements and tests. Choosing a medical career. Knowledge is the useful compilation of lessons learned. Wisdom lies in sensing the applicability of knowledge. Unsolicited opinions rarely change a patient's decision

Bill S. excelled in ROTC. He loved to march, he knew every military rule and he was ready to make decisions. Before the completion of his two-year training program in Chest Surgery, Dr. Bill "knew all the surgical rules" and would only accept advice from our Program Director. Apparently, it never crossed his mind that the end of his formal surgical training might merely be step one of life-long on-the-job training.

Coming from an excellent teaching program, he did well at first. But as Dr. Bill's military career progressed and he rose through the ranks, his inability to learn from more recently trained subordinates and his insistence on remaining surgeon-in-charge despite increasingly out-of-date skills (rather than accepting an administrative post), eventually brought about a humiliating, nationally reported investigation of his 50% operative mortality for routine heart surgery.

Several of us had foreseen the entire trajectory of his career, from initial advancement, to many unnecessary deaths, to his final ouster from the military and from surgery. But every medical or surgical field attracts different talents and personality types for reasons good and bad (e.g., His "Now You will listen to Me!")

My own interest in chest dynamics began in childhood as I watched my mother, a severe asthmatic, struggle for breath. And while I was unusually aggressive and unreasonable as a

teenager, I was also observant and helpful to those in distress. Consequently, our father decided I would become a physician and "Do something about asthma!"

My siblings were similarly directed toward a variety of attainable professional goals, and they too were generously supported until self-sustaining at more or less whatever our father decided they should do. This supportive/directive approach eventually positioned both Marianne and me in rewarding careers.

In turn, Marianne made sure that our children and their friends took classes they needed for admission to well-known colleges. But other than that, we followed a more passive supportive non-directive path as they independently explored the apparently limitless career possibilities of their far more complex world.

Medical Training Includes Requirements and Tests

When I graduated from medical school in 1957, multi-year family practice residencies were still uncommon and certified family practitioners did not yet exist. Fresh graduates with M.D. diploma in hand, commonly completed a mandatory post-graduation "internship" year of training in order to sit for a state medical license exam or enter the military.

A state-licensed M.D. was free to enter general practice (as a GP). For that matter, he or she could also specialize in psychiatry or orthopedics or cardiology or radiology (taking and reading X-ray films)—or even brain surgery. Anything the State License covered, he/she could do in an office practice, with or without additional post-internship training.

However, large public (non-profit, not-physician-owned) hospitals normally would not list anyone as a specialist unless he/she had additional formal training after internship. More recently, practices of staff physicians in Public Hospitals have often been restricted to specialties included within accredited

training programs successfully completed.

Successful completion of such training made physicians eligible for Examination and Certification by that Specialty's Board of Examiners. However, simply becoming *Board Eligible* ("Qualified by certified training to undergo Board Examination in that specialty") usually allows a physician to open his/her practice of that specialty in a Public Hospital, pending a convenient opportunity to take or retake the relevant Board Examination.

In general, Public Hospitals expect entering physicians (those who have not yet demonstrated proficiency by practicing a specialty locally for enough years to be grandfathered-in) to challenge and eventually pass the appropriate specialty exam and thereby become Board Certified within a certain number of years.

Upon completion of training in General Surgery, I became Board-Certified in General Surgery. And soon after training in Thoracic and Cardiovascular Surgery, I became Board Certified in that field, more commonly then known as "Chest Surgery". The latter more limited term was descriptive of pre-1960s practice in our specialty—before heart and large blood-vessel repairs became routine—when chest tumors, infections and injuries predominated.

In 1965, being Board Certified was rare in Alaska, and generally irrelevant for medical practice. Soon after Marianne completed her Pediatric residency in Iowa, she became Board Certified in Pediatrics. Then while our four children were young, she worked part-time in the Pediatrics Clinic at Elmendorf Hospital, where she gradually focused on behavioral problems (a natural interest, given that both of her parents were psychoanalysts trained by Freud).

Eventually she took a fellowship at L.A. Children's Hospital before opening her solo Behavioral Pediatrics practice in Anchorage. Her subspecialty, now known as Developmental

Pediatrics, evolved its own formal training requirements and Certification. But because Marianne was a Behavioral Pediatrician before Developmental Pediatrics existed as a recognized subspecialty she, like other practitioners of that time (including early teachers in that new subspecialty) was "grand-mothered-in".

However, unlike those in high-earning sub-specialties based upon expensive tests and procedures, Marianne soon was busy but her income has always lagged that of an average pediatrician. Fortunately, many of her low-income patients had Medicaid support. But while taking a careful complete history remained essential to her evaluation, costly testing rarely helped, and the frequently necessary follow-up interventions were essentially non-remunerative. In other words, her Developmental Pediatrics practice has Baumol's cost disease (see page 400).

Younger physicians often leap from Board Eligible in some specialty to "grandfathered-in" for hospital privileges in that hospital and specialty. Usually this is necessitated by their inability to pass the relevant Board Examination, despite which their peers may conclude that they are good or friendly or polite enough to continue their hospital specialty practice.

It wouldn't surprise me to learn that specialties such as Internal Medicine formerly raised or lowered the bar for certification according to their perceived need for new recruits. However, after flipping through my credentials, the only question my GP interlocutor asked before granting my Iowa Medical license was whether I planned to practice in Iowa after training—which I promised not to do.

Board *Recertification* - a separate, subsequent issue - is discussed later. Current hospital rules and regulations—or malpractice insurance carrier requirements—or medical society guidelines—or State Medical Board regulations—usually only set vague limits on specialty practices.

Other than those restrictions, and barring formal patient complaints or malpractice lawsuits (which formerly were also mostly ignored by "Medical Society or Hospital Authorities"), all physicians are free to offer any lawful services within their own offices. And an occasional doctor—even a well-trained one—may go off on a tangent from the standard, widely accepted, medical treatments that they were taught.

Thus Franseen pioneered the electrocoagulation of skin cancers, and Deepak Chopra pursues his own personal or religious theories of treatment; others perform acupuncture, or prescribe herbal remedies, or promote costly but unfounded treatments like chelation, chiropractic or scientology.

Summary: Only in medically remote rural areas like Twillingate (in the fifties) or Alaska (into the 1970s), could a physician with just an internship year of post-medical-school training, regularly perform major elective operations.

My selection of a surgical career

During senior year in medical school, we students all applied to a nationwide internship matching program that somehow more-or-less correlated our desired postgraduate training programs and the interest those programs had in us.

At the time, more hospitals offered very-low-wage internship positions than there were physician applicants to take them. Consequently, we all matched to an appropriate general or specialty internship somewhere.

Openings that remained were then partly or entirely filled by foreign medical graduates. After internship, most of our cohorts undertook several more years of resident-level training in some specialty, usually based at a hospital or medical center.

In part, I pursued many years of residency training because medical schools like Harvard were elitist institutions where only professors, physician specialists and researchers

were viewed as competent. In contrast, local medical doctors (LMD's) were often the butt of jokes for missing obvious diagnoses or otherwise performing poorly.

One reason I became a surgeon was that surgery happened to be my last senior-year specialty rotation. While learning about other major specialties had been interesting, none appealed to me as a lifelong occupation. Thus surgery seemed my best option until I rotated through general surgery and found it merely interesting as well. But by then I was already matched—it was too late to change—and besides, until I encountered chest surgery, I knew of no better option.

Several aspects of chest surgery appealed to me. *It was a field in ferment.* There was little agreement on principles of chest physiology, or when and how to perform chest surgery. Yet chest dynamics seemed straightforward to me, a simple matter of pumps and pipes, pressures and flows, as I later explained for the third time in my Manual of Thoracic Surgery, 2nd ed. (still available through Amazon.com).

Furthermore, it was exciting, for incremental changes that barely improved each cycle of the patient's blood or air pump, might soon have dramatic cumulative impacts that saved many lives. In addition, chest operations made sense while poor outcomes often had preventable causes that could soon be identified and thereafter avoided. And intuitively, I already understood a lot about breathing from having watched my mother struggle with asthma. Hence I felt I could contribute.

Upon entering medical school, my expressed goal - rare at Harvard - had been to become a "Simple Country Doctor." For I enjoyed rural life and helping people—making their lives better. And surgical skills were obviously important for a physician intending to work in a remote location like Twillingate Island. In addition, I was fast, strong, steady, decisive and good with my hands—though I never achieved the manual dexterity of an average seamstress.

Specializing in psychiatry, with its endless talk and inconsistent progress, seemed unrewarding. Nor was I patient enough to enjoy Internal Medicine, where weeks of tests might suggest nothing was wrong. Also I found no validation in making obscure diagnoses of conditions that, unfortunately, we could not treat. Nonetheless, during those miserable years of training in general surgery at Boston City Hospital, my decision to become a surgeon often seemed less than brilliant.

Of course, after enduring the first year, it also became a matter of "sunk costs"—as those who ran the Vietnam War could attest—since quitting meant admitting I had endured a lot of misery for no good reason. Many decisions on what specialty to enter are still made for equally immediate or minimal reasons.

For example, as of 1993, Canadian family doctors were required to take a two-year rather than a one-year residency. At the same time, more spaces opened up in specialty residency programs. So since they faced at least a two-year residency anyhow, an unexpectedly large number of Canadian medical school graduates chose to enter specialty training without first doing family practice.

Knowledge is the useful compilation of lessons learned

It is often said, though it certainly was not true for me, that "You will never again be as up-to-date as you were on the day you completed your residency." And every medical hatchling who emerges stuffed with plausible theories soon discovers the unspoken corollary, "You will never again make as many mistakes as you did while learning if, when and how that information should or ought not be applied."

Obviously, any form of this statement and corollary are only relevant while physicians try to remain well-informed. Nevertheless, looking back on the evidence-based, hence scientific (because falsifiable) classroom-type lessons to which

I was exposed during my 20 years of high school, college, medical school and surgical training, it seems clear that almost nothing taught then would be considered relevant today.

This apparently absurd statement is not meant as a criticism of my high school, college, medical school or didactic surgical training (though such criticism was surely warranted). Nor do I suggest that a good science education just represents another ticket to a high-paying job that any intelligent high school graduate might learn to do as well—though that too could be the case.

For while high school and college science courses filled my head with randomly selected, soon-forgotten-or-outmoded information, they also offered many options for constructing an expandable framework of knowledge based on innumerable collages, message boards, files, hangers, shelves and other sites where additional incoming information just might fit and contribute to understanding.

Eventually, some parts of these options were included in my personal, uniquely organized, mental warehouse wherein meaningful concepts, ideas and behaviors could be examined, matched and rearranged for useful comparisons, revisions, connections, disassembly, and retrieval until discarded or lost.

Finally, the above subtitle does not imply that any intelligent person—endowed by life experience with a bit of common sense and willing to do a lot of reading—could open a successful medical practice. Yet some imposters manage to practice medicine for years before being caught. Has anyone ever determined how well these bounders served their patients?

Indeed, ought we be upset if an imposter forever evades detection by doing a decent job for a fair price? More generally, I suspect that a good hands-on apprenticeship (externship, internship, residency or whatever) is probably the most important pre-practice aspect of formal medical training.

Few would deny that some talented nurses and physician assistants—who may initially not have had enough confidence, time, money or interest to undertake medical school—have since proven themselves more caring, competent, honest, intelligent or technically skilled than many physicians. Just as competent foreign physicians occasionally take better-paying nursing jobs in America before returning home to open their own medical practices.

We regularly expect more of some physicians than they can deliver. And undoubtedly we expect less of some nurses and PAs than they are capable of providing. In business, people who started in the stock room occasionally become excellent corporate CEOs. A few top-level managers may end their careers in the stock room as well.

But as Business Week recently pointed out, our traditional expectation of individual betterment through intelligence and hard work is increasingly an exception rather than the rule. In other words, the "class" you are born into increasingly determines your occupational destiny unless you somehow complete college.

Our national dream of a classless society was expressed by Thomas Jefferson in the Declaration of Independence. “We hold these truths to be self-evident: that all men are created equal; that they are endowed by their Creator with certain unalienable rights; that among these are life, liberty, and the pursuit of happiness.”

So with both China and India now graduating more scientists and engineers than the USA, an increasingly powerful argument can be made for free tuition and appropriate federal-tax-supported subsidies at enough State Colleges so no one seeking a college education is denied on the basis of poverty.

For in case you haven’t noticed—in addition to the flight of manufacturing, we are rapidly losing white-collar jobs and much of our technical services sector to well-educated folks

overseas. So would our nation's health benefit or suffer if those who finished medical school could not automatically expect life-long top billing and super salaries regardless of whether they remained up-to-date or how well they performed?

After all, Universities occasionally offer professorships to outstanding individuals who have no postgraduate degree. So does any field actually benefit from a glass ceiling? Might it even be a worthwhile experiment to admit a few experienced nurses and PAs directly to an internship or residency if they successfully challenge an appropriate examination?

On the other hand, if a physician repeatedly fails his/her "Practice outcomes" audit, shouldn't that lead to a reduced level of patient-care responsibility and compensation—or even a job in the stock room?

The point being made here is that science is an ongoing process rather than a result. And as medicine becomes increasingly scientific, it will outdate ever more swiftly. By 1980, an estimated 600,000 biomedical articles were published annually, and the half-life of medical knowledge was about seven years.

Today, with many more journals and articles, half of all current medical knowledge becomes outdated within about four years. And some claim that total cultural information doubles every two or three years.

Science is our most important tool. It works best when kept sharp. And the most rewarding applications of that great tool tend to be those that reflect deep empathy for life and the human condition, as portrayed by innumerable great minds throughout human history.

Which leads to the inevitable conclusion that a formal education only succeeds insofar as it encourages a lifetime of learning, including the frequent reexamination of strongly held ideas and beliefs.

Wisdom lies in sensing the applicability of Knowledge

The torrid pace of present-day advances in matters scientific and technological, assures us that medical specialties and subspecialties will continue to rise, fall or change ever more swiftly—often beyond recognition—as the years pass.

However, modern medical education represents such a huge effort and expense that one might reasonably expect those who finally achieve high medical specialty status to resist, or at least seem disinterested in, advances that endanger their hard-earned eminence.

Here physicians have an initial advantage over automobile repair persons, construction workers and professional pilots who also must regularly acquaint themselves with new machines, materials and methods, for at least humans, old and new, are still made of the same right stuff.

But humanity's inherent self-protective conservatism also explains why possibly important low-cost medical advances—as mentioned in the treatment of peptic ulcers and skin cancers, or discussed later in connection with coronary artery disease—often arise in out-of-the-way places and have relatively few advocates.

Thus even the most well-intentioned physician might feel a twinge of empathy for the young Saint Augustine who—torn between his sexual appetites and his love of God—fell to his knees in the garden after another immoderate night and prayed "Oh Lord! Strengthen my belief and bring me continence, *but not just yet!"*

Similarly, moral young physicians everywhere sincerely hope that medical advances will soon provide a simple inexpensive cure for the devastating illnesses they have just learned to treat. But in the meanwhile, they plan to prosper by applying the difficult, dangerous and expensive therapies they were taught.

And if good doctors sometimes resist advances that threaten their position, it is hardly astounding that lesser practitioners regularly become hopelessly out-of-date, hence dangerous to patients who might benefit from a more modern or moderate approach.

It has long been clear that most consultations with a family doctor, clergyperson, witch doctor, faith healer, shaman, homeopath, herbalist, naturopath, acupuncturist, scientologist, music therapist or chiropractor—are by the "worried well" seeking reassurance, a check-up, a test, or attention for some minor self-limited condition. An additional small number of health-related visits are for serious conditions where modern medicine thus far offers little more than hope.

Some patients merely seek information on normal growth and development, while others come in for complaints related to loneliness or alienation, or to discuss marriage, parenting, life-style or sexual problems, or even to seek advice on educational issues from someone they trust to protect their privacy. Many such visits by the worried-well are nowadays criticized as "the medicalization of modern society".

Naturally, some advice patients get will be good and some bad, whether Doc's opinions were uploaded in medical school or developed from life-experience, personal sexual preference, or even watching football games and soap operas on TV.

Often he or she will just be winging it, as the Oracle of Delphi used to do upon exiting her inner sanctum after sniffing near-fatal doses of gases that seeped up through deep fissures in the cave floor from volcanically heated oily bitumen deep below. These gases included CO2 and hydrocarbon/anesthetic gases such as ethylene that can cause euphoria, violent frenzies and delirium—see New Scientist, Sept. 1, 2001 pp40-42).

So where else might one go—besides the Doctor's office—to discuss the nuclear family and its problems?
Well, self-help books are extremely popular. And many groups

meet regularly to discuss specific problems or medical conditions of mutual interest (relevant meetings and support groups are often listed in local newspapers or on the web).

A great many Internet sites also compete to provide information, misinformation and disinformation that may address some of these questions or needs. Of course, Internet sites don't necessarily respect privacy, so you might soon be inundated with unwanted or embarrassing offers for related products and services.

Anyhow, the office visits of patients with medical questions or misunderstandings often feel more important than they may appear. Thus pre-adolescent males and their parents are sometimes mightily concerned to notice a soft moveable bit of breast tissue under one or both nipples. But this usually becomes a non-issue when they understand that it likely represents a temporary early manifestation of the adolescent growth spurt.

And more than one young child has been repeatedly punished for playing with his/her belly button until it got red and sore - before a pediatrician eventually found that the child was born with an otherwise inapparent connection between bladder and umbilicus. Then, as soon as simple surgery closed that minor bladder leak, the "misbehavior" stopped.

A healthy looking young woman once entered my office in tears, having just learned she had four months to live. Between sobs, it turned out she had an ordinary hiatus hernia with occasional heartburn. I called her doctor to find out what was said. Apparently, Dr. X tried to reassure her by pointing out that if she took Tums occasionally, she could "go for months" with her minor complaint, before needing further evaluation.

One could justifiably claim that many patients might derive equal benefit from any sort of practitioner, or less expensively, from complaining over coffee to a friend, or from working in the garden, or taking a stroll in the forest. On the

other hand, it really can matter who investigates and treats patients with significant treatable illnesses or injuries.

But change sneaks up even on the best. And it is currently unclear how a busy physician might possibly hear about, let alone evaluate carefully, all potentially relevant medical advances in a broad field like internal medicine or family practice. *Perhaps a cheap, friendly, regularly updated personal pocket computer will soon become a valued additional source of medical information and routine health advice.*

However, for now, every practicing physician must continue to evaluate and assimilate new skills and knowledge. And each will undoubtedly absorb different lessons at different speeds for different purposes, based upon previous training, abilities, interests and experiences. So it follows that no physician is ever completely knowledgeable and unbiased.

My father-in-law (a psychoanalyst) made the relevant point that “The greater the illusion, the greater the disillusion.” In other words, physicians should avoid appearing “All knowing” and they should not try to be “All things to all people”.

Rather, doctors and patients both need occasional reminders that even the finest medical schools only produce fallible (hopefully intelligent and well-intentioned) humans with special skills. Also that all doctors must still study a lot in order to remain current in their chosen medical field.

That is just another reason why a truly "informed consent" for an operation is so important, yet nearly impossible to ensure, as surgeon and patient explore alternative options together before initiating surgery.

For a surgeon soon learns that his or her personal preferences will set the course for most patients who have decided to place their lives in her/his hands (see also Informed consent as part and parcel of the scientific inquiry, Lancet, June 28, 2003 p2171).

A recent study at Dartmouth-Hitchcock Medical Center in Hanover, N.H. suggests that patients who take home videotaped explanations of potential benefits and possible pitfalls of a proposed back operation, are about 30% less likely to undergo surgical repair of their back problem than those who rely upon a physician's oral presentation—which has already been largely forgotten by the time the upset patient reaches home.

That the patient's welfare must always be paramount hardly seems a controversial statement. Yet we all recognize how slow times can encourage an ambitious plumber or roofer to visualize an expensive rebuild where a simple patch might otherwise suffice. Similarly, some surgeons perform profitable procedures even when they personally would not have selected such an inexpert surgeon or such a dangerous or costly procedure for themselves.

The solution to this problem might seem straightforward - a matter of quality control, but physician quality control is never easy or completely achieved. For all sorts of humans become surgeons. And at various stages in their evolution, different surgical fields attract surgeons with quite different personal characteristics.

So while one surgeon might enjoy doing the same procedure the same way, day after day, another might not. And a pre-technology joke insisted that "An Orthopedic Surgeon must be "Strong as an ox and twice as smart." Furthermore, all surgeons err, at least occasionally.

Nevertheless, a few surgeons are generally recognized as "the best around" by reason of their above-average skills, judgment and caring. And most surgeons are "good enough"—their usual skills, judgment and caring generally suffice.

Sometimes our diagnostic tools are inadequate, or they offer accurate but irrelevant information that may mislead us. For example, while 70% of adults have had have episodes of

back pain—and a third of us have had back problems within the last 30 days—"In 85% of cases, it is impossible to say why a person's back hurts" and nearly everyone gets better "with or without medical treatment."

Furthermore, in two out of three persons with no current back symptoms, MRI examination of the spine will show one or more major bulging, protruding, herniated or degenerated intervertebral discs. And persons with acute back problems who have suggestive MRI findings at one vertebral level, often have symptoms suggesting nerve impingement at an entirely different level—while their real problem might simply be sitting upright too long at the computer.

In one study, backache patients were randomly assigned to either an MRI study or a simple back X-ray (which can show tumors or fractures but not disc abnormalities). Those who had the MRI (which reveals degenerative disc disease) predictably received more intensive treatments, more doctor visits and more physical therapy, acupuncture, massage, and chiropractic manipulations, as well as more back surgery.

But despite greater patient satisfaction with their care, the MRI group fared no better than those who had a plain back X-ray and minimal treatment. In 1998, American back-pain-patient expenses totaled $26 billion (two and a half percent of total health care costs), up from $20 billion in 1984 (adjusted for inflation). This difference reflected increasing costs and complexity of treatment per case rather than more backaches.

Yet no one has shown any treatment to be better than "no treatment" for the vast majority of backache patients. So an ongoing randomized trial was set up to compare the results of "surgery" with "no surgery" in 1000 patients with herniated discs, spinal stenosis (a narrowing of the spinal canal that often occurs with lack of exercise such as walking, arthritis and aging) or degenerated spondylolisthesis (a slipped vertebra).

Some providers allegedly fear that those trial results may

take away their practice (Anchorage Daily News, Feb 9, 2004 ppA1 and A4). It seems likely that—rather than undergoing back surgery—the usual backache in a desk worker (a functional problem) might respond best to frequent breaks for short walks, occasional horizontal naps and work in a comfortable tilted-back chair with feet upon an ottoman, using a portable computer properly positioned on a tilting hospital-type adjustable table.

Sometimes a surgeon performs a procedure ineptly or carelessly—especially when unexpectedly confronted with a problem beyond his/her current abilities, or if tired or annoyed, or late for a golf game. A few surgeons are chronically unsuited to their field because of poor judgment, inadequate knowledge or skills, or physical or mental limitations ranging from poor eyesight, poor coordination and poor character to addiction (alcohol or other drugs), indecisiveness, lack of empathy, or an inability to lead, control, or cooperate with the operating room team.

When such lesser surgeons describe the risks, costs and benefits of a proposed procedure to a potential patient, inner demons may drive them to make dramatic declarations such as "I can guarantee you a good result" or "I never make mistakes" - though neither remark is credible. And if a patient asks, "What are the most likely results and complications with this procedure?" a lesser surgeon may quote or even misquote the published results of an experienced group rather than honestly relate his/her own meager experience or dismal outcomes.

In contrast, the competent surgeon probably has enough confidence and honesty to present her/his own outcomes in a comprehensible fashion. So when patients ask their ultimate trick question "What would you do if it was your wife?" the lesser surgeon is prepared to look that patient in the eye and lie. For only the best can prosper by discussing their results honestly.

Even those who are usually skillful or smart enough must admit to themselves and their patients that better surgeons are probably available, or convince themselves and their patients to proceed in hopes that both may do well. Of course, every sailor encounters—and every skier finds—and every surgeon discovers—unexpected limitations that only become evident upon entering weather/terrain/situations he or she cannot handle - at least this first time.

In an emergency, I have occasionally assumed that I would have been granted permission to operate, had the injured or sick patient been in proper condition to evaluate and provide such permission. Under these circumstances, we proceeded with attempts-to-repair on my responsibility—simply assuming permission rather than endanger a dying patient with further delay.

Once I even operated despite a sane adult's express refusal, as I felt he was unable to make a rational decision or endure prolonged discussions due to his deteriorating condition. In this case, I had been asked to see a Russian Muslim fishing-boat Captain who, at the height of the Cold War, had been evacuated to the Alaska Native Hospital for emergency treatment of a severe chest infection.

It turned out that while at sea, an inadequately treated lung infection had extended through the left chest cavity into his pericardium (a sack surrounding the heart). With that infected fluid (pus) now compressing his heart, he needed prompt operative drainage in order to survive. Through his interpreter, this toxic stranger-in-our-strange-land refused any surgery—as well as all contact with female nurses.

But when his blood pressure went too low for him to survive further discussion, we whisked him to the operating room and went to work. Thereafter, he was one of our most grateful and cooperative patients. As he regained his previous good health, he also became friends with all the female nurses.

Unsolicited Opinions Rarely Change a Patient's Decision

As a young resident, I once tried to convince a patient that the X-ray therapy his private doctor had ordered was useless for treating the benign tumor (bronchial adenoma) that nearly blocked his airway. I urged him to consult a far more competent surgeon in the same hospital who could actually remove that tumor.

Thereupon the patient—a professor with whom I had often chatted—panicked, refused to listen, and avoided further contact with me. He suffocated the following week. Had it become known, my interference in the care of another doctor's patient would have been considered "highly unethical" and might have caused me problems.

Since then I have several times suggested important alternatives to another doctor's patients that could have helped them out of life-threatening medical circumstances, but none listened. For once a patient places faith in a physician, one might as well try to alter his or her religious beliefs.

Perhaps "Free advice really is worth exactly what you pay for it." In my experience, unsolicited second opinions rarely if ever change anything.

CHAPTER SEVEN
Up The Long And Dusty Trail to Market

Anchorage. Heading for our future home. Assisting at surgery. Chief of Surgery. Retraining in heart surgery.

In the summer of 1965, we drove from Iowa to Alaska in our new four-wheel drive International station wagon with three young children and a college-age babysitter (who soon married the boy next door), pulling a retired double-axle U-Haul trailer packed with everything we owned from potty chairs to the boards and bricks of a bookshelf.

A friend who enjoyed fishing volunteered to deliver my old Pontiac and canoe. And Marge, an Iowa surgical tech, drove up independently to become my trusted technician and secretary until she married a GI and moved on.

It had long been my intention to settle in Alaska, where I had worked summers (1954, 1955) for the US Fish and Wildlife Service out of a remote shack we built by a small salmon stream in Prince William Sound. As a weir attendant (GS-3), I earned $17.50 per day, which included "room" (the shack) and "board" (whatever I caught or could dig up at low tide).

Mary (my first wife) accompanied me in 1954 but chose not to return in 1955. Consequently, that second summer had been lonesome but idyllic, with thirteen black bears, 60 harbor seals and several fat medical books for company, lots of clams and salmon to eat, and one or two brief human encounters a month—in other words, an uninterrupted growth experience.

Anchorage

Marianne insisted that I visit Anchorage—Alaska's largest city—before she would begin packing. It turned out that few if

any Alaskan physicians foresaw a need for an up-to-date board-certified chest surgeon. Indeed, most spoke glowingly of their “very good relationship with Virginia Mason Clinic in Seattle—only three hours away by jet.”

Several sent word that they were too busy to see me at all. But by then I felt confident of my surgical skills, and certain that they would eventually come around. Later I learned that the Mason Clinic was especially dear to Alaskans because it had a separate area reserved for Alaskan patients where sick folks and their visitors were likely to meet old friends.

And furthermore, no matter what sort of debacle preceded a referral, Virginia Mason doctors routinely complimented the work of Alaskan physicians who sent them cases. In contrast, residents at the far less “Alaskan-dollar-dependent” University of Washington Hospital often asked incoming patients “Who the Hell did THAT to you?!!!”

Of course, there was much to question about the training of Anchorage doctors in those days. For Board Certification was irrelevant and many older doctors - having grown up during Prohibition - were alcohol-dependent. Indeed, patients often declared Dr. X a better surgeon “when drunk” than Dr. Y was "when sober".

Nor did most physicians think that having sex with a patient was unethical. Indeed, HR, a personable, competent, hard-drinking physician and surgeon, developed an almost cult-like following among close to a thousand Anchorage women. For HR truly loved all women—tall, short, fat, skinny, homely or beautiful—and they loved him.

In addition, while he surely annoyed hundreds of husbands and caused countless divorces, he allegedly helped to support his known descendants, whether they originated inside or outside of wedlock. But he was one of a kind—a man of his time—and if alive and active in these more politically correct days, he would surely lose his medical license.

In 1965, Alaska's few board-certified surgeons worked closely with and got referrals from local general practitioners, many of whom also maintained their own surgical practices in local hospitals. Anyone could list himself or herself as a specialist, and many did. I was especially taken by an older GP (general practitioner) who listed himself on a Clinic's specialty board as an Orthopedist one year and a Urologist the next.

Not surprisingly, these libertarian circumstances also gave surgeons freedom to devise innovative solutions for common problems. For example, GH, Alaska's first Board Certified general surgeon (who also did general practice), apparently cured a patient of ovarian carcinoma. At least she was well and appeared tumor-free ten years later, despite cancer having penetrated through her ovary's peritoneal surface.

Presumably GH was able to achieve that unlikely cure because—after the standard removal of uterus, ovaries, all visible tumor and the omentum (a mobile fatty layer up front)—he immediately and compulsively irrigated every crevice of her entire abdominal cavity with a radioactive gold solution that he then left inside.

By thus instilling radioactive gold before early postoperative healing and scar formation could commence, GH maximized the potential impact of that treatment. For ordinarily, within a day or so, various internal surfaces start to heal and adhere, and thereafter such isolated pockets can easily shelter a few residual ovarian cancer cells from subsequent intra-abdominal or intravenous chemotherapy.

Those internal adhesions easily hide tiny tumor implants from detection if a patient undergoes a low-benefit "second look" re-exploration. In this respect, modern chemotherapy for ovarian cancer—which is costly, dangerous and consistently non-curative when begun after surgery—is like "Locking the barn door *after* the horse has run away."

GH's choice of radioactive gold was sensible, since gold's radiation has a short effective range—just right for free-floating cancer cells or tiny surface implants. And any tiny particles bearing radioactive gold were likely to drain away through the same nearby lymph channels and lymph glands that might harbor bits of tumor.

But while the routine use of intraperitoneal radioactive gold at the time of an initial ovarian cancer operation could easily be investigated and tested against other available treatments, radioactive gold is relatively cheap. Furthermore, it—and the temporarily radioactive patient that results—can be a nuisance to handle. And radioactive gold would not be needed very often.

Hence only the patients might benefit by its promotion. In addition—as with physician resistance to learning about electrocoagulation of skin cancers—simply pouring radioactive fluid into an abdominal cavity and sloshing it about "isn't real surgery". Nor would it appeal to those gynecologists who enjoy showing how swiftly they can complete the few procedures they are trained to do.

Thus many (most? all??) gynecologists quickly close the abdomen after doing "their" operation for ovarian cancer without giving a thought to carefully exposing every intraperitoneal surface to an effective anti-tumor solution. They then hand off their healing postoperative cancer patient to an oncologist (chemotherapist) to do her/his (by then, fatally delayed) thing.

In contrast to many speedy surgeons, GH was a truly meticulous surgeon who could take hours to get everything exactly right before closing. He had arranged to have radioactive gold available for this case. And he waited patiently in the operating room while the solution was prepared and its radioactivity measured.

As mentioned with Mr. Zackoverich earlier, when

responsibility for a patient is shared (here between a gynecologist and an oncologist), no one may "feel in charge" or have actual authority over other consultants. So it is worth repeating—every hospitalized patient needs one physician-in-charge who can request and modify or veto consultant proposals.

Heading For Our Future Home

The Alaska Highway was a scenic 1200-mile dirt-road dust-bath. Our only adventures occurred as visibility fell to zero behind each passing truck. But I was sure there would be work ahead after several small stops along the highway—and even U.S. Customs at the Alaskan end of that dirt road from Dawson Creek—spotted our distinctive, overloaded vehicle and reported inquiries about our progress.

As it turned out, these inquiries were from my friend (with Pontiac and Canoe), and Marge Y (my surgical tech and secretary), both of whom had pushed ahead rapidly. And on our arrival, there still was no interest in, nor work on offer, for me. However, Marianne soon became gainfully employed at the Elmendorf Air Force Hospital Pediatric Clinic, where she worked part-time until our children were older.

Thus sixteen years after entering MIT, I finally opened my solo chest surgery practice in Anchorage—one year after North America's largest recorded earthquake and subsequent tsunami had damaged South-Central Alaska - a huge area with just a few roads—inhabited by about 100,000 people in Anchorage and several small towns.

We chose Anchorage because it was Alaska's largest town, though its population then was too low to keep a full-time chest surgeon busy. But Anchorage was the largest town I was willing to live in, and the smallest city Marianne would even consider after two years in a rural Iowa farmhouse on an active corn-and-sheep farm.

I had enjoyed the sounds and smells of farm activities going on around us, but she now wanted a house near shops and schools where honeybees didn't swarm in the walls and drop from light switches while I chased sheep out of the corn and repaired fences by moonlight.

Anchorage's four hospitals included Providence (a new 90-120 bed Catholic Hospital), a slightly smaller doctor-owned, private (formerly Presbyterian) Hospital downtown and the Air Force Base Hospital where Marianne worked – plus the rambling old Alaska Native Hospital near the Alaska Railroad terminal where the US Public Health Service provided health care for Alaska's Indians, Inuit and Aleuts.

None of these Hospitals yet had heart monitors, and vascular surgery was just being introduced. Although I soon acquired surgical privileges at institutions all over the State, I still had plenty of free time to hike, sail, ski, fly, and write a couple of "how to do" books that proved useful for chest and general surgeons.

Although I could easily have offered electrocoagulation services and competed for general surgery patients, I preferred to become known as a thoracic and cardiovascular "specialist". So my initially meager income remained at least a thousand dollars below our low office overhead for the first five months.

Thereafter, I was increasingly asked to assist other surgeons working in many different specialties. Assisting at surgery often paid a bit, broadened my experience and helped me maintain my skills. And an occasional patient was sent to me for a diagnostic procedure or for major surgery.

On Emergency Room call, I handled a wide variety of acute cases—ranging from a child with intractable epilepsy (that responded nicely to my open-drop ether anesthesia - another "outmoded technique" that worked well) to many consultations on patients with severe injuries.

For based upon my wide interests, referring doctors

increasingly concluded “Cardiovascular Surgery” was surgery on anyone “bleedin’ bad.” Although sick patients usually appreciated my rapid diagnosis and/or correction of their problems, a few lesser talents among referring doctors did not.

One "Internist/Chest-Medicine" physician greatly preferred having less-qualified others do surgery upon his lung patients, for those patients then required many days of his costly intensive care and weeks in hospital—while comparable patients of mine often went home to convalesce after two or three days.

On occasion, when I assisted less experienced surgeons in other specialties, the lack of progress soon made it evident that I would have to complete this operation. Although Dr. C (a Scottish urologist) seemed happy for such skilled surgical support, and even woke me one midnight to tow his disabled car home, he always billed strategically, which usually left my assistant’s fee unpaid as part of the insurance “deductible”.

Other surgeons also called me to rescue their patient from some "iatrogenic" (unintentional, physician-caused) intraoperative injury to the spleen or a major blood vessel. Under such circumstances, I usually requested that my name not be included as a participant since I was not there at the family’s request and my presence, if it became known, would simply raise awkward questions.

Increasingly, calls came from all over. For example, one gray Sunday, a practitioner in a small town four hours away by car, phoned me at Providence Hospital where I was on rounds and removing sutures. He related that soon after he had inserted a chest tube, his patient’s blood pressure began to fall - and it had now disappeared.

I rushed for my 2-seater “beachcombing airplane” and reached that distant hospital within the hour. By then the young woman was unresponsive (no anesthesia required), and the six pints of blood I had requested were ready, so I quickly

accessed a leg vein and the local operating room nurse (with whom I had previously worked at Providence, and who most likely had suggested I be called) began pumping blood.

It turned out that this unnecessary chest tube had been incompetently inserted for a non-indication ("a bruised chest"). And the tube-insertion had torn an internal mammary artery within the chest. That still bleeding vessel was quickly secured and a new chest tube properly inserted before the fully transfused patient awoke.

She seemed intact so I went to the hospital coffee shop while my nurse friend cleaned up. The patient's husband was having coffee. We chatted casually. I didn't mention my involvement in his wife's care. Soon the nurse allowed him in to see his wife. After the husband returned to the coffee shop, I made a final bedside visit and left instructions.

While driving back to the airport, the referring physician was generous with praise and declared he would send me a large king salmon (he never did). A couple of years later, this same attractive young couple came by my office to express their appreciation, having by then figured out what happened. On their own, they decided not to sue the doctor, who soon moved to another town.

Another day I was called into two different operating rooms by different surgeons who had encountered uncontrollable intra-abdominal bleeding. By coincidence, both patients had a torn artery with a bleeding kidney that required removal. Luckily both patients had another healthy kidney. However, our several hospital-accredited urologists were enraged by this double invasion of their turf. And "Hell hath no fury like urologists pissed".

During the early years, most surgeons took emergency night and weekend calls for one or more hospitals. Initially, our night calls included severe toothaches, since Alaska's few dentists did well despite having unlisted phone numbers and

no interest in hospital work. Eventually, hospital-based dental specialties took over as a less restrictive dental exam allowed more dentists into practice in Alaska - which finally freed us from "toothache call" (at a nurse's suggestion, I usually recommended "oil of cloves" for that complaint).

In those days, most Health Care Insurance companies paid the assistant surgeon 25% of the surgeon's fee. Few uninsured patients could afford to pay, so I routinely wrote off all such debts. At that time it was still legal to charge "insurance only" or cancel an entire bill that the patient found burdensome—which was good public relations and eased the financial impact of illness.

A decade or so later, new Federal guidelines made it illegal to bill any Federal Government Insurance for more than the lowest fee the physician ever charged for that service – which meant anyone who treated a friend or colleague for "insurance only" - or worse yet, who gave free medical care to a poor person, committed "fraud" if she/he thereafter charged any federally insured patient the usual amount.

I simply ignored all this nonsense, though it surely caused a lot of unnecessary aggravation, as physicians might at any moment be required to show that they had made every effort to collect their usual fee from some poor person, friend or neighbor.

Only once did I turn my unpaid surgeon's bill over to a lawyer for debt collection, because the patient's husband—a busy contractor—had put two bullets through his wife's lower mid-chest on New Year's Eve. When called for this case, I had just fallen asleep after a party.

The surgery was complicated but she did well. Because he had voluntarily caused us to do a lot of work when I wasn't feeling all that great, it especially annoyed me that her husband wouldn't pay my $800 fee. But he wisely evaded the high cost of medical care by transferring his assets. His wife soon

forgave him as well. A few years later, with criminal charges dropped, he divorced her. And I never got paid.

Assisting At Surgery

During my slow first year in practice, I mostly assisted Bill Mills, a busy orthopedic surgeon and world-renowned frost-bite expert, who was also widely known for superb reconstructive work on post-polio and cerebral palsy children. Mills regularly asked me to assist him despite his serious doubts about Easterners, and especially Bostonians.

For several years earlier, an Alaskan physician had asked Mills to help a "Proper Bostonian" friend named Bradford Washburn prepare a small article on frostbite for the Appalachian Mountain Club Journal. Because Mills was too busy to answer endless questions, Washburn borrowed a lengthy frostbite article Mills was preparing.

When next seen, that article - reporting Bill Mills' life-experience with frostbite, including many of Mills' clinical photographs - was the lead article in the highly ranked New England Journal of Medicine *under Washburn's name as sole author!*

Washburn - an allegedly wealthy man with no relevant education - had previously been known for climbing Alaskan mountains or shooting nice mountain pictures while being flown over them. But then "Washburn's" article on the Medical Treatment of Frostbite became an immediate classic.

Over the following forty years, despite repeated requests by myself and many others, NEJM neither printed a retraction nor admitted that Washburn's obvious plagiarism had even occurred. More recent NEJM editors appeared to agree that it was all Mills' work. But Alaska seemed far away from Boston.

Washburn insisted he had only published Mills' life-work on frostbite and clinical photos after getting Mills' verbal permission. Many years later, NEJM did develop a new policy

requiring “authors” who submitted articles to attest that they actually had done the work being reported.

But this was decades after NEJM’s 1960’s Editor brusquely dismissed repeated complaints from Mills’ irate friends by declaring “No gentleman from a good Boston family would ever take credit for another man’s work.” Yah, sure! Whatever.

Of course, Mills himself just ignored this entire ruckus for he never complained as a matter of principle. More recently, the Washington Post aired a different accusation about Washburn plagiarizing an entire book. His defense that time was being 90 years old made him forgetful.

Mills commanded a PT boat in WWII, and saw plenty of action before being badly wounded. Eventually he lost a leg. Nonetheless, he went off again to provide military orthopedic-surgical care during the Vietnam War. I considered following him (He was another born leader, and surgery in Anchorage was still slow) but Marianne insisted that I stay home. So Mills had me split firewood for the Mills family until he returned.

Mills eventually reentered private practice and retired in Anchorage as an Admiral, with many medals for bravery (e.g., for removing a live rocket from the chest of a Viet Cong soldier when other surgeons declined). And for the next five years, I mostly assisted gynecologists, general surgeons and a neurosurgeon.

One day I was even introduced to a family as “the world’s best assistant vaginal surgeon”—another unsought honor. But while many hysterectomies we performed were unnecessary, at least Alaskan gynecologists I assisted were skilled at rebuilding a functional vagina.

Chief of Surgery

During 1971, I was appointed Chief of Surgery at Providence Hospital. The previous Chief had resigned suddenly

when a doctor whose surgical privileges were being curtailed, threatened to kill him. No other qualified surgeon wanted the job, so I accepted. But clearly my appointment as "Chief" was no great honor. Additional threats flew as I suspended various operating-room privileges of seven additional physicians “for cause” before my term as Chief expired at the end of 1972.

Something interesting, of which I only gradually became aware during my stint as Chief of Surgery, was that wielding the power to decide who could, or should not, do certain things or even anything in the operating room, made me feel increasingly powerful and righteous. As a lifelong critic of those who let power go to their head, this made me uncomfortable.

Consequently I consulted ever more widely before any action, and leaned over backward to avoid conflicts of interest. Indeed, I never even tried to restrict one incompetent surgeon with whom I directly competed. Consequently, I never completed the “unending” task of upgrading Providence Hospital’s Staff by restricting all surgical privileges to areas of competence. Although every disciplinary decision I made was open to in-hospital or legal appeal, the former was rare and unsuccessful and the latter never happened.

But until I became Chief, I had assumed I would remain immune to feelings of unjustified importance. So now I am even more convinced that built-in safeguards against any (and especially against chronic) abuses of power are essential. After all, it is hardly news that “Power corrupts, and absolute power corrupts absolutely” (Lord Acton).

In its setting, our hospital-based surgeon-credentialing-and-oversight system may have been as good as it could be, for “Chief of Surgery” was a temporary, one-or-two year post held by most of us in turn. But when a Single-Payer system finally comes to pass, it will require a huge cooperative effort and open public transfers of responsibilities, to ensure fair and

adequate public, as well as professional, oversight of those who administer or work within such a system.

In my case, several of the eight physicians that I restricted or evicted from the operating room—plus certain of their buddies—were determined I should never again care for one of their patients. Once again, my income fell below my modest office overhead. So when the unpaid "Chief" job ended, I closed my practice and went off to St. Luke's Hospital in Milwaukee for retraining in heart surgery—six months earlier than planned.

Retraining in Heart Surgery

Ever since we arrived in Anchorage, I had occasionally visited St. Luke's state-of-the-art "open heart" surgery facilities to observe the pioneering work of Alfred Tector—a friend from Iowa City days, who completed his own thoracic surgery training there after our family headed north.

By 1972, the Milwaukee Group's heart-lung-machine-supported coronary bypass operations (using the patient's own leg veins or other vessels to bypass diseased coronary arteries) was sufficiently successful to justify opening a heart surgery program in Anchorage for Alaskan patients.

Naturally, this advance in skills, knowledge and technology, entirely outmoded the heart repair techniques I had learned in Iowa seven years earlier. By this time, Providence Hospital had purchased a shiny new $4,000 heart-lung machine at my urging, which they later sold to me for a dollar to avoid liability for mechanical problems.

In turn, I simplified my own life by giving that $1 machine to John Hillebrand (our Milwaukee-trained perfusionist) who thereafter billed independently for his services. By then the Providence Heart Catheterization Lab was open and providing competent diagnostic services.

Our initial heart surgery team included George Seuffert,

an anesthesiologist, George Rhyneer, a cardiologist, and half a dozen great nurses. We had already tested our new equipment on a couple of large dogs that were supposed to be destroyed. Soon a Government biologist permitted us to support an adult-human-size black bear on our heart-lung machinery before completing his own dissection (part of an ongoing bear pregnancy study).

That full-scale test proved our equipment was adequate, though the operative procedure had a definite slapdash quality. After darting the bear with muscle relaxant in its cage, we had to trundle it to surgery in a deep wheelbarrow and induce anesthesia before the relaxant wore off. Not unreasonably, I belted a 44 (pistol) over my surgical gown to back up the anesthesiologist.

At one point, I even threatened to shoot the bear if George did not promptly relax her. For with our bear flat on her back, and a much-too-small endotracheal tube delivering inhalation anesthesia to both bear and bystanders, both forelegs had been shaved in a wild search for veins to introduce intravenous anesthetic. Then as the operation began, she broke restraints and swung her left foreleg and claws smartly around my back (a true "Bear Hug").

Under such circumstances, no one volunteered to watch her until she awoke, so we never did check for possible brain damage during bypass. Later, I indirectly heard that our Government biologist was not pleased with her shaved forelegs as these, along with my large chest incision, ruined his chance to auction the hide at our Winter Fur Festival so he could buy needed laboratory equipment.

Overall, our initial efforts to develop an efficient open-heart surgery team had made me increasingly nervous. For while I had arrived in Anchorage brimming with confidence, my first Alaskan heart surgery experience had left me sadder but wiser. For our local butcher, the first of three Alaskans on

whom I performed “closed” mitral valve repair (a brief valve-opening procedure done without heart-lung machine circulatory support), had bled to death as a result of my surgery.

Most fatal automobile, airplane or spacecraft accidents occur as a consequence of multiple errors. Here too, several errors by me led to disaster. First, after carefully reviewing all steps of the proposed procedure with Marge, my friend and surgical technician from Iowa City, I let her convince me that we always used a 2-0 rather than a far stronger #2 suture to control the finger-hole in the atrium through which I monitored the valve dilation (my mistake #1).

Secondly, I carefully selected a calm and skilled general surgeon to assist who had never helped on such an operation before, and did not adequately prepare him with a detailed summary of the procedure and his duties ahead of time (my mistake #2).

Thirdly, I did not specifically instruct him to keep his hands and instruments out of the operative field unless otherwise directed (my mistake #3). And fourthly, I did not foresee that he might respond to a sudden gush of blood by trying to clamp the unclampable heart (my mistake #4).

So when that too-weak thread snapped and a momentary gush of blood followed (itself a common and easily remedied non-event), my assistant—the just-removed clamp still in his hand—naturally tried to reapply that clamp. Unfortunately, the scissor action of that clamp on the distended heart initiated a full thickness tear that quickly extended around to the circumflex coronary vessels behind the heart.

However, heart surgeons in the 1960’s had not yet developed safe ways to access or operate in this area without heart-lung machine support (which was still technologically imperfect with its own considerable risks) And merely lifting the heart for visual exposure made the heartbeat ineffective.

Nor were heart surgeons yet doing successful coronary artery bypasses if that became necessary. So while major bleeding from this "no-man's land" was soon controlled, I reluctantly closed his chest despite an ongoing minor ooze of blood (my mistake #5). The patient awoke and lived several hours, but eventually died of blood clot compressing his heart (another easily remedied condition in later days).

I heard that his wife considered a lawsuit for malpractice, but decided against it. I appreciated that decision despite her understandable feelings of anger and loss; and I still carried malpractice insurance at the time. However, I doubt she could have won, as heart surgery deaths were still common then, and "closed" or "open-heart" repairs remained a work in progress.

Nevertheless, I had nightmares about this disaster for years thereafter, and never again entered my former butcher's workplace. Another hard lesson had been learned. Our next two valve jobs went smoothly. And before long, further technical advances in heart surgery made "open" (heart-lung machine supported), visually directed mitral valve repair, better and safer than our previously preferred, closed option.

CHAPTER EIGHT
We Bring Heart Surgery to Alaska

Disputes between surgeons are, unfortunately, common. Painful experience informs medical judgment. Medical malpractice insurance in Alaska. Other observations on medical malpractice insurance. Our annual fuck-up conference.

During my three-month heart surgery fellowship at St. Luke's Hospital in Milwaukee, I had to jam my private practice ego back into a white "resident's suit". This was not always easy, and several Milwaukee physicians who tried to play the blame game found me rude.

But there were lots of exciting new things to learn, and I was back on call every other night—working with other mid-career fellows, some of whom became lifelong friends. Much of my time was spent assisting Alfred Tector, by then a nationally respected heart surgeon—who taught me a great deal.

Years earlier I had requisitioned Tector out of his general surgery residency in Iowa City to work for two weeks in Nome, Alaska when that town's hospital desperately needed a physician. Now on my Sundays-off-call, Tector sometimes left me at the Milwaukee Zoo near his clinic. And there I would wander happily for hours before walking eight miles back to St. Luke's.

Tector and his wife Joy, later visited Anchorage to help us jump-start our open-heart operations. Our first two patients really appreciated his presence and Alaska's heart surgery program opened with good vibes. Eventually I performed 700 elective or emergency open-heart operations for all sorts of problems—though the vast majority were bypass procedures for coronary artery disease.

When I retired in 1983, my cumulative open-heart

operative mortality rate on emergency and elective surgeries combined, was roughly 2%—still too high, but no beginning heart surgery program of that era had better overall numbers. Naturally, our heart surgery referrals began slowly, so I still had time to assist in general surgery until 1976.

Thereafter, heart surgery occupied most of my time. And with busy cardiologists referring Alaskan patients to me, most of the physicians I had restricted or offended while Chief of Surgery either retired or forgave me. Indeed, several times I overheard staff doctors bragging that Providence Hospital was far more strict about surgical privileges than any other Alaskan hospital (and see Lao-Tsu quote, page 312).

As one might expect, the advent of heart surgery in Alaska was itself associated with a swift and widely beneficial upgrade of nursing care, laboratory skills and hospital facilities. And soon our usual heart operations went so smoothly that some general surgeons (who occasionally assisted on our team) concluded that I was an over-rated fathead—and that heart surgery was exceedingly simple, boring work. And they were at least partially correct on all counts.

So when I eventually advertised for "competitors" after seven years of always being on call (for I neither wanted to take on more headaches nor make more money by hiring a partner), various Providence Hospital Chiefs of Surgery promptly approved heart surgery privileges for all who applied, even those who were not fully trained or competent.

The first two arrivals were Mohammed Sarwar and MH. Mohammed Sarwar was a fully trained, capable thoracic and cardiovascular surgeon from DeBakey's famous program in Texas. MH was a general surgeon who spent one year as a fellow in Denton Cooley's famous program—also in Texas.
I was pleased when Sarwar entered solo practice in Anchorage: We enjoyed a good working relationship and soon shared office space.

But if the local rumor at the time was true—that Cooley really did endorse MH as “better than anyone in Alaska”—then this strong recommendation may have resulted from Cooley overhearing my joke at a surgical meeting that “In Alaska, a coolie is just a quickie in the snow.”

It took several years of "poor results" to end MH’s career in Alaska. On the other hand, after I helped Sarwar through a couple of ordinary early complications, we remained friends and competitors until I retired—at which point, he generously continued to provide office space for Marianne's busy private practice in Behavioral Pediatrics.

Disputes Between Surgeons Are, Unfortunately, Common

During my 18 years of practice, I annoyed many Alaskan physicians. For example, I once encouraged the Surgeon General to demote JW from his post as Chief of Surgery at Alaska Native Medical Center, after JW repeatedly operated upon a Native newborn with a congenital malformation known as tracheo-esophageal fistula.

My gripe was that correction of this condition was usually a straightforward one-stage surgical procedure that required special training. Yet JW, an older lung surgeon who had already demonstrated his inabilities by operating on three similar patients who all died, justified operating upon this fourth patient (who soon died too), by pointing out he had already repaired three others. We raised Hell!

Although JW’s demotion only lasted until a new Surgeon General was appointed, I assumed the point had been made. Yet a few years later, JW was sued for simply observing an Alaskan Native teenager with a freshly torn thoracic aorta for 16 hours until the patient died—rather than referring him to me or to an “Outside”(of Alaska) surgeon for treatment while the weak outer layer of his aorta was swelling but still intact.

I first heard of this case when the patient’s sister showed

up at my office shortly before JW's scheduled deposition and handed me the chart. She just wanted to know if such a problem could have been surgically corrected. For DD, a local general surgeon, had allegedly sworn that a ruptured thoracic aorta was surgically beyond repair and invariably fatal.

My response was that we had encountered a number of ruptured thoracic aortas in Alaska. And of my five patients who reached the operating room alive, all survived and were well (one with residual leg weakness). I even offered to contact those patients and provide names of any who were willing to testify at trial.

So during JW's deposition, the plaintiff 's lawyer mentioned that he was going to ask me for a sworn statement. Allegedly, JW then exploded—saying (something like) he wouldn't refer a case to me if I were the last surgeon on Earth. At which point the government's defense attorney rose, folded his papers, and quietly asked the plaintiff 's attorney, "How much do you want?"

Fortunately for us taxpayers (since the Native Hospital where JW worked was owned and operated by the U.S. Government), the dead boy's sister was trying to make a point and bring about policy changes rather than score an outlandish award.

I should mention that despite shortcomings revealed in this case, JW was a competent lung surgeon. Indeed, he—like most experienced surgeons with whom I worked or spoke—had developed and willingly shared useful variations on standard surgical techniques.

My assumption here was that JW's many years of absolute medical authority over his Alaskan Native patients was so like a pre-Civil-War plantation-owner's position that it eventually inflated his self-esteem beyond reach of his judgment.

Painful Experience Informs Medical Judgment

As they move up the ranks, some salaried academic and government physicians find it pleasant or professionally useful to engage in subsidized medical partying and politics at every major professional meeting, rather than providing care for patients back at home. In contrast, older fee-for-service practitioners commonly find themselves with little time to study or attend meetings. As a result, many physicians gradually restrict their practices to areas in which they still feel up-to-date and comfortable.

Any competent physician or surgeon can recognize truly glaring inadequacies in the work of those with similar practices. But it is less clear how one might fairly evaluate the current competence of an average physician who has lived with the results of his or her work in a narrow self-selected subspecialty over the decades. Certainly, it seems unnecessary for older physicians to remain current on fast-changing subsections of a field that have no further relevance to their own practices.

The common sense that underlies excellent results is a product of time, effort, study and painful experience. Thus, every capable physician will forever "mentally revisit his or her own private graveyard" to review the agonizing “if only” lessons that underlie real medical knowledge and humility.

Which raises an interesting question. “If medical practice enforces humility, why are there so many arrogant doctors?” An honest first answer must be “I really don’t know.” But an increasing emphasis on communication and teamwork often helps reduce physician arrogance.

And at least in gynecology, that former bastion of male chauvinism, surgical arrogance diminished notably as women physicians (who are naturally better communicators with female patients, and often better team workers than male gynecologists) carved out their own private practices.
Note: I retired before female surgeons had a noticeable

presence in cardiovascular surgery. Thus I cannot comment on how women surgeons fared in our citadel of self-adulation.

Medical malpractice insurance in Alaska

In the late 1950's at Boston City Hospital, many of us who were making $100/month reluctantly signed up for medical malpractice insurance, which then cost $50 per year. Presumably our premiums got past the Administrator's Office to the Insurance carrier, since we received official-looking malpractice insurance policies with the customary fine print.

The only in-hospital malpractice case that became known while I was at City Hospital involved an uninsured resident in gynecology who told his postoperative patient that he had used recently developed wire sutures for her vaginal repair. Though she apparently healed well, her husband was not pleased with this "experiment" on his wife, since sexual intercourse thereafter was like making love to a cactus.

In this case, while the hospital defended the resident, he had to pay the $1,000 settlement. When I entered private practice in Alaska, the cost of malpractice insurance doubled to $100/yr—annoying but still affordable. Most years thereafter it doubled again.

During the mid- to late-1960's, only half a dozen plaintiff's attorneys accepted medical malpractice cases in Anchorage. Several of these attorneys were rather despicable fellows (in our view). But as my childhood friend, Warren, used to say while we collected the neighborhood's garbage, "Somebody has got to do it."

Well, malpractice insurance costs continued to rise. And I was among those who dropped their coverage as insurance premiums passed $10,000 per year (A Miami obstetrician-gynecologist's policy cost over $200,000 for coverage in 2001 - even more than my median gross practice income).

At that point, some of us decided we could no longer risk

providing health care for local medical malpractice attorneys, including one who pointedly brought a medical textbook to hospital and confirmed whatever was said or done to his wife. Thus began a long drawn-out dispute.

As it turned out, I never again purchased malpractice insurance, for I increasingly came to see such insurance as a counter-productive guarantee to the plaintiff 's attorney that his costs would be paid while he squealed for more.

Our hospitals did not then require physicians to carry malpractice insurance, so my lack of it simply became a part of the routine preoperative discussion. Such discussions included how many of this type operation I had done, and how those patients had fared. By then I had a good reputation and I never heard of anyone going to another surgeon simply because I didn't carry malpractice insurance.

But since I lacked malpractice insurance, I did promise each patient that if she/he died or was in any way dissatisfied with my care, I would give them or their estate all insurance payments received for their care—which in more complex, difficult or re-operated cases might be many thousands of dollars.

Because I generally charged "insurance only" whether the patient had insurance or not (since the uninsured usually had few resources anyhow), my "money-back guarantee" usually worked out well - though one unusually large refund to a patient's estate probably contributed to one early death and a second institutionalization when that deceased patient's adopted (and afterwards, inadequately supervised) teenage street kids went wild and/or crazy.

That case was another of my surgical mistakes. For I had initially refused to re-operate on this patient's asymptomatic leak between old and new channels near the aortic valve—a year or two after total aortic-root replacement. But his internist insisted on surgical repair and the patient was a truly

nice fellow who just knew he could never survive heart surgery at an “outside” V.A. hospital.

So since I had performed his original (emergency) operation, I very reluctantly agreed to try again. We nearly succeeded, but the operation went too slowly (due to my inexperience) and his heart was too weak thereafter to support his circulation. My mistake here was accepting an elective case that I did not feel comfortable doing. And I wasn’t even convinced that a successful second repair would improve his prospects over simple observation.

Only once did a patient with a good result repeatedly insist that he was unsatisfied. And as he persistently gouged open his leg wound (vein donor site) with his fingernail, it soon became worth the three thousand dollars he lusted for, just to be rid of him.

Though I never did the numbers, and didn’t price malpractice insurance in my specialty after I stopped carrying it, I probably refunded less money than malpractice insurance would have cost me. But for patients with a setback that delayed their return to work (gall bladder problems, bleeding gastric ulcer, and so on) - or for relatives of the deceased - that quick refund was usually appreciated and a big help.

With Alaska’s legislature considering a radical rewrite of medical malpractice laws, and physicians increasingly paranoid, we dramatically closed the heart surgery program for over a year. During part of this time, legislators held hearings. Because insurers had essentially abandoned our market, Alaska finally initiated its own insurance program. And *that new medical malpractice insurance was mandatory!*

In the meanwhile, the district attorney investigated whether physicians had illegally "black-listed" certain attorneys and their families so they couldn’t receive medical care. The first doctor from whom the DA demanded “the black-list” pointed out that only six attorneys were causing our

malpractice problems so he didn't need a list, nor had one been provided. Some of us foresaw problems with mandatory insurance and urged others not to buy it, but with each meeting we had fewer holdouts.

At our final meeting, several State-Insured physicians complained that there were no criteria for settling cases. In fact, when one patient was distressed by a sore knee after otherwise successful knee repair, the State Program simply mailed him a $50,000 check without any examination or hearing. State-Insured physicians protested that this sort of "easy money" would soon encourage more complaints than the medical profession could afford.

At that point, CF, the State Insurance Program's lawyer, stood up and said something like "Doctors, you don't seem to understand, so let me put it bluntly. From now on, your pocket is our pocket!" Merely imagining his sticky legal fingers in their pockets quickly converted everyone who hadn't already purchased State Malpractice Insurance into a holdout.

Alaska's Attorney General then announced a date on which he would arrest all who continued to practice without buying the State policy. So we called a meeting for that date of all who would be arrested for not buying the State policy, and invited the media to attend. Not surprisingly, the Attorney General chose not to arrest a third of Alaska's doctors—many with acutely ill patients in the hospital.

Thus Alaska's Mandatory Malpractice Insurance program fizzled. Eventually, other voluntary plans became available and we reopened the heart surgery program—having gained little through our program shutdown and protests except a bit more unity - at least momentarily.

Although I made a number of serious surgical mistakes as cardiovascular surgery evolved, only one malpractice lawsuit was ever filed against me during my 8 years of training or 18 years of surgical practice in Alaska. And that suit was for a case

in which I assisted on an unsuccessful attempt to bypass widespread intra-abdominal ovarian cancer that had obstructed a patient's bowels.

The plaintiff, who represented himself, alleged that his wife's surgeon and I had purposely killed her to discredit laetrile—a quack apricot-pit extract with which he claimed to have cured her cancer. That case was eventually thrown out of court.

Other observations on medical malpractice insurance

A divorce that doesn't involve children or significant assets is rarely costly or complex. For example, when Mary (my first wife) and I divorced, we had no children nor significant assets. So she took the silverware when she left and filed for divorce - while I kept my $85 blue Model B Ford convertible with the rumble seat and ineffective mechanical brakes.

But as more assets come into play, attorneys tend to enhance complexity and promote costly conflict even though their clients would be better served by a quick, fair, fact-based negotiation. Similarly, medical malpractice insurance mainly rewards those insurance attorneys and plaintiff's attorneys who routinely select the most costly, socially destructive path.

I certainly cannot criticize malpractice attorneys when they recognize and try to restrict or even delete the medical privileges of some blatantly incompetent malefactor who has successfully evaded medical disciplinary actions—either because those disciplinary actions were too weak and delayed, or because medical politics prevented appropriate action.

However, as long as a physician can maintain adequate malpractice insurance, even a punitive financial award is merely a charge against all malpractice policies - hence a financial burden reflected onto all patients. Indeed, the actions of malpractice attorneys often seem to say, "We're not mad at you, Doc! We just want to punish your insurance company."

A competent Single Payer, backed by a decent social safety net, could easily support good quality care for all (see Chapter Fifteen and Epilogue). But Bush-II's Billionaire Corporate Buddies and other God-Fearing Republicans would surely try to run such an entity into the ground for their own short-term gain.

In which case it might become necessary to design a National Health Care system based upon regional and local units in which all adult citizens were equal voting shareholders - with all these separate units run independently, responsibly and responsively - sharing information on what works best, and supported by long-term funding from a progressive income tax.

But for now, to the extent that malpractice policy “gold” still resembles the “mother lode”, it just encourages attorneys to prospect. And in response, most physicians may practice "somewhat defensive" medicine. In my own practice, as a chest surgeon, almost every adult patient had a chest X-ray taken at the adjacent hospital if no recent film was available.

Otherwise any patient leaving my office with a good report after my examination of their leg or tummy vessels might reasonably assume they also had no chest problem. And the last thing I ever wanted to hear was people saying “von Hippel missed THAT?” Unfortunately, the mirror image of such a statement, and the image too many competing physicians savor and encourage is “ Dr. X sees all & knows all”.

Yet even the most carefully cultivated reputation for infallibility shall surely collapse with a crash - and likely sooner than later. In small-town medical practices where almost everyone is “in the loop”, it is especially important to share credit and keep others from exaggerating your every success. The best approach is to try hard to do good, but openly admit that—like all humans—your knowledge and experience are limited and that you occasionally err.

Otherwise, the town may soon split into true believers who still have faith in you, and hostiles who have been burned, are disillusioned, and now hope to drive you out of town “so they can attract a real doctor”. In order to avoid unreasonable expectations, one must be fair to the patient’s previous doctors and not proclaim - or encourage others to proclaim - your far greater brilliance.

For a patient with vague symptoms often bounces from one physician to another seeking an immediate diagnosis. Yet if something actually is wrong, and that condition is progressive, the diagnosis may soon become obvious to any competent practitioner as the patient walks in the clinic door.

So by the time a truly ill patient reaches the next consultant, the lack of an earlier diagnosis may be interpreted (by the patient or by competing practitioners or consultants) as incompetence of the prior or referring doctor. That is especially true when an academic physician first sees such a patient months later.

Of course, many physicians, clinics and private hospitals generate so much of their income from psychological or X-ray or laboratory screening tests that they would do unnecessary studies even if they were no longer at risk for a malpractice suit. Yet seemingly sensible malpractice insurance rules may greatly increase cost and risk for the patient as well as for the physician.

For example, malpractice policies commonly require prompt "incident notification" and early consultation with the insurance attorney. But an insurance attorney often can only bill for a few hours work if the inquiry into a simple incident is rapidly completed or settled.

Similarly, a plaintiff ’s attorney might not even meet expenses with a legitimately small settlement, so he often goes all-or-nothing in hopes of scoring a major settlement or jury verdict. In other words, the system is so biased that either or

both attorneys might lose a lot of money by considering the plaintiff's welfare. Under such circumstances, a proper arbitration clause with timely completion guarantee, might be in both the patient's and the doctor's best interest.

Sarwar once assisted a newly arrived surgeon (K) who mistakenly sewed a bypass graft onto a coronary vein rather than the intended, adjacent, coronary artery. This is the sort of error that most surgeons nearly make at one time or another—here it actually happened. I do not know whether Sarwar was busy procuring a leg vein at the time or if he too was misled.

In any case, their joint malpractice carrier was notified as soon as this error was suspected (and then demonstrated) by a postoperative coronary angiogram. But the point here is that *the lawyer for the insurance carrier then insisted that K and Sarwar NOT discuss the error with the patient or his family.*

Of course, these competent and caring surgeons should simply have told the lawyer to "butt out" until the patient's problem was optimally resolved by reoperation, referral or whatever. But both younger physicians lacked confidence in their own common-sense ethical or legal standing, which might have guided them to flout Insurance Company rules.

So instead they followed the insurance lawyer's stupid advice in his area of expertise and authority. Indeed, both surgeons wrongly assumed that the attorney's preliminary advice at first consultation was their legal mandate - so they abandoned the patient forthwith and refused to see the patient or family again.

Because this was K's patient, not Sarwar's—and the patient's cardiologist had already taken over the patient's day-to-day out-of-hospital care—each surgeon faced a somewhat different dilemma. But not surprisingly, their sudden lack of further interest in the patient infuriated and thoroughly confused the patient and his family, who soon contacted me through a printer's organization I had joined after my medical

retirement. Naturally, I listened and tried to help straighten things out—which at first just confused matters even more.

My point here is that a Malpractice Insurance Attorney's legal advice can legally be ignored when following that advice would violate the physician's commonsense duties or act against a patient's apparent best interests. And every malpractice policy should make that point clear **in bold print!**

Our annual Fuck-up Conference

We had been in Anchorage about ten years and our Heart Surgery program was up and running, when a physician friend recommended me to a relative who was arranging annual sponsored three-day gatherings of younger heart surgeons from all over the country.

The sponsor—Cobe Laboratories—picked up our tab during an annual meeting at Keystone ski resort near Denver. In addition to providing an important educational service, Cobe Labs gained good will and insight into our current problems and needs. Cobe also requested that we attend a final half-hour presentation by their Product Manager to critique their products.

It looked like an important educational exchange and a great way for us to broaden our views. Eventually, Cobe organized several such groups of 20 surgeons. Every group member was asked to present a recent surgical problem case that resulted in unexpected death. Right after his presentation, all other group members critiqued his judgment or care, or proposed alternate approaches, or expressed sympathy.

We also had an opportunity to present other interesting or troublesome chest surgical or open-heart problems for brief discussion. The few surgeons who (unbelievably) never made major mistakes or caused an unexpected death, were not invited back. I attended five or six of these annual three-day meetings. During that time several participants invited me to

visit their program and observe their work. I managed to arrange two such visits, and both proved very worthwhile.

Despite my sudden "medical" retirement from surgery and also the Cobe group, I was invited to our group's 10th year reunion. By that time, Sarwar was a several-year member of the same group. On recap, it seemed our group had been the most productive and successful.

Contributing factors were our blunt but friendly critiques, and perhaps the fact that our group included few full-time academic surgeons. Yet even our academics appeared competent and avoided posturing.

Personally, I always came home recharged, with renewed confidence in our shared evaluations of the advances and limitations of open-heart surgery. Our OR and ICU nursing teams were always eager to hear what I had learned. And Cobe personnel never pushed Cobe products. Nor did our orders for Cobe products change significantly during this period.

At our initial Cobe meeting, there had been a bit of medico-legal paranoia that soon dissipated in the camaraderie (without attorneys or stenographers), as it became evident that we all screwed up occasionally, and that this really was a forum where all could ask each other for advice, rather than a PR event for well-known MD's, or to sell more Cobe products.

Some questions arise: Can that truly positive outcome for our group be replicated? Where else might young and middle-aged doctors confer freely about problem cases without risk of malpractice litigation or institutional reprisals? Might such mini-conferences reduce current high rates of hospital error?

Would politicians, administrators, grieving families and malpractice attorneys ever agree that an honest admission of error ought not cause repercussions for an individual or team? Is there a parallel here to FAA or Maritime Law that can hold individuals harmless for self-reported accidents?

Perhaps such circumstances might allow simple "harmful

incident insurance" to replace the far more costly malpractice insurance, especially under a Single Payer also responsible for quality control. My current guess is that honest self-reporting will not soon become widespread except in small specialty meetings like our Cobe groups—at least until an established Single Payer develops a track record of objectivity and truthfulness. In other words, not just yet.

Of course, not every unexpected death soon after heart surgery has an obvious cause. Indeed, only years later did I learn (through a chance off-the-record conversation with an unknown but obviously well-informed source) that one of our patients who had succumbed to sudden, inexplicable and (unusually, for modern times) irretrievable cardiac arrest in our hospital intensive care unit, was actually murdered there in his bed by the Mafia.

Apparently this patient had a concerned visitor who (my informant alleged) stood to lose a million dollars if my patient woke up—or to make a million if he died (I can't remember which). After introducing himself to the nurse as "just like family", this man hovered attentively about the patient. So when the nurse had to leave for several minutes, she asked him to keep an eye on the patient and notify the Charge Nurse if he started to wake up.

On the nurse's return, her previously stable patient was undergoing resuscitation, with the "concerned visitor" long gone. None of our usually successful efforts had the slightest effect. When I asked my informant whether he had notified the police, he quite reasonably responded that he preferred to live. So why had he told me this? He just wanted me to know that it wasn't our fault. Well, better late than never. So this new information suggests our overall open-heart operative mortality rate was under 2%.

CHAPTER NINE

On the importance of teamwork

Accepting Blame. Teamwork in surgery

Teamwork was never mentioned during my formal education. My first lesson came as scary reprimands to a small pre-adolescent volunteer farm hand, when I dropped (rather than carefully setting down) the handle of a homemade two-wheel cart we had just loaded with new potatoes.

With the handle broken, it became a major struggle for several of us to move the barrow through the freshly plowed field. At about this time, I regularly observed hand and machine milking of cows, did whatever I could to assist in the care and harnessing of horses, and learned not to leave tools outside.

But a far more difficult lesson for me to retain was that safety and productivity depend upon careful cooperation and timing rather than demonstrating how much I could lift or how quickly I could toss great masses of hay with a pitchfork.

Similarly, I learned that I could gain favor and accomplish more by carefully synchronizing with my larger, more experienced, adult partner as we lifted against each other to move heavy cabin logs with our cant dogs. Jerky motions obviously increased the risk that a log might slip out of place or cause injury, but it was hard to suppress my adolescent need to show off by lifting harder and faster.

The same lesson was reemphasized to me as a Wyoming ranch hand in the summers of 1950 and 1951. Once again, close coordination was essential as - with tension on a lasso around the front legs - one of us toppled a young bull by torque on nose and horn while another pulled on the top hind leg with feet braced against the hock of the other leg, so branding and

nut-cutting could commence.

As usual, I made lots of mistakes. During haying season in Wyoming, I worked a team too hard with the 16-foot wide hay rake, with the result that my older horse died later that night. A few days later, the dead horse was a maggoty mess so I suggested we burn it using gasoline siphoned from a truck which a) was unsuccessful, and b) filled my mouth with gasoline so I burped leaded gas and had to avoid open flames for several days. Plus c) our dirty siphon hose contaminated the truck's entire fuel system, which required a costly cleanout.

Another idea of mine was no better. One of the ranch's prize Hereford bulls had an infection that required us to push half-a-dozen large sulfa tablets through a hose into his stomach every few hours. The other ranch hands knew I intended to go to medical school so I was considered a minor medical authority - even after they heard about my recent bus trip to Salt Lake City for a look at Utah's Medical School, during which visit the famous Dean declared me "The worst candidate for medical school he had ever met".

Anyhow, when I suggested that we abbreviate the arduous hose-insertion and tablet-pushing process and eliminate annoying night-time treatments by giving the bull his entire large bottle of tablets at once, "which ought to cure him in a hurry!" there was a general murmur of assent.

Unfortunately, all that sulfa blocked the bull's kidneys and killed him in a hurry (another loss greater than my entire summer's salary at $45/wk). Fortunately, P.E. Daley, the ranch owner and boss, was a kind-hearted man with a sense of humor who treated us young hands as family (as several were).

In earlier times, Wyoming sheep ranchers and the Union Pacific Railroad had maintained a complex and annoying fiscal relationship, since the Union Pacific's long-time monopoly on freight movement (Interstate Highways had yet to come) meant ranchers were routinely cheated on shipping costs.

For example, to prevent ranchers from extracting and separately selling then-valuable wool fat ("lanolin"), the Railroads and Boston wool merchants allegedly conspired to charge far more for shipping clean wool than for shipping freshly sheared dirty wool.

On its arrival, those proper Bostonians then offered the ranchers much less for dirty wool than for clean. Not surprisingly, ranchers were happy to return the favor.

So when heading East near the Continental Divide—to get over the long slow rise toward Rawlins—heavily laden multi-engine Union Pacific Railroad trains usually rolled through Daley's Ranch at about 110 mph. And if a railroad fence went down, speeding trains occasionally killed some livestock before ranch hands could shoo them off the track.

Under such circumstances, local juries unanimously held that regardless of prior lineage or condition, only costly thoroughbred horses or purebred cows were ever killed by speeding Union Pacific trains. That rapturous acquisition of far greater value was conferred while the animal was still airborne after being struck. *When treated unfairly, people try to get even.*

I never became anyone's model employee, but many additional experiences enhanced my abilities to work with others. In the summers of 1952-3, I regularly drove a cab-over, flat-bed U.S. Navy "squid truck"- leaving Weston, MA at four AM for Sakonnet Point, RI. There I boarded a fishing boat to help collect live squid from large net-enclosed "traps".

These traps captured all sorts of sea creatures because fish naturally head for deeper water upon encountering a long net leader to shore. Those leaders joined into net funnels that ended well inside the net traps so as fish swam around the trap periphery, they could see no way to escape (Wild horses are similarly captured in the West by helicopters that drive them between narrowing fences thru chutes into corrals).

Among interesting fish that we caught was a 500 pound

tuna (worth $500 at a time when a cup of coffee plus a donut cost 15 cents and a gallon of gas or a pound of hamburger was 19 cents), a 200 pound jellyfish-eating ocean sunfish (worthless there, valued in Asia), that was coated with a half inch thick layer of slime - making it nearly impossible to heave overboard), sharks, flying fish (which often flew in groups from the trap, some escaping while others collided with one of us or landed in a boat), bonito, sting rays, skates, sturgeon, mackerel, bluefish and many slow moving, huge-mouthed, exceedingly ugly "Irish Lords" (a politically incorrect name - presumably pay-back for historical injustices).

My job was to fill the truck's fish tank with fresh seawater, keep that water cool during hot summer days despite unreliable refrigeration equipment, and promptly deliver as many healthy squid as possible to MIT researchers studying nerve impulse conduction through "giant" nerve fibers innervating the squid's muscular body or "mantle" (outer body wall behind the head, including fins).

During capture, the six to twelve inch-long bodies of these squid required gentle handling as they soon died if a delicate, translucent, inner support structure (mollusk shell remnant called "the pen" - a site of mantle muscle attachment) was damaged.

Each morning our sturdy 38-foot diesel-powered fishing boat towed the open crew boat and smaller skiff to those anchored-and-buoyed, heavy mesh fish traps. Incidentally, all three wooden boats were home-built by old Holder Wilcox as he recreated his fishing business after the 1938 Hurricane wiped him out.

Upon reaching a trap, the crew boat took position centrally above the intake funnel while the skiff was stationed along one side of the trap. Then these ageless life-long fishermen slowly began to lift the trap mesh with their huge hands and cold-impervious fingers (each finger nearly half the

diameter of my wrist).

By progressively lifting and releasing empty mesh behind them, they reduced the remaining trap volume, thus herding trapped fish toward the far corner where our fishing boat awaited, ready to scoop up fish with the long-handled pursed-bottom scoop net or brail.

The full brail was repeatedly hoisted from the sea by a sturdy brail rope that went up through a mast-top pulley before passing down around the "rotating power takeoff" below. When the brail was just above the deck, the smaller rope through all the brail-bottom metal purse rings was loosened to dump enclosed fish onto the deck.

We encountered the large tuna on a day with no gaff hook aboard, so that “giant” (to me) fish was lassoed as it calmly swam in circles within the diminished trap. Our lasso was the long brail rope with a hangman's noose at its lower end.

The final capture followed twenty long minutes of failed attempts to slip the noose over the tuna's tail as it lazily but unpredictably circled inside the net while the noose was silently passed from boat to boat until finally a crew-member looped the tail and the skipper suddenly tightened the noosed brail rope with the power takeoff.

Being thereby suddenly jerked backward out of the water, the startled tuna flipped right over the fishing boat mast to the far side—then flipped back down toward our tiny open boats like an enraged torpedo on a bungee (a thoroughly mixed but totally valid metaphor).

Fortunately, Carl Wilcox, our great skipper (another true leader!), had huge, powerful arms—and the rope, mast and power takeoff all held—since that descending tuna could easily have smashed us and plunged out through a boat and trap net.

Ordinarily, before the trap size was diminished enough to compress or suffocate squid, there was a brief flurry of activity and often much amusement as carefully hand-netted live squid

were thrown at me from both smaller boats. Standing by the fresh seawater barrel on the stern of the fishing boat - I swiftly became a world-class squid catcher.

Now "squid catching" is not as simple as it sounds, for a hard catch kills the squid. Nor was it enough to merely catch incoming squid gently: I also had to convert the backward catching motion into a smooth dunk in the water-barrel before said squid bit my hand with its beak.

Naturally, the burly fishermen's idea of entertainment and my interest in obtaining live squid were not always congruent, but we worked well together—in part because there were usually plenty of squid even if I muffed a few catches amongst many "incoming", and also because I helped the crew whenever I could, especially in rough weather when a much reduced crew just pulled the gill nets for bluefish.

And I usually put on a good Sunday show! For on Sundays many well-to-do church members from Newport—the men in light summer suits and stylish flat straw hats—came by to gawk at the catch as we unloaded. Usually one or two of the more adventurous climbed uninvited onto my dirty truck (their mistake #1) to inspect the live squid in our steel tank.

Though they mostly pretended to be busy sorting fish, this was a moment the fishermen enjoyed. For I had become an adept squid handler, based upon the following hard-earned knowledge: Squid will try to slip out of your grasp in either direction. So if you hold them tentacles-up and barely underwater, grasped gently near their head, they will squirt upward and reload rapidly as they try to jet downward.

When thus held in water, they won't bite the hand that holds them. Furthermore, since squid are nearly transparent, any squid that has a still-visible ink sac - if slightly squeezed - will eject ink in that jet.

Unlike octopus ink, which spreads widely in water as a "smoke-screen," squid ink is a thick black mucoid substance

that serves as decoy while the squid turn transparent to flee. I generally managed to accidentally soak-and-ink one or more of these good churchmen—which always amused the hard-working stolid fishermen. And as the black mucoid mess dripped down the uninvited intruder's face and over his immaculate seersucker suit, we knew from personal experience that those stains would never wash out.

Accepting Blame

In addition to maintaining a good sense of humor and keeping the team harmlessly entertained, another important aspect of teamwork is accepting responsibility for adverse outcomes. Naturally, no one likes to take blame for another's mistakes, but those in charge of a project retain overall responsibility whether things go well or not.

In the usual case, those who contributed to a problem already feel badly about their role and are grateful not to be singled out. Thereafter, they become more aware that teamwork includes looking out for one another. Of course, even undue eagerness to help or carry out orders can have fatal results.

Soon after entering medical school, I was told to immobilize a large rabbit so another medical student could draw blood from an ear vein. That essentially painless procedure went swiftly and easily, but when released, the rabbit was dead.

Clearly, in my eagerness to help, I held it so tightly that it suffocated, or perhaps I fatally compressed its heart. This was an unforgettable lesson for me, who would later be responsible for restraining and operating upon many tiny infants, some "the size of a squirrel."

Like many other teenagers and young adults, my career goals rarely seemed more important than doing what I enjoyed. In fact, every spring, the thought of further schooling

became intolerable. Yet by fall, I always returned from great outdoor jobs with my interest in books and learning rejuvenated.

Nonetheless, in those early years, I would have happily pursued a farm or ranch or fishing career, or built log cabins or driven trucks for a living, had my father not generously supported me through school despite my poor grades and teen-misbehaviors.

My point? As already mentioned, a good education usually enhances a person's productivity. And well-informed citizens are essential to stabilize democratic societies. Yet many good minds never have a chance to contribute in this wealthy nation, where too often money and mediocrity rule.

So rather than let quirks of birth or fortune limit a young person's chances, an adequately subsidized State College education should be available to everyone. Our technologically complex nation can no longer afford to let any citizens remain under-educated for financial reasons.

Here I must applaud MIT's decision to put course materials on-line for free worldwide public access. But this is not enough. For nearly everyone I know has, at some point, fallen sufficiently behind complex developments in their own field that the most sensible option would have been retraining - yet even amongst those who could easily have afforded it, not many bothered to retrain.

In my own case, I required a three-month fellowship—during which time I supplied resident-level patient care in exchange for new knowledge and a monthly stipend of $1000 so I could catch up on recent advances in heart surgery.

Our national economy would surely benefit if every working adult could be supported through some such 1-to-3 month refresher apprenticeship, or even a more interesting term of study in a related field - perhaps every seven years or so, as desired and needed. Such programs could easily be

funded by employers, unemployment benefits and taxpayer subsidies.

Many, perhaps most lower-income American employees are now overworked. More cannot find satisfying jobs. It takes fresh ideas and new experiences to keep work from becoming stale or intolerable. Minds atrophy when not stimulated and challenged.

The world is changing rapidly. For those who are prepared, new possibilities appear as old jobs vanish. Our human potential and productivity can be optimized if we recast ourselves as life-long learners.

On the one hand, a flood of new information and changing times offer excitement and challenges. On the other hand, obsolescence is a constant threat. As social animals, we all flourish when we stay involved – so work, encourage, relate, teach and learn. Don't just give up on your life and sit passively in front of wide-screen or tiny screen motivation killers. Read! Write! Grow! Build!

It is especially important to help others without expecting payback, just as they helped you when their taxes were paying for your opportunities. *So pass it on!* Volunteer for community projects. You will be amazed at whom you meet. And doubly amazed when you see what a wonderful reward "true gratitude" can be for hard work undertaken on another's behalf.

Teamwork in Surgery

It takes time and effort to develop a competent surgical team. Fortunately, most Alaskan operating room nurses were smart, tough, competent, hard-working women. Our talented ICU nurses even included some good men who also enjoyed patient care and were eager to learn. Naturally, a few nurses didn't have the necessary interest, talent or dedication so there were several early battles over who could stay and who would

seek work elsewhere.

For no surgical team can provide optimal patient care when burdened by those who are unable or unwilling to help—or worse yet, who hope team leader and project will fail, even if such a failure would cause multiple unnecessary deaths.

Thus a few of the same folks who regularly work in life-or-death situations, eventually start acting out petty "likes" and "dislikes"—apparently forgetting that each life routinely saved in surgery - as part of another boring day's duties - is as important as any life saved at great risk and publicity from a coal mine disaster or at sea.

Cynicism or depersonalization of the patient are well-known ways to reduce stress and burnout among emergency or health care workers. But it is far better to reduce stress by working a reasonable schedule with a compatible team that succeeds or suffers together. For while cynicism may reduce stress and burnout by lowering standards, a happy team will take pride in shared excellence (see also Lancet, June 15, 2002, 2089-90).

Incidentally, not many people are natural night-shift workers. Hence those assigned to the aptly named "graveyard shift" make five times as many mistakes, have 20% more accidents (major nuclear power plant accidents have all occurred at night, including Chernobyl), and suffer more serious and costly medical problems (Business Week, July 28, 2003, p14).

For example, nurses who pulled "night duty" several times a month for at least 15 years had an elevated risk of breast cancer and a 35% higher risk of colon cancer (Science News, July 5, 2003 p13). Some Sleep Researchers have even suggested training natural "night owls" to work the night shift as a possible way reduce such dismal statistics (Nature, 30 Oct. 2003 p885).

It is the team leader's responsibility to see that the work

environment is enjoyable for all, allowing no interpersonal problems or voices raised in anger to disturb concentration or delay progress. Furthermore, she or he should ensure that the entire team shares credit for all successes (though as mentioned, the team leader—as captain of the ship—necessarily retains full responsibility for adverse outcomes).

As team leaders, surgeons take home a disproportionate share of the financial reward for an entire team's effort. Under such circumstances, fairness suggests that leaders recognize the contribution of everyone else on the team with a nice annual gift—a bicycle or whatever.

Humor helps, and no posturing. Everyone must feel free to question or offer advice. Thus I might report how my latest course in reading electrocardiograms ended with me looking thoughtfully at an EKG until a coronary care nurse pointed out that I was holding it upside down.

And if in surgery, I asked for something out of sequence, any regular nurse felt feel free to point out that I usually did (A) before (B). In one case, I noticed a large air bubble in the translucent aorta just as the heart began to beat and said, "Quick, the knife!" at which point one of our great scrub nurses said, "Why do you need a knife?" before quickly handing it over when I said "I want to kill myself!"

I managed to stab the aorta and release that air before it was pushed ahead into other arteries where it might have caused a stroke or other problem. Among our survivors, only one had a significant stroke—and she made a truly remarkable recovery after a very long weekend in deep coma.

A couple of other patients suffered more diffuse brain damage (one complained he could no longer balance his bank statement without a calculator—the other found it harder to concentrate) after bleeding or other problems caused a prolonged period of undesirably low blood pressure.

While one or two patients may have been a bit confused

right after surgery, none developed the zombie appearance so prevalent in the late 60's - before those wonderful arterial-blood filters became available to selectively remove clumped blood components and small bubbles from oxygenated blood reentering the patient's circulation through the aortic cannula from the heart-lung machine.

An occasional patient even displayed humor immediately on awakening. One man insisted he was dead! Assuming he was confused, I assured him repeatedly that the operation had gone smoothly and that he had survived nicely. Finally he said, "No! No! You look like the Devil! I am dead!"

It goes without saying that every team member including me confessed our own screw-ups so we could all learn from our mistakes. And nobody ever yelled at anyone! After one anesthesiologist caused a serious neck infection, all agreed to do a full surgical scrub before inserting intravenous lines.

Another time, a patient's heart stopped suddenly as we were preparing to close the sternum. It turned out that the heart-lung machine had been "off" for 15 minutes but the anesthesiologist had not restarted his anesthesia respirator.

Thereafter, no one objected to loud reports such as "Pump is off—Restart anesthesia!" that were immediately confirmed "Pump off. Anesthesia restarted!"

To our immense relief, both of these patients did well. The first resolved his infection quickly with antibiotics. The second awoke promptly and was mentally intact—presumably because high intra-operative blood-oxygen levels and brain depression by medications and cooling had left the brain enough dissolved oxygen even as the working heart temporarily ran out (Whew!).

After one very bad week in which three patients bled excessively and one nearly died, I declared that no more cases would be done until the problem was found and corrected. At that point, a perfusionist confided that he had recently begun

rewarming blood (we usually cooled the patient for additional safety during surgery) with new equipment that easily exceeded the recommended warming rate. He added he would henceforth rewarm by the clock. Our bleeding problem was over.

A recent chance encounter reminded me that I used to drop by the laboratory—and especially the blood bank—after dealing with urgent bleeding problems, just to let the techs know what had transpired and how much we appreciated their help. The former tech told me that those visits had been hugely important to them and really made them feel like part of the team.

And last but not least, the cardiologist or surgeon should keep the referring physician in the loop on how his patient is faring.

CHAPTER TEN
Why and How I retired

Continuing medical education (CME) makes no sense.
Recertification is another unproven remedy (for what?).
Are there really 101 uses for a retired surgeon?
Screening tests often do more harm than good

As I approached my 52nd year, I was walking more slowly and easily out of breath. At first I blamed this gradual change on less time for exercise and a slow twenty-pound weight gain (to 250). In June of 1983, I had an unremarkable treadmill stress test that I terminated "slightly early" - preferring to quit early rather than collapse!

Then on the first of August, as I ran upstairs to check patients between surgeries, I felt a light finger-like pressure on my chest and my pulse became irregular. This was a matter of concern, since any new upper-body symptom, even earache, may represent angina. Obviously, angina-as-earache is unusual.

However, any pressure in or on the chest or shoulders, or discomfort down the arm or into the neck and jaw—especially on the left side or when associated with physical exertion or stress (even without changes in heart rhythm)—indicates it is time for a competent medical evaluation.

Of course, on the skin surface, you need to know right away what is biting you and where, in order to smite it. But only in the last century would human survival have benefited noticeably from early detection, identification and localization of internal symptoms. So since an accurate internal monitoring system offered no survival advantage, it never evolved.

Until modern health care developed, a person or animal could do little about serious internal disorders except stop eating, or try different foods or medicinal plants, or assume a

new position, or discontinue an activity and rest until the problem resolved itself or ended in death.

In fact, prior to the 20th century, except for a few interventions such as smallpox vaccination or the treatment of bone fractures and dislocations, *Western medicine*—compared with traditional remedies or even prayer (such as "Christian Science") - *was more likely to harm than heal, kill than cure.*

Anyhow, with that day's patients doing well in Intensive Care, I took some nitroglycerine home and got on my exercise bike. Soon that tiny pressure on my left chest returned—and my once-again-erratic pulse became even wilder after taking the nitroglycerine.

So I returned to the hospital and scheduled myself for a coronary angiogram right after an evening emergency study then underway. My angiogram showed all my coronary arteries to be highly irregular and repeatedly obstructed, rather like tiny strings of homemade sausage. My cardiologist friends handed me the films, a fist-full of pills and best wishes.

Sarwar took over my patients, and since my coronaries appeared more or less inoperable, we both decided I should seek surgery by someone very experienced. Sarwar drove me home while I lay back and applied pressure to the puncture site in my groin. Early next morning I left for Milwaukee, after advising Tector's office that I would arrive as a patient.

An old army nurse named Sweeney was still head nurse on the St. Lukes Hospital heart surgery ward when I arrived. She immediately informed me that while I had formerly given the orders, *She* was now in command and would tell *Me* what to do (So there!).

A younger nurse assigned to explain the proposed bypass operation didn't bother. Instead she fabricated her (usual?) lengthy - and to my Milwaukee friends, highly amusing - description of how poorly I comprehended the proposed coronary bypass procedure, despite her best teaching efforts.

On August 3, I was feeling worse so Tector hustled up a great Saturday night team of my good friends and did his usual fancy cleanouts and bypasses. Six days later, I was wheeled out of the hospital. As we passed the Nurse's Station, Sweeney was holding forth to a group of student nurses. She commanded, “Give us a kiss!” Everyone smiled. I responded, “Go to Hell!” Everyone looked horrified - except for Marianne, who had learned about my operation while bicycling through Europe, and viewed Sweeney as more suited to an Army Hospital.

Marianne had the cab driver take us from St. Luke’s Hospital in Milwaukee to the Chicago Airport, which proved faster, cheaper and more comfortable than flying to Chicago. From there we flew home.

I returned to work several weeks later. But while our surgical procedures again went boringly well, I was exhausted by the end of each day, and could easily imagine that the next time I drew a complicated "all-nighter", the patient and I would both die.

Consequently, when Sarwar returned from holiday, he generously agreed to buy me out so I could pay my taxes and retire. For while working, I had more or less filed and paid taxes according to Mark Twain’s old dictum “How much did you make? How much have you got left? Send it in!” And that system, it seemed, made no provision for quitting suddenly.

So despite having undergone a life-saving operation for severe coronary artery disease by an extremely skilled team, I was forced to retire by a lack of endurance at age 51, just as I entered my peak earning years. But while I truly had enjoyed the teamwork and camaraderie, I was ready to try a less strenuous existence.

Prior to my unexpected retirement, the family had agreed that our college-age children ought not apply for scholarships since we could readily afford their educations, whereas many others couldn’t pay for college at all. But now, with no

retirement plan, three kids in college and the fourth preparing to go, they soon had scholarships or teaching assistant posts and were pretty much self-supporting.

To help cover my taxes—and because I could no longer fly or pass a pilot's medical exam—I asked the Citabria dealer in Fairbanks, from whom I had bought my little airplane, to come get it and sell it for me.

We had become friends during the Fairbanks Flood of August, 1967 when 5,000 Fairbanks women and children were evacuated during three hectic days by large propeller-driven unpressurized National Guard cargo airplanes to Anchorage.

On arrival, these flood refugees, many still airsick, most women without purses and just the clothes on their backs, passed between stacks of free diapers and other donated essentials before being taken into private homes for the next two weeks or so.

My station wagon was "next" in an endless line of volunteer hosts with vehicles waiting to pick up evacuees, when the Citabria dealer's wife and seven children (his kids and those of his business partner) became our bedraggled guests for pickup (this was many years before mandatory seat belts and kiddie car-seats.)

Amusingly, those Fairbanks kids especially enjoyed our showers. So after the women washed all 11 children (including ours) in assembly-line fashion, they noticed several back in line for a repeat spray.

Several years later, I bought a new Citabria from these Fairbanks folks at full retail price (which I could easily afford), ignoring their generous discount offer because their business was still "underwater" financially, though recovering. In turn, when the dealer sold the plane for me, he refused any compensation. *Sooner or later, we all need friends!*

Through 1984, I occasionally assisted in surgery. But then, rather than waste 17 hours of each year (recently upped

to 25 hours) attending lectures on diarrhea or whatever, in order to meet Alaska's irrelevant Continuing Medical Education or CME requirement, I let my medical license lapse.

Continuing Medical Education (CME) Makes No Sense

Alaska's Mandatory CME - like its short-lived Mandatory Malpractice Insurance, was initiated a decade earlier by four older Anchorage Internists.

Possibly relevant information: These four old men felt slighted. Their consultations were dated and no longer in demand. Nor were they compensated at high hourly rates received by most medical sub-specialists - or even at rates ordinary surgeons charged *"for merely cutting and sewing!"*

Indeed, their medical practices had gradually diminished to a point where they competed for patients with doctors trained in family practice, who offered a wider variety of services including child health care and deliveries of newborns.

Not surprisingly, as they consulted less, they pontificated more. And high on their list of issues - as the medical scramble for higher incomes left them increasingly behind - was the need for all physicians to appear more "competent and caring" (rather than looking like a mere bunch of money-grubbers).

Consequently, they decided that Alaskan physicians would request "Mandatory Continuing Medical Education" before ***others*** *did it to us, since* such a request would make us look "more sincere." *So these* ***four previously prominent internists did it to us before others could*** **even try**, by simply presenting themselves as spokesmen for all Alaskan doctors.

With Continuing Medical Education then becoming a "National Issue", they successfully instigated Alaska's CME requirement without polling other Alaskan physicians for their opinions, or even asking anyone else if they agreed. Nor did they even acknowledge those who loudly disagreed (like me).

Interestingly, the way those four senior Alaska State

Medical Society members determined we would all receive compulsory CME was identical to the way Internal Medicine trainees at PBBH had used their newly acquired "cognition and caring" to decide Zachoverich "shall" receive intravenous fluids - *without asking him if he was thirsty, without listening to his complaints about being unable to breathe, and even without listening to his lungs to see if they were congested*. In other words, "Your doctor already knows what you need *and that you shall receive!"*

That Four-Internist Declaration - *"We must do it to ourselves before they do it to us"* sounded even sillier after my retirement as I wrote my third book - Manual of Thoracic Surgery 2e - that again was positively reviewed and utilized internationally. But as none of the Fab-Four happened to write textbooks, that hobby never became accepted as an alternative pathway to CME credits.

Stunningly Obvious Conclusion: Innumerable patients have been "drowned" by excessive intravenous fluids ordered by doctors who already "knew" what these folks needed and were far too busy to listen. But since patients are ordinary humans who usually feel thirst and rarely kill themselves drinking non-alcoholic fluids, *why order intravenous fluids at all for those who can safely drink what they need?*

A Fast-Forward to Today: Alaskan physicians nowadays must get annual credits for 25 hour-long lectures on any random topic, so they sign in, then sit or stand near the rear exit—not to be seen again after house lights dim for the first slide. And that is how our **Four-Internist-Determined CME obligation** became yet another annoying irrelevancy, adding pointless paperwork and another useless time-consuming physician duty to Alaska's Medical Licensing requirements.

On the other hand, as part of a nationwide CME trend, the escalation of post-graduate educational requirements has stimulated an entire new growth industry—the proliferation of

costly “CME accredited” tax-deductible meetings in pleasant resorts or on luxurious cruises—often featuring fading medical politicians who score free trips and supplementary income by lip-synching "Big Pharma Untruths" to their captive audiences.

Some CME lecturers have even proposed role-playing games and/or meditation to improve attitudes (Lancet, May 17, 2003, p1752) though I doubt either would do much for my attitude. To date, *there is zero evidence that CME enhances medical knowledge, wisdom or effectiveness.*

After all, competent doctors have always sought out useful medical training, taken review courses and attended specialty meetings to compare results and update ideas and practices through discussions with peers. If anything, CME requirements may have reduced physician attendance at big meetings with hard chairs where one might actually learn something from fellow attendees if not from the speakers.

Overall, it seems clear that CME requirements waste physician time, reduce taxes collected and unnecessarily increase costs for patients who eventually must support our entire medical enterprise. Since just writing another textbook was not approved for Alaskan CME credits, I was happy for the excuse (“Sorry. No medical license.”) to stop assisting.

Recertification is another unproven remedy (for What?)

A somewhat related issue is the "Mandatory" Recertification of Board Certified specialists every ten years or so. For nowadays, to remain Board Certified, most specialists have to pass a Recertification examination by their specialty Board.

However, at least in Chest Surgery, that Recertification requirement never included the older academics who thought it up, nor older Board-Certified surgeons like me. Marianne was similarly "grand-mothered-in" by her Pediatric Boards.

You may have assumed that many other less time-

consuming methods of evaluation such as "patient outcomes analyses" were carefully evaluated before Recertification was shown to be the most cost-effective solution for a serious problem: And that evidence for and against Recertification was carefully weighed before Recertification was finally voted "The most appropriate remedy" by most surgeons in practice at that time. But you would be wrong!

For there never was any serious competency crisis nor any relevant problem. And Recertification never was tested against other alternatives. Rather, Recertification just sounded like a good idea to a few aging Academic Politicians. Hence in my view—then and now—Recertification is just another outstanding example of how outmoded Academics sustain demands for their own "services".

I opposed Recertification from the start. Indeed, it was the classic case of a "Judas goat" leading sheep onto a railroad car - then hopping out the other side just before the door slammed and the train rolled off to market.

For had there been real risks from which patients could be protected by regular Board Recertification, *it would have been highly unethical not to demand that all the original organizers of Recertification - as well as all of us older non-Academic peers - also be Recertified.*

Earlier, I pointed out that not one of the lectures in biology, chemistry or medicine that I endured during my mostly mandatory education as a general surgeon would still be considered useful or relevant by today's practitioners.

Also I mentioned that every training program and teaching hospital approached important medical problems quite differently. Hence it is arrogant and dishonest for the average academic politician to present himself as more knowledgeable than busy specialists who routinely devise improved solutions and regularly achieve better results than many of their academic peers.

Medicine is not yet physics. Every practitioner soon encounters situations that their professors never met, considered, explained nor understood. So how could such Academics ever usefully **reexamine** older experienced Board-Certified specialists?

This becomes even more ridiculous when you learn how often practicing specialists restrict their efforts to some parts of an entire specialty - so they would just waste valuable time if forced to study prevailing views of all subjects in their overall field (especially when so many of those views were likely outdated or entirely irrelevant to that doctor's practice).

Overall, I view Board Recertification as yet another annoying manifestation of Aging Academic Syndrome (such as "Gastric Freezing" discussed earlier). And like those CME requirements–Board Recertification has become just another support system for superfluous senior specialists who created yet another useless, costly industry just for producing and marketing Board-recommended study materials.

Politicians routinely say the opposite of what they mean. "This is not about money, it is about principles!" or "Campaign donations won't buy you a huge taxpayer-funded payoff!" Similarly, Professors Promoting Recertification may "proclaim 'til the cows come home" that the intent of Recertification is NOT MERELY to put no-longer-useful academics into ego-and-wallet-boosting positions of authority over practitioners, but sadly, that is also untrue.

Like CME, Recertification requirements waste physician time, reduce taxes collected and raise costs for the patients who must eventually support the entire medical enterprise. At best, Recertification only measures the ongoing ability of experienced physicians to swallow and regurgitate irrelevant or soon-outdated information and theories.

Knowledgeable consumers with major medical, surgical or dental problems, usually seek out an experienced hand who

has learned “the hard way” what works and what doesn’t. So rather than annoy experienced surgeons with "resident level" teachings, why not simply analyze patient outcomes in each Board Certified specialist’s current practice?

Surely this will be easily and cheaply achieved within a Single Payer system with patient follow-up information already in a data-base. I have heard representatives of large Health Care Organizations declare that patient outcomes analysis provide effective quality control. ***So why recertify?***

Furthermore, in-house analyses avoid the adverse impacts of published ratings that might promote malpractice actions or push surgeons to overstate minor shortness of breath as emphysema (so their patients appear sicker on paper than they really are), or worse yet, might cause surgeons to avoid caring for very ill patients entirely, because really sick folks often don’t do as well as an average patient.

Properly performed outcomes analyses ought not even be noticed by most surgeons whose patients appear to get good care. It has been said that outlier physicians - who are privately advised that their peers have better results or use fewer expensive tests - are usually willing to adopt more effective methods or undergo retraining or change their field. Undoubtedly, a few also quit or are fired.

In other words, rather than continue the present costly disturbance of every active specialist’s home life and practice by decennial preparations for Recertification, why not apply outcomes analysis and then only bother those who actually need retraining? After all, the average practicing physician is far more interested in improving her/his patient outcomes than any faraway Academic doctor could ever be.

Furthermore, I would rather be cared for by a physician whose patient outcomes were satisfactory on an ongoing basis, than by one who barely passed a mostly irrelevant exam nine years earlier. After all, I was totally obsolete in open-heart

surgery just seven years after becoming Board Certified - at which point I needed three months of further training just to catch up.

If left to their own devices, most physicians voluntarily attend the best meetings in their specialty. And there they actually do sit long hours on hard chairs in order to remain current on matters affecting the welfare of their patients. On the other hand, busy practitioners cannot leave town for many such trips.

Naturally, it is difficult for specialty meetings in dirty old cities to compete with "free holiday!" bribes from Big Pharma, or with seductive CME-accredited offerings—or with classes for Recertification at some fancy deductible resort. And that is just another way that Big Pharma and CME and mandatory Recertification undermine the quality of medical care.

Are There Really 101 Uses For a Retired Surgeon?

With my third Chest Surgery textbook published and my medical license expired—hoping to still be of service—I signed up to run for a State Senate seat. Fortunately for me, after knocking on about 15,000 doors, I was barely defeated in the Primary by the usual last-minute Republican smear.

That standard, repeatedly tested, reliably effective Republican smear brings in a non-candidate (third person or group) to promote some fabricated untruth (in my case, that I was "controlled by the Teamsters") and keep hammering away at it with annoying advertisements until the less-informed public is so sick of both complainer and complainee that it either doesn't vote or simply holds the nose to vote for the uninvolved other (Republican) candidate.

The Republican Party is currently dominated by two largely overlapping groups—religious fundamentalists who believe extremism in the service of the Lord is no sin—and the truly power-hungry or terminally greedy who intend to ride

their political connections to dominance and obscene wealth.

Recent extraordinary electoral successes of Republicans stem from the fact that neither group of chronic liars feels remorse for last-minute smears and other dirty deeds (like using police threats and sham disqualifications to keep Democrat-leaning minorities from voting, or promising to help the less fortunate while doing the opposite, or installing tens of thousands of defective election machines that issue fraudulent vote counts) to frustrate the will of the majority.

For example, many (most?) recent Republican electoral wins have depended upon the rapidly expanding use of touch-screen voting machines with secret proprietary software operated by Republican vendors (see Afterword). Thus "new high-tech computer voting machines in Boone County, Ind., counted 144,000 votes in an election with fewer than 19,000 eligible voters" (The Week, Nov.21, 2003 p6).

Ordinary Americans still assume that the avoidance of public shame will motivate mostly moral behavior by their leaders and fellow citizens. But these Republican liars and mis-leaders truly are shameless. In fact, they lie even more when their dirty deeds are exposed. For them, losing honestly is the only shame.

At the opposite extreme, those who trust and those who are trusted tend to become more trustworthy. And the degree of trust in a country is one of the most powerful factors affecting its economic health. Unfortunately, there seems to be a negative correlation between trust and religious belief.

Thus Utah, our most religious state, also has the most business scams. Which may help us understand how President Bush—who declared himself a born-again Christian—got away with so many lies about his intentions. Apparently, if you cannot rely upon others, you just rely upon a higher power (New Scientist, 10 May, 2003 pp33-37).

In any case, after I lost that election for State Senate, for

the first time in my adult life, I felt free to do as I liked; even to stay in bed when I felt ill or tired. Various friends and certain hustlers, knowing we still had children to educate, attempted to help me and themselves make a better living.

One hustler wanted me to sell mortgages to my medical comrades just as a big real estate crash was pending "because you have such a good reputation!" I politely declined to rent tattered remnants of my amply smeared post-campaign reputation.

A good friend knew someone who would pay me well to run patient trials on experimental drugs. But I could never encourage others to take a "me-too" hardly-different "wonder" drug (as in "we wonder how to hype this me-too drug") just to detect obvious adverse effects—though many physicians encourage their patients to enter such studies.

For example, a local urologist wanted to switch my good, well-insured friend away from the costly drug successfully suppressing his prostate cancer, to a comparable new drug that might not become available for years. The experimental drug for that short-term test was "free"—along with frequent "free" blood tests and a short "free" follow-up.

This extra attention appealed to my friend, who realized he would soon need more help. At the very least, he thought, the urologist might take more interest in his case. But when he asked my advice, I convinced him that this unknown (but obviously "me-too" drug) might interfere with, but could not possibly improve his care.

Only his urologist, who in accordance with current practices could have received over a thousand dollars for each patient entered in the study—and the Big Pharma Corporation hoping to hype its slightly different product into another billion dollar drug—could possibly benefit from this study, even if my friend suffered no ill effects.

So he didn't sign on, though a mutual friend of ours did,

for the usual “He will take better care of me if I do him a favor” reason (How could that possibly qualify as an informed consent?), even after I briefly summarized the situation to him as well. Perhaps coincidentally, our mutual friend’s chronic coronary heart disease flared up shortly after completing that new-drug test and he soon died. (and see Clinical Trials, Lancet, Oct. 30, 1999 p1534)

My next career was as a slightly paid, part-time instructor of Anatomy and Physiology in various local branches of the University of Alaska. Because all available A&P textbooks were useless out-of-date clones that mentioned nearly everything but explained nothing, I eventually wrote Human Evolutionary Biology; Human Anatomy and Physiology from an Evolutionary Perspective.

That book came out in 1995 and still sells through Amazon.com—where readers awarded it 4.5 stars. A more recent book of mine - An Evolutionist Deconstructs Creationism - about the evolution of Religions - got 4 stars.

Screening Tests frequently do more harm than good

As I recuperated from heart surgery, it seemed clear that I no longer was an acceptable risk to undergo major surgery. Perhaps surprisingly, that was a relief, as it further justified my ongoing avoidance of all "popular screening tests" (see Uses and abuses of screening tests, Lancet, March 9, 2002 pp881-4) such as colonoscopy or prostate specific antigen (PSA) that commonly return therapeutically ambiguous findings.

For example, back in the late 1960’s or early 1970’s, FS, a friendly long-time hospital pathologist, asked me for a blood sample in order to test his newest blood-screening gadget. Later that same day, he paged me urgently, led me into his office and insisted I sit down. Then he hesitantly confided that his new machine predicted I must soon die.

Of course, pathologists deal mostly with rude doctors and

dead folks, so they often come up a bit short on bedside manners; my own bedside manners have sometimes been questioned too. Anyway, his machine's tests showed my liver or kidneys to be feeble, failin' bad and ready to fall out—or something like that.

Therefore, FS urged me to give lots more blood immediately so he could run a bunch of costly confirmatory tests. I refused, predicting that all of my body parts would outlast his new machine - and rode my bicycle home.

As I had expected, his new machine died within the week. But before it passed away, it apparently stimulated a fruitful flurry of follow-up blood tests for the Hospital lab.

Furthermore, up to half of all autopsies on older adults reveal small prostate or breast cancers that never had an adverse impact during life. Those individuals—having died of an unrelated cause—were clearly better off with that cancer unrecognized and untreated.

In the US about 200,000 prostate cancers are discovered and treated yearly, while 35,000 to 40,000 men die of prostate cancer—see National Cancer Institute SEER website, seer.cancer.gov

Although this represents a considerable rise in prostate cancer frequency, the overall death rate from prostate cancer has remained relatively stable. Some might conclude that we were seeing a prostate cancer epidemic to which modern medicine had responded with a wonderfully high cure rate.

More likely, this situation represents over-detection and over-treatment of many incidental cancers that would not have harmed the patient. Furthermore, it is reasonable to assume that per-case treatment-complication rates apply even when less aggressive cancers are treated—which means a higher modern prostate cancer detection rate has merely left many more men impotent and/or dribbling urine despite no survival benefit (the US Preventive Services Task Force estimates that

prostate cancer surgery leaves 20-70% of patients impotent and 15-50% incontinent).

Some urologists hope to lower the current PSA cutoff of 4.1 for recommending an invasive prostate biopsy to 2.6 ng/ml as this would detect 64% of prostate cancers in men under 60 versus the 18% currently detected at 4.1. But quadrupling the number of invasive biopsies in the below-sixty population seems irresponsible as long as each of those biopsies has significant risks (up to and including death), yet cannot predict whether that specific prostate cancer will become dangerous in 5 years or 50 (New Scientist, Aug. 2, 2003 p7).

Will the next recommendation be yearly biopsies for all adult males? Some experts say that over three-quarters of prostate cancer patients "really don't need to be treated"—though which cases belong in that untreated three-quarters is still uncertain. It is even unclear "how significantly any treatment extends life" (see The Prostate Paradox, in The New Yorker, May 29, 2000 pp 52-64).

"While (PSA is) frequently used for prostate cancer screening, the United States Preventive Services Task Force (USPSTF) does not recommend its use in healthy men. This USPSTF recommendation, released in October 2011, is based on "review of evidence" studies concluding that "Prostate-specific antigen–based screening results in small or no reduction in prostate cancer–specific mortality and is associated with harms related to subsequent evaluation and treatments ... which may be unnecessary." In those with prostate cancer, rising levels of PSA over time are associated with both localized and metastatic prostate cancer. Prostate... screening is controversial and may lead to unnecessary, even harmful, consequences..." (from Wikipedia)

In addition to weeks of worry, cost and inconvenience, and the risk and discomfort of unnecessary and invasive studies, there is the chance that patients who receive any sort

of cancer diagnosis will abandon their previous optimism and self-perceived good health and become less happy, productive or fun to be around.

Thus whenever a screening process generates income or employment without apparently yielding cost-effective benefits for the patient, those promoting such screening need to stop and reflect whether they need it more than the patient—and if so, they should end the program or at least declare a personal conflict of interest.

“It is a difficult situation (says Eric Schneider, Harvard Medical School). Patients want relief from uncertainty, doctors want to offer them something, and these tests can provide a sense that more knowledge is possible. In the name of prevention, doctors and patients undertake a collaborative effort that sometimes leads to tests or procedures that might not be in the patient’s best interest.”

In the meanwhile, to help separate the known from the unknown, the U.S. Preventive Services Task Force (www.ahcpr.gov/ clinic/cpsix.htm) “reviews all scientific evidence for or against the different preventative interventions and then grades them accordingly” Harvard Magazine Sept/Oct. 2003.

Another oft-unforeseen side-effect of discovering a low-malignant-potential breast cancer is its adverse effects on insurability of female relatives. Any intelligent woman who has accepted the standard medical promo that "mammography is the only way to be sure" might consider herself doubly misled if the final outcome of all those intrusive, expensive and annoying tests was biopsy information that offered neither therapeutic nor prognostic guidance.

And her female family members might justifiably be doubly annoyed to lose their insurability through no act of their own. Clearly, screening is not risk free. Indeed, for populations with a low prevalence of the condition being

screened for, even a known low rate of testing errors will reliably produce unacceptably high frequencies of incorrect results and undesirable outcomes.

On the other hand, populations at moderate risk of hypertension, diabetes or cancer of the uterine cervix are likely to benefit from early detection of those problems, provided competent follow-up is readily available.

What if one could demonstrate that patients with malignant breast cancers found by screening mammography lived (on average) two years longer after cancer detection than those whose malignant cancer was only diagnosed when it became physically evident?

Unfortunately, that apparent two-year bonus might just indicate that the patient learned of her problem two years earlier than she would have without a mammogram—rather than that early detection granted two additional years of life.

As mentioned previously (see urinalysis in Chapter 3), everything we do or have done to us or don't do—including going to work, eating lunch, drinking a glass of water, shopping or having medical tests—exposes us to some risk, or may even cause death.

Perhaps a fair legal environment will one day recognize that the best any physician can do for her patients is to balance the cost and risk of a test against its potential to contribute useful information that might make a helpful difference in treatment.

But even if the cost and risk of a potential treatment could be accurately measured - say against its likely benefit to determine at what point detrimental outcomes from possible errors of omission balanced detrimental outcomes from possible errors of commission—different individuals still might value present cost and risk against possible future benefit in quite their own way.

So should we recommend replacement of a dilated blood

vessel in an apparently healthy 70 year old if statistically that vessel has a 50% chance of dangerous rupture within 5 to 10 years? And how shall we factor in sometimes extraneous, subjective or individually relevant values, costs and benefits such as impact on appearance, or the desire to have children, or the effect of a procedure on an individual's ability to work or speak or read or eat or urinate without dribbling.

What if a malignancy near the brain will soon cause a miserable death unless it is heavily irradiated, yet that radiation will destroy enough brain function to probably leave the person blind or an invalid. Surely, accepting radiation under such circumstances is a choice that the patient ought carefully consider in consultation with family members and other concerned and competent advisors or caretakers.

Some might prefer to terminate such a no-win situation early and in comfort. Indeed, well into the 20th century, most patients were better off avoiding drugs and medical care. *Is it morally troubling—or just an unavoidable aspect of capitalism and medical progress—that in the early 21st century, so many still do so well selling drugs and doing procedures that are cost-ineffective or do more harm than good?*

Before Helicobacter pylori and simple antibiotic cures for ulcers were discovered, many ulcer patients underwent disabling stomach operations "to prevent future problems". And long ago, I operated several times on a young adult whose huge cancer was compressing his heart. Each of those dramatic (and by most measures, cost-ineffective) operations reduced his symptoms and gained a few months. The lad knew he had no chance of cure as other means of control had proven ineffective. But he desperately wanted extra time.

So for a relatively short time, he came to me for help and I helped as much as I could—which, after all, is what physicians are sworn to do. I don't recall if he was well-insured or if I operated for free, or if I refunded his insurance to help him

cover other costs.

But money that went into his care from whatever source and to whichever health-care-affiliated persons, could have saved many lives in a free-health-care clinic or free immunization program. Or those thousands of dollars might have tracked down many patients who underwent spleen removal for various reasons such as splenic rupture from blunt injury to the abdomen, or a problem with blood clotting, or an accidental tear of its delicate capsule during abdominal surgery (in former times, we believed that such a tear justified spleen removal to prevent delayed bleeding).

Yet post-splenectomy patients have more recently been considered candidates for antibiotic prophylaxis or immunization against certain varieties of pneumococcus and other encapsulated bacteria that may quickly kill patients lacking a spleen.

Presumably, current calculations still identify some of that follow-up care as cost-effective, but check with the Center for Disease Control or an appropriately trained infectious disease or other expert (just as you should investigate any possibly relevant medical recommendation here and now, or elsewhere and sometime in the future, before proceeding).

Should an insurance company or a single payer be allowed or encouraged or required to refuse payment for treatments that do more harm than good, or those that are not cost-effective? Would my palliative surgery on that young fellow now be viewed as cost effective? Should we refuse to provide costly unproven drugs or procedures to those who cannot wait for the results of clinical trials? And so on.

CHAPTER ELEVEN
WINNERS AND LOSERS
BIG PHARMA VERSUS JOE AVERAGE

The role of pharmaceutical advertising. Do all those costly drugs reflect good science? A monopoly is "a legal right to the exclusive control of an industry or service as granted by a Government". Monopolies generally undermine decent health care

The role of pharmaceutical advertising

True medical breakthroughs such as penicillin are uncommon and need no promotion. Therefore the role of pharmaceutical advertising is to generate enough excitement about the latest ho-hum product so that physicians will say "You should be on this medicine" even if you cannot afford it.

Big Pharma promotions often depict Joe or Jane Average playing with the grandkids. Those heart-warming scenes might lead one to assume that affordable cures for life's worst diseases are Big Pharma's fondest dream. But were that the case, even highly hyped medicines could cost a lot less.

Over half a century ago, Kefauver's Committee hearings showed the nation that the most outlandishly expensive medicines were not costly for Big Pharma to license from academia, nor very expensive to develop or manufacture.

Rather, it turned out that expensively-hyped drugs remain costly for as long as their patent-protected monopoly persisted because costly hype creates an apparent need for ordinary (non-essential) drugs, while higher prices make ordinary drugs (and diamonds) more desirable and profitable.

As mentioned previously, Big Pharma is the most profitable of our major, public, lawful industries. And that excessive profitability harms Joe and Jane Average in multiple ways. As discussed in Chapter Four, Big Pharma's focus is on

short-term profits through lobbying ("In Washington, there are six pharmaceutical company lobbyists for each U.S. senator" according to the Los Angeles Times), lawsuits, mergers and acquisitions, rapid payoffs from political contributions, and so on: All of which increasingly divert Corporate attention and investment from longer-term projects that might actually create some useful or even essential new medicines.

That relentless corporate drive toward higher short-term profitability is largely fueled by the desire for ever higher executive salaries and ever more valuable stock options (e.g., From 1999-2002 *Pfizer reported spending over $14 billion on Research and Development* ***and nearly $10 billion to buy enough Pfizer common stock to offset stock options***).

In pursuit of those huge short-term profits, Big Pharma companies often shut down plants—or discontinue essential vaccines, out-of-patent medicines or other products that citizens depend on—because they return only ordinary profits. Yet most businesses seem delighted to make ordinary profits.

But the mere fact that Big Pharma **can** discontinue essential vaccines and medicines at will—*allows wealthy multinational Corporations to extort guaranteed or excessive profits* for vaccines and other medicines that they deign to produce (Why we must pay more, New Scientist, 31 Aug. 2002, p25).

Anyhow, when the hype subsides as patents expire, a drug that has only proved useful for uncommon conditions is unlikely to attract immediate generic competition. And don't expect Big Pharma Corporations to issue timely market-wide notifications or to continue providing such essential but low-volume medications until others can think it over and ramp up low-cost generic production.

Indeed, these wealthy Corporations discontinue important vaccines like tetanus toxoid whenever it suits Corporate strategy or convenience, without attracting ongoing

press attention, closer government oversight or consumer outrage. Clearly, Multinational Corporation decisions need only benefit top executives and the bottom line.

Do all those costly drugs reflect good science?

Consider an ordinary placebo-controlled double-blind trial. This sounds scientifically above reproach because it compares look-alike pills to prevent participants or researchers from knowing who got the new medicine until the code is broken and results are tabulated.

However, any placebo-controlled clinical trial of a slightly different me-too drug can only show whether the new drug is obviously toxic, or if it is more effective at what is being measured than the placebo effect of a non-drug. In other words, is the new medicine in any way better than nothing?

Such a study becomes unethical patient abuse if it exposes some trial participants (those who got the placebo) to non-treatment of a serious condition—while many others are exposed to the unknown risks of a new molecule without anyone even trying to answer the most important question "Is this medicine better than drugs currently available?"

And when a Big Pharma company does compare an established drug with their new release, they regularly use inappropriately small or infrequent doses of the established drug to make the new medicine appear more effective.

So we are not surprised that so many new medicines reaching the market are more toxic or less effective than what is already available. Yet they too are heavily hyped, widely sold and inordinately expensive.

For example, in 2003, Bayer, a giant multinational drug manufacturer, faced possible bankruptcy because so many lawsuits claimed that Cerivastatin (a "me-too" statin they developed and promoted when half-a-dozen other cholesterol-reducing statin drugs were already on the market) had an

unusually high fatality rate from muscle breakdown—a side-effect Bayer allegedly knew about but repeatedly denied.

Other statins may raise the risk of cancer sufficiently to negate any possible improvements in the survival of patients with coronary artery disease, or some may raise plasma homocysteine concentrations—thereby increasing the likelihood of arterial disease (Lancet, July 7, 2001 pp39-40).

And not surprisingly—given that cholesterol is a key ingredient of cell membranes—there are many reports of amnesia and other nervous system side-effects such as polyneuropathy (weakness and numbness of the extremities) closely associated with taking these cholesterol-lowering drugs (see "You're my wife?" New Scientist, 6 Dec. 2003 p14). *But don't expect Big Pharma to investigate those questions either.*

Many medicines approved by the FDA for one purpose may have other useful off-label effects - also referred to as useful "side-effects". But once a drug patent expires, its monopoly price can be undercut by generic competitors, so at that point, a drug manufacturer is less likely to achieve significant financial gain by investigating other applications.

Under such circumstances, only an advocacy group for patients (whose members might benefit), or a Single Payer (representing all of us!) could benefit by supporting clinical trials to pursue such possibly important questions.

Fortunately, Medecins Sans Frontieres is organizing a consortium—the Drugs for Neglected Diseases initiative—dedicated to developing and distributing essential drugs to the world's poorest people (see Nature, 3 July 2003 pp10-11).

Between 25-60% percent of approximately 1.6 billion prescriptions written in the USA each year involve off-label uses (Lancet, Jan. 4, 2003 p63). Clearly off-label drug usage deserves far more than the limited anecdotal attention it has received. Indeed, were a nationwide survey of physicians to tabulate and computerize all off-label prescription drug usages,

that compilation would instantly become a treasury of great new treatments for troublesome conditions, as well as a monument to failed ideas and purposeful misrepresentation.

Examples from the positive side include Ramsdell and colleagues' work at NOAA (in Charleston, S.C.) who confirmed in mice that cholestyramine, a cholesterol lowering drug, is protective against brevetoxin, an algal ("red tide") product that causes often-fatal paralytic shellfish poisoning or PSP (Science News, June 7, 2002 p364). They also developed a quick diagnostic blood test for brevetoxin.

In another fascinating article, David Horrobin asks—Are large clinical trials in rapidly lethal diseases usually unethical? (Lancet, Feb. 22, 2003 pp 695-97)—then answers that opening question with a resounding "YES!" Fortunately, Horrobin and friends were able to devise an initially effective treatment for his own rare and rapidly lethal type of lymphoma after uncovering at least six possible (previously unexplored) off-label treatments using FDA-approved drugs already on the market.

Of course, no major drug manufacturer can prosper by developing inexpensive medications for diseases afflicting only a few patients. And this problem is likely to get nastier as Drug Corporations become more adept at identifying probable-good-responders through advances in pharmacogenetics. For such advances will let them run truly impressive clinical trials.

To date, Big Pharma has been conspicuously reluctant to support Public Pharmacogenetics Research, or to publish its own results in that new field. As Brian Spear, director of Pharmacogenetics at Abbott Laboratories, points out, "Our general philosophy is not to initiate a drug-development programme that would limit the group of patients a drug could treat" (Nature, 23 October, 2003 pp760-2).

Furthermore, once a Corporation receives specific FDA approval, *it need not tell physicians how to identify potential-*

good-responders if such helpfulness could decrease sales of that often useless or even toxic, but costly and highly profitable drug.

Summary: Expect Big Pharma Corporations to report great trial results that encourage physicians to test apparently impressive new drugs on patients outside of the designated "likely responder" group. Such off-label uses of a potent drug with many dangerous side-effects will predictably harm lots of "likely non-responders" with little likelihood of benefit (e.g., see "Hardly a wonder drug" about misleading promotion by AstraZeneca of the anti-cancer drug Iressa, which rarely helps but can trigger a deadly side-effect—New Scientist, 24 May 2003, pp12-13).

On the other hand, where a few treated patients might formerly have "inexpensively and quickly" answered the "Yes" or "No" questions about a Drug's efficacy, there now exist huge administrative, ethical, clinical and financial barriers to block all but the most wealthy, persistent Big Pharma Corporations or the most experienced investigators.

In good part, these barriers were erected as clinical trials changed from interest-driven enterprises to new institutional profit centers. As a result, no one can afford to study anything except patent-protected new chemical entities. And Academic researchers in most institutions allegedly determine which trials to join by the financial contribution from a commercial sponsor rather than any likelihood of benefit for the patient.

Furthermore, very large clinical trials are only necessary to reveal very small (generally useless or hardly significant) beneficial effects. So with unusual diseases, one large trial may tie up enough relevant patients to delay or stymie trials of other, possibly more useful, competing medicines.

Nowadays, almost every Hospital has Committees to ensure that new drug trials meet strict rules and are statistically valid, as well as ethicists to maintain proper standards for drug trials, and so on. But such Committees

usually just impede innocuous investigations rather than safeguarding patients.

However, Big Pharma still manages to test every potential billion-dollar drug for toxicity by misleading sick folks (see previous comments on prostate cancer drugs) or by taking advantage of poor people in Third World Countries. "Trials and Errors" (New Scientist, 21 June 2003, p28) discusses the issue of informed consent in Third World countries, and asks whether the efficacy of new drugs can ethically be determined by comparing treatment outcomes with those based upon local herbal products. Or ought the trial-control population receive the best treatments available to Western medicine?

One may even question the ethics of most ethicists, since Big Pharma Corporations nowadays engage bioethicists to assess controversial work—hoping "to convince the public that they are (finally) taking ethics seriously". But at a time when bioethicists are offered board positions, consulting contracts, research grants and even stock options, only one ethics center out of 89 surveyed posted funding information on its web site (see Nature, 27 June 2002 pp885-6).

Cary Gross and others at Yale University Medical School have reviewed all English language studies of links between funding sources and medical outcomes since 1980. Not surprisingly, after analyzing over 1100 clinical trials, they conclude that *where Academics receive backing from industry, over 80% reach pro-industry conclusions*—versus only half of all studies without such industry links.

Currently, two thirds of all biomedical research and development is industry-backed, and two-thirds of academic institutions have equity interest in new biomed companies that support research on campus. Furthermore, some industry contracts actually prohibit researchers from reporting harmful effects of proprietary medicines that they study—*even to trial participants* (see Clinical Trials and industry, Science, 27 Sept.,

2002 p2211).

And this is a huge problem. For while it is illegal for Big Pharma Corporations to withhold negative information from the FDA , the FDA and comparable overseas governmental entities will not, or else cannot legally, release any information upon which a drug's approval was based, if that evidence was labeled **"a trade secret"** by the Manufacturer.

Which results in truly evil outcomes such as more Americans dying each year from anti-arrythmia drugs than died in action during the entire Vietnam war. "Had some of the early evidence suggesting those drugs were lethal been published, this catastrophe might have been prevented."

Similarly, Serum Albumin was used to expand blood volume for 50 years despite partly unpublished evidence suggesting a six-percent mortality from its use (see Chapter Fourteen, and Iain Chalmers, "In The Dark", New Scientist, 6 March, 2004 p19).

Chalmers suggests *Three Lessons*. "*First*, if companies have not studied effects on the key outcomes—like death—that matter to patients, regulators should grant only provisional licenses. *Second*, evidence from successive clinical trials must be accumulated and reviewed systematically. *Third*, biased reporting of clinical trials must be outlawed."

He concludes that *permitting companies to keep the effects of licensed drugs secret, and ignoring the evidence that biased reporting of trials harms patients and wastes money, "surely cannot be in the public interest."* Chalmers is Editor of the James Lind Library which documents the evolution of fair tests of medical treatments (www.jameslindlibrary.org).

Cancer chemotherapy is currently stuck with the large trials needed to detect a rare persistent improvement. Thus most trial participants suffer adverse effects for little likelihood of benefit. The author concludes that it can be rational to not participate in a clinical trial, and that we need a

new system for selecting and testing promising drugs.

In addition, Contract Research Organizations (CROs) have taken over two-thirds of Industry-funded Clinical Research. And Big Pharma controls CRO research—often to the point of withholding complete data from the researchers doing the study. As you might expect, studies with negative findings rarely see the light of day. Furthermore, Big Advertising Corporations now buy CROs and package the design and outcomes of CRO studies to sell more product (see Doctored Research? Harvard Magazine Nov/Dec 2003 pp15-16).

A Lancet editorial also points out that *since a clinical trial is a treatment, it ought to obligate the investigator, especially one running trials in a developing country, to ensure appropriate follow-up care is provided even when the trial is over.*

After all, it is frequently the case that volunteering for a trial is the only way a poor person can obtain any treatment. So this obligation should be spelled out in an amendment to the Declaration of Helsinki (Lancet, Sept. 27, 2003 p1005).

Or perhaps we should ignore administrators, fire all the Ethicists who have cooperated in this unethical folly, and return to doing whatever is best for our patients. However, that would require academics to cast off their profitable ties to Big Pharma and return to unrestricted interest-driven research—so don't hold your breath.

In addition to charging "as much as the Market will bear," Big Pharma Corporations prolong their time-limited monopoly by every possible devious method. If cheating at cards is detested by ordinary folks, how would they judge the games Big Pharma plays, such as filing lawsuits to delay legitimate generic replacements for years while pricing to maximize profit regardless of how many sick people are cut out of the market, just so Big Pharma makes a few extra bucks.

During the summer of 2002, 30 US States and Territories filed suit against Bristol-Meyers Squibb for allegedly filing

many frivolous lawsuits and fraudulent patent applications in an effort to protect their monopoly on Taxol and avoid legitimate competition from generic products.

The course of Taxol treatment from Bristol-Meyers Squibb cost $6,000-$10,000, while generics sold for about a third less. And in 2001, when generic Taxol finally reached the US market, Bristol-Meyers Squibb's annual revenues on Taxol fell from $1 billion to $545 million.

We have pointed out that highly hyped medications are hardly ever unique or outstandingly effective. For unlike long-awaited "breakthrough drugs" like penicillin—which naturally attract a great deal of interest as soon as they become available and thereby advertise themselves—the usual very-expensive "Billion Dollar Drug" is not notably more effective than generic medicines costing cents per day or even a placebo.

For example, a five-year study (mentioned in Science News, Jan. 18, 2003 p 45) involving 623 health centers found an inexpensive diuretic was generally more effective as initial treatment for high blood pressure than calcium blocker or ACE inhibitor drugs costing 5 to 15 times as much.

Of course, different anti-hypertension treatments work better for different folks. One small study even suggests that diuretics may be contraindicated during pregnancy, since *severe late pregnancy hypertension—and/or its treatment with diuretics—may increase the risk of schizophrenia for that newborn by the time he/she reaches 35 years of age* (like all initial reports, this interesting association needs confirmation).

An inexpensive, 40 year-old drug, Spironolactone (Aldactone), suppresses aldosterone (a steroidal hormone secreted by the adrenal glands which causes sodium ion retention, potassium ion loss and raises norepinephrine levels—thereby stressing the heart). Aldactone remains a very effective anti-hypertension drug. It also reduces deaths from heart failure by 30% (but side-effects include reduced sex

drive or breast growth in 10% of men).

As an old retired surgeon, I can only praise those more effective anti-hypertension agents now available. For they truly are "wonder drugs" when compared to the risky diagnostic studies and low-benefit therapeutic operations performed in the early 1960s for "malignant (uncontrollable) hypertension".

Those hardly useful and now outdated "anti-hypertension operations" included bilateral lumbar sympathectomy, renal artery surgery and partial kidney removal. But nowadays, instead of major invasive studies or such major surgery, physicians simply try one anti-hypertension agent after another until they find a drug or drug-combination that works with tolerable side-effects for that patient at that time.

Big Pharma claims that exorbitant charges for patented drugs are the only way they can sustain their fabulous research programs. This claim is "a true fable". For most true—rather than hype-driven—"Blockbuster drugs" (over a billion dollars in annual sales) were discovered and often even developed largely by University-based scientists at public expense.

In its May, 2002 report, the non-profit National Institute for Health Care Management found that the FDA approved 1035 drugs during 1989-2000. Of those 1035, only 361 were new molecular entities—and only 153 were deemed significant enough to warrant priority review. Active ingredients in the other 65% of new drugs were already available in approved drugs (Lancet, Nov. 2, 2002, p1341).

A Monopoly is "a legal right to exclusive control of an industry or service, as granted by A Government"

A Technology Review commentary by Seth Shulman (April 2003, p77) offered points to ponder as our story unfolds.
1) The U.S. Taxpayer supports about two-thirds of research in our Universities and non-profit research institutions.
2) The Bayh-Dole Act of 1980 lets Universities license patents

to commercial entities without disclosing the deals made.
3) Over half of such licensing deals are exclusive arrangements granting a monopoly on some patented technology.
4) Hence Bayh-Dole should be revised, for taxpayers have the right to know what happens to intellectual property they paid to create.
5) Furthermore, exclusive licensing is likely against the pubic interest since the owner of a legal monopoly on any life-saving technology may demand anything from desperately ill persons. And exclusive licensing often blocks important innovations.

For example, CellPro, a Seattle company, developed an innovative government-approved treatment for cancer that was in use by 5,000 sick cancer patients by the time Baxter International finally had their own product ready. Then that deep-pocket multinational corporation claimed "Infringement on its exclusive license from Johns Hopkins" and drove CellPro into bankruptcy (Conflict of interest statement—I once consulted for a Baxter subsidiary and eventually received about $60,000 in royalties on a Chest Drainage Device).

Monopolies undermine decent health care

In an old Disney movie called Dumbo, a bunch of circus clowns come up with a great idea—that Dumbo (a small elephant with large ears) shall modify his act by jumping from a far taller burning building into a much smaller safety net. The scene ends with drunken clowns celebrating their great idea before rushing off "to tell the Big Boss and hit him for a raise."

Presumably it was not just a bunch of drunken clowns seeking a raise who initially rumored (thereby market-testing) a $3,000 manufacturer's price for each drug-releasing stent. The basic stent is a springy metal-mesh cylinder that, when positioned within a previously narrowed coronary artery, may "hold it open" after coronary artery "angioplasty" (dilation).

Sometimes several stents are inserted by a cardiologist

during a single "angioplasty" procedure. Bare-metal stents were originally developed in the 1980s to minimize the highly variable (15% to 80%) reported early failures of angioplasty. Despite inserted stents, a fourth of dilated-and-stented vessels were again blocked *within six months.* A more recent study claimed less than half that many closures *within 9 months* for drug-eluting stents.

Longer-term local effects of the stent coating or various drugs eluted had not been determined. However, previous attempts to decrease vessel closure rates after angioplasty (by local treatment with radioactive materials) proved counter-productive within two years.

Nonetheless, Science News (Oct. 4, 2003 p214) reported that despite that brief experience and limited supplies, an estimated 60% of current stent insertions were of the new drug-releasing type at about $2500 each (roughly three times the price of a bare-metal stent).

So a single unproven drug-eluting stent (releasing a chemical alleged to suppress early cell regrowth near the stent) costs a cardiology patient more than my basic surgeon's fee for an entire heart operation in 1983. And presumably, most cardiologists charge more for each stent inserted after ***"angioplasty"*** (a great cost-justifying-term for probing and dilating a narrowed coronary artery branch).

In any case, coronary artery closure rates after angioplasty - with or without stents - has remained consistently higher than failure rates of surgically installed bypasses. But each approach has advantages under some circumstances.

More importantly, cardiologists diagnose coronary artery disease so they usually decide if the patient gets angioplasty by a cardiologist or is referred for heart surgery. Similarly, surgeons are consulted to determine if patients needs surgery.

The salient point here is that all procedural physicians or

other therapists have an inherent conflict of interest—of which they are acutely aware, since most make a very good living by promoting their own services to the patient. Furthermore, physicians are supposed to always put the patient's interests before their own. Hopefully, some still uphold that proud tradition and continue to deserve their patient's trust.

Now I have no idea whether public dollars supported two thirds of the research on costly drug-eluting stents—or on those thirty-thousand dollars or more per-patient-year cancer drugs—or on the $60,000 yearly costs of the patented drug for reducing pulmonary hypertension (apparently not enough people bought at that price so the manufacturer allegedly dropped the price temporarily to about $25,000 per year, but may raise charges again).

In many such cases, the question is not "How can we get our new drug out to all those that desperately need it?" but rather "Will we make more by charging a great deal or a huge amount?" Would Big Pharma withhold an effective drug from dying people to make a few extra bucks? "You bet!"

However, in the case of the pulmonary hypertension drug, the company allegedly offered reduced or compassionate prices to needy folks who can get one of the few physicians approved by the manufacturer to care for them and also assist with their "compassionate-drug-use" applications.

It is obvious that the retail price of stents, or of costly cancer or HIV suppression drugs, often has little to do with manufacturing costs and everything to do with having exclusive rights and evading competition. Were it otherwise, generic drugs could not be sold inexpensively for a good profit.

Interestingly, Big Pharma's routinely understated marketing expenditures always dwarf their hugely-exaggerated research costs—see America's Other Drug Problem—How the drug industry distorts medicine and politics; by Arnold Relman and Marcia Angell (The New

Republic, December 16, 2002 pp27-41).

Of course, a Big Pharma Corporation's marketing expenditures only begin with routine visits and bribes to physicians (e.g., Marianne was offered a fully paid Florida resort holiday plus $1000 spending money), or those colorful promos seen everywhere in print and other media. For by far the greatest return *Big Pharma gets is on dollars spent as campaign contributions, or to sustain throngs of deductible lobbyists and attorneys who routinely revise Congressional legislation to better serve Big Pharma needs.*

Our very own Food and Drug Administration (FDA) - the agency that oversees drug safety concerns before and after drugs are brought to market - *is increasingly dominated by Big Pharma, as is our heartless foreign policy that for so long denied poor countries cheap drugs to treat AIDS,* thereby bringing early death to millions and severely damaging our Nation's image, so multinational Big Pharma could make a few extra dollars.

Robert Kennedy wrote that when police receive more money from criminal payoffs than police salaries, it is not necessary to ask for whom they really work. Similarly, one can tell a lot about how a politician will vote by identifying his or her major campaign contributors. And a lot about whom they really worked for while in office, by who hires their relatives, or them upon retirement.

Big Pharma soon corrupted even the Pharmaceutical Management Organizations devised by Big Health Care to monitor prescriptions and negotiate discounts from Big Pharma. Although HMO's and Big Health-Insurance initially saved 30% by restricting drug purchases to discounted, less expensive, more effective remedies), it became obvious that the PMOs had been co-opted when drug costs to individuals and large organizations again skyrocketed *while PMOs reported huge profits from "new services to drug-makers" that they did not disclose.*

Medco Health Solutions is an outstanding example of a hugely profitable company that was supposed to help health plans find low-cost prescription drugs but (federal prosecutors alleged, on 6/23/03) instead pressured doctors to switch patients to medications made by Merck—beginning after Merck bought Medco in 1993.

When accused of providing misleading information in connection with its contract to manage drug benefits for federal employees, Medco responded that these charges were either untrue or reflected old isolated issues that had been identified and corrected.

On 8/5/03 Merck announced Medco would pay Merck a $2 billion dividend and that all Medco shares would be distributed to Merck shareholders. For while Merck's pharmaceutical business captures 40 cents pretax profit on each dollar in sales, Medco retains just 2 cents on each dollar in sales.

And because Medco's 2002 revenues were $33 billion—hence a large part of Merck's entire revenues—their combined results made Merck's profitability appear less grand than that of other Big Pharma companies—which may have limited executive bonuses and stock options at Merck.

Medco's three main competitors in this fast-growing field were AdvancePCS, Caremark RX and Express Scripts ($12 billion in revenues in 2002)—until Caremark bought AdvancePCS for $5.6 Billion in September, 2003. Advance was larger than Caremark but had lower profit margins. Following this purchase, Caremark expected to handle 600 million prescriptions with annual sales of $23 billion—up from $6.8 billion in 2002.

Although modern advertising lets Big Pharma promote many ordinary drugs to great profitability, it is comparatively difficult for Big Pharma to totally suppress information about truly innovative and effective drugs. Nonetheless, the playing

field is particularly tilted against inexpensive remedies by the usual aggressive, costly and biased Big Pharma legal attacks, and by Big Pharma's overwhelming marketing and lobbying efforts (see peptic ulcers, Ch. 4 and tetracycline, Ch. 12).

Interestingly, over a million residents of the northern United States have lately been purchasing their more costly medicines from Canadian pharmacies near the US/Canadian border to take advantage of huge discounts negotiated by the Canadian Government for Canadians.

Those Canadian discounts in turn are largely based upon average discounts negotiated by several European national health programs—or by prices of comparable drugs already available in Canada. Canadian discounts underlie the 50% to 70% discounts offered by some Internet pharmacies.

Naturally, Big Pharma condemns all cross-border drug sales as "possibly counterfeit" or "hazardous" (at least to Big Pharma's bottom line), even though those drugs are mostly made in USA. In particular, Glaxo and AstraZeneca have said they might no longer supply licensed Canadian pharmacies if they sell their products to Americans.

President Bush-II tried to stop this cross-border discounting, and also prohibited Medicare from negotiating with Big Pharma for lower drug prices—though every other major American health care provider regularly derives major discounts through such negotiations.

Under such egregious circumstances, there was no need to ask whether Bush-II's salary as President was far less than Bush-II's rewards from Big Pharma. For every day in every way, President Bush served the Multinational Big Businesses that put him into office "better and better"—rather than making any effort on behalf of average American people—the majority of whom rather sensibly voted for Al Gore.

Of course, Big Pharma's concern about possibly hazardous or counterfeit drugs on the US market is valid but

misplaced. As usual, the explanation is quite different. For currently only 1% of all prescription drugs coming in illegally from all over the world are stopped by US Customs.

Many of these deeply discounted drugs are counterfeit, damaged by poor storage, diluted, mislabeled or outdated. And not surprisingly, much of this trade is dominated by organized crime.

"Normally, drugs follow a simple route. Manufacturers sell them to one of the Big Three national wholesalers, Cardinal Health Inc., McKesson Corp. and AmerisourceBergen, which sell to drugstores, hospitals and doctor's offices. Regulators and industry officials have long considered this straightforward chain to be the gold standard . . . But now that system is being undercut by a growing illegal trade in pharmaceuticals."

"In the past few years, middlemen have siphoned off growing numbers of popular and life-saving drugs and diverted them into a multibillion dollar shadow market . . . The shadow market exploits gaps in state and federal regulations to corrupt this system . . . Networks of middlemen, felons and other opportunists fraudulently obtain deeply discounted medicines . . . (by pretending they are for) . . . nursing homes and hospices."

"Crooks have introduced counterfeit pharmaceuticals into the mainstream drug chain. Fast moving operators have hawked millions of doses of narcotics over the Internet. Such drugs from these diverters and counterfeiters pass back undetected through wholesalers (eager to profit from cheaper supplies) to the shelves of retail pharmacies."

"Cardinal Health Inc., McKesson Corp. and AmerisourceBergen have a combined annual revenue of $146 billion and a profit margin of 1% of revenue. And even though they have been forced to recall many counterfeit or damaged goods, the huge discounts they receive from those smaller

wholesalers are apparently hard for them to resist."

"In many States, anyone can become a small drug wholesaler for a few hundred dollars" in fees. (quotes are from a Washington Post article—"Shadow Market, US prescription drug system under attack by illegal trade", by Gilbert M. Gaul and Mary Pat Flaherty that appeared in Anchorage Daily News 10/26/03).

In 1987, manufacturers prices on patented drugs averaged 36% less in Canada than in the US. By 2001, Canadian prices were 69% lower. However, in a 6-3 decision (June, 2003), the Supreme Court allowed Maine to demand discounts on drugs for Medicaid patients and to impose Medicaid type discounts on drug prices for the poor as well as the uninsured. Many other states plan to follow Maine's lead.

Pharmacies are increasingly compromised too, because they sell patient information to Big Pharma companies which then pay the pharmacies to call clients and remind them to get prescriptions filled or to tell them that there is another drug available that might work better for their condition. Perhaps new privacy regulations will restore some sanity and patient privacy in these situations.

As for herbal remedies, some would be just what the doctor ordered if only they met purity and cleanliness standards and were officially tested for safety and efficacy. However, Big Pharma corporations have prevented herbs from being standardized, tested and regulated by the FDA. After all, that might severely undercut Big Pharma patents or their huge markups on herbal extracts and manufactured versions of these same traditional remedies.

Big Pharma's claim that traditional herbal products are "new and previously unrecognized"—despite having been used by man and beast as remedies for countless millenia—is just another abuse of patent law as well as human credulity. And Big Pharma's avoidance of royalty payments or other fair

benefits to the healers that identify and provide herbal samples for researchers, or even to poor foreign lands where these drugs and treatments originated, is unconscionable (see Fair Benefits for Research in Developing Countries, Science, 13 Dec. 2002 pp 2133-4).

But times are changing. For example, in June 2003, the Queensland Government announced Australia's first Biodiscovery royalty laws. Now companies must apply for a permit to collect samples, and the state gets a proportion of any royalties from products created as a result of bioprospecting in its territory (see New Scientist, 20/ 27 Dec 2003 and 3 Jan 2004—p86).

An important four-part series in The Lancet, "Medicines, Society and Industry" offers a great deal of useful information.

In Part 1: The pharmaceutical industry as an informant (Lancet, Nov. 2, 2002, pp1405-09), Joe Collier and Ike Iheanacho point out that "The pharmaceutical industry spends more time and resources on generation, collation and dissemination of medical information than it does on the production of medicines. This information is essential as a resource for the development of medicines, but is also needed to satisfy licensing requirements, protect patents, promote sales and advise patients, prescribers, and dispensers.

"Such information is of great commercial value, and most of it is confidential, protected by regulations about intellectual property rights. Through their generation and dissemination of information, transnational companies can greatly influence clinical practice. Sometimes, their commercially determined goals represent genuine advances in health care provision, but most often they are implicated in excessive and costly production of information that is largely kept secret, often duplicated, and can risk undermining the best interests of patients and society."

Part II: The pharmaceutical industry as a political player

(Lancet, Nov. 9, 2002, pp 1498-1502) by John Abraham, concludes that "The pharmaceutical industry has produced many drugs that have benefited man. Political frameworks designed to govern the industry must maintain these benefits. However, regulation needs to be sufficiently robust to protect public health from drugs that are unsafe, ineffective or unnecessary.

The extent of industry influence over drug regulation, at the expense of other interested parties, suggests that the current system could be more robust. The many ways in which the pharmaceutical industry can influence governments and regulatory agencies are discussed, and methods by which this influence can be curbed are suggested."

Part III: The pharmaceutical industry as a medicines provider (Lancet, Nov. 16, 2002, pp 1590-95) by David Henry and Joel Lexchin points out "Rising prices of medicines are putting them beyond the reach of many people, even in rich countries. In less developed countries, millions of individuals do not have access to essential drugs. Drug development is failing to address the major health needs of these countries.

"The prices of patented medicines usually far exceed the marginal costs of their production; the industry maintains that high prices and patent protection are necessary to compensate for high development costs of innovative products. There is controversy over these claims.

Concerns about the harmful effects of the international system of intellectual property rights have led the World Trade Organization to relax the demands placed on least developed countries, and to advocate differential pricing of essential drugs. How these actions will help countries that lack domestic production capacity is unclear. Better access to essential drugs may be achieved through voluntary licensing arrangements between international pharmaceutical companies and manufacturers in developing countries."

Part IV: Accountability of the pharmaceutical industry (Lancet,Nov. 23, 2002, pp 1682-4) by M N Graham Dukes concludes “The pharmaceutical industry is accountable on the one hand to its shareholders and on the other to the community at large. These two obligations can, in principle, be met. However, the industry has developed practices that do not consider society, including excessive or inappropriate pricing of drugs, an indifference to the needs and limitations of the developing world, an imbalance between true innovation and promotional activity, interference with clinical investigations, and efforts to mold medical thinking and priorities as a means to enlarge the market.

“In such respects, the pharmaceutical industry must now be called to order. The industry has shown itself to be sufficiently resilient to adapt to change if society insists on it. However, to influence multinational corporations effectively, the efforts of governments will have to be complemented by others, notably the many voluntary organizations that have shown they can effectively represent society’s public health interests.”

Another useful reference is Out-licensing: a practical approach for improvement of access to medicines in poor countries—Lancet, Jan. 25, 2003 pp341-44. And see also DNA patenting and licensing, Science, 23 Aug. 2002 p1279.

CHAPTER TWELVE
MY APPROACH TO HEALTH CARE
WHATEVER WORKS

Heavily hyped medications are usually worthless or worse! Self-medication allows interesting experiments and rapid results. Simpler is often better & cheaper. Tart Cherries control my gout AND my angina! But cheese nearly killed me! Tart cherries stopped my heart attack! Ordering tart cherries on the Web.

Turnips control my gout. Tart Cherries seem safer than glucosamine. Low-dose tetracycline relieved my coronary insufficiency. Medical parameters. What about cholesterol? Heart rhythms, muscle cramps and magnesium ions. Atenolol. Gatorade. Antibiotic ointments. Salt as an antiseptic. Statins and anti-depressants finally debunked on TV (as patents lapse).

College, Medical School and Surgical Training consumed the second 16 years of my life. My Anchorage surgical practice lasted 18 years, with the last seven mainly devoted to heart repairs. Now twenty-nine busy retirement years have passed.

In contrast, after 37 years of medical practice, Marianne still takes pleasure in her low-paying Developmental Pediatrics career. Some years ago she was invited to join Anchorage's largest Pediatric practice, a relaxed and competent group. In her prior years of solo office practice, she often earned little more than her loyal secretary, and some years less.

Marianne cheerfully recalls many comments about "Women doctors! They take a man's place in medical school, then get pregnant and waste their education staying at home." So now I "waste my education" cooking, sewing on buttons, doing dishes, occasionally vacuuming and washing windows. I also take out garbage, recycle, do yard work, grow berries and vegetables, shovel snow, and write. And Marianne stays busy

with Pediatrics, shopping, laundry, and our three walks per week in the forest primeval.

Marianne prescribes my three generic medications - Atenolol, Tetracycline and the "total thyroid hormone replacement" that became necessary after a prolonged but barely noticeable thyroiditis. For some years I had thought my neck discomfort was occasional mild angina, until my formerly full neck became scrawny and my pulse dropped to 40.

Overall, I have remained generally "healthy and active, enjoying life" and *providing my own health care despite the old adage that "a doctor who provides his own health care has a fool for a doctor and a fool for a patient."*

However, I would far rather appear foolish than actually be fooled by highly touted, very profitable modern health care ideas - as so many others are. Thus for almost three decades, I have tested simple therapies and dietary deletions on myself. Notably, a couple of my most important lessons (pro-tart cherries, anti-cheese) were initiated by casual suggestions of women in health care.

As mentioned below, an older nurse suggested in the early 1990s that I try Tart Cherries to relieve my nasty (first) gout attack. And since that time, tart cherries have delivered great health benefits to *me and to many others*. A younger health lecturer's comment that dairy foods often cause health problems led me to discover that *cheeses tastefully aged by bacteria and molds, markedly worsen my angina.*

Having moved "Much closer to the Exit" since my 1983 surgery (thus, of necessity becoming more aware of how I feel) has let me quickly complete many simple YES/NO! evaluations of possible pathways toward health or illness. Some of these findings may enable you - within your own comfort zone - to assume greater responsibility for your own health care.

However, we all differ, so only parts of what I learn about myself apply equally to others. In any case, Chapters 12 and 13

offer useful information possibly relevant to your health.

Heavily hyped medications are usually worthless or worse

I avoid using all new medications whenever possible, until such drugs are proven widely helpful with only rare toxic-side-effects. In my view, all *new and heavily hyped medications* ought only be tried by truly desperate people, since if hype (aka "lying") is needed (see statins and anti-depressants below), those drugs will likely do more harm than good, or do nothing much for a very high price.

On the other hand, older natural remedies I have tried - such as tart cherries - occasionally prove so widely beneficial that their information spreads virally around the country and world – often helped along by convinced fellow members of a mostly feminist, private web site devoted to health care.

When I was a youngster, every farmer treasured his junk pile of discarded implements, wheels, axles, differentials and rusty iron parts, for that was where he or a good neighbor might find just what they needed to complete a critical repair, revision or invention.

Similarly, health care, whether one delivers, explains or experiences it - is a jumble of reasonable assumptions, dubious concepts and questionable information, often in desperate need of revision - at least according to the ultra-sensitive "crap detector" I gradually pieced together while rummaging through obsolete and helpful ideas about the wonderful life processes that keep us all going till the end.

Self-medication allows interesting experiments and rapid results

My daily medication costs are under $2 a day, The only heart medicine prescribed for me at my 1983 bypass operation that I still find still useful is Atenolol – an effective, inexpensive beta blocker (see later this Chapter).

Of course, complete self-care by Western (versus

Traditional or Alternative) Medical Principles is clearly impossible for those not intimately familiar with modern medical care. Still, all patients should try to understand and participate more in their own medical care decisions, rather than simply accept, ignore or forget their doctor's advice.

Our world includes countless doctors, goals, plans and ideas. As with foods, some of us accept or even prefer rather different choices and outcomes. So other than several non-productive visits to a dermatologist long ago, I have managed to avoid formal medical care by others over the past 29 years - except for a couple of eye exams.

Even those simple, competently performed, negative exams - one for occasional retinal light flashes which, when associated with many new floaters, might signal a retinal tear requiring urgent laser treatment to prevent further retinal detachment - raised interesting cost/benefit issues.

For the lights used to examine my retinas were so bright that even two weeks later - when I closed my eyes - I still saw bright afterimages (in this case, spider-like visual patterns resembling my retinal vessels). In addition, my visual acuity went down for several months—during which time I couldn't see mountain sheep on nearby peaks without binoculars.

So if gazing at the sun during an eclipse endangers eyesight, why wouldn't regular eye exams with high-intensity lights also reduce visual acuity? Modern soldiers can shoot accurately "in the dark", so why must eye doctors use strong lights for eye exams? Could frequent eye exams even partially explain why so many middle-age persons avoid night driving?

Simpler is often better and less expensive

On a slippery day in the early 1990s, I fell on a steep forest path. When I awoke from a brief concussion, I had a shimmering left visual field and temporary loss of leftward vision (consistent with visual migraine), as well as many

broken ribs and probable compression fracture(s) of one or more thoracic vertebrae.

After walking out and driving home cautiously, I initially sought comfort by lying on my injured side, but then my broken ribs just caved-in, leaving me like a dented ping-pong ball. And my breathing became even more difficult.

When Marianne came home from work, she fluffed the bedcovers, which elicited a painful sneeze that popped all my ribs back into place. Upon reopening my eyes after that speedy "sneeze-upgrade", I had what others might consider a “near-death experience" - seeing the usual bright light and an old guy with white whiskers in a long white robe.

But in this case, it was just old me in my white bathrobe, reflected by the closet-door mirror. Soon my ribs only hurt when they shifted. But over subsequent days, the joint to my right great toe became increasingly red, painful and swollen.

Eventually, that swelling extended up to my knee—and I began taking ibuprofen to control the inflammation and discomfort of my newly evident gout—an inflammatory condition related to tissue uric acid levels. Thinking back, I probably had minor gout-related symptoms for much of my adult life, including backaches, inflamed Achilles tendons and "bursitis" at various sites (a bursa is a fluid-filled sac that allows underlying bones and tendons to move more freely).

Tart cherries control my gout

After several weeks of hobbling about on ibuprofen, we enjoyed a family reunion in Hawaii. An older nurse in a nearby unit noticed my swollen toe-and-leg and suggested "cherries". The health food section of a local bookstore explained that tart pie cherries were an ancient Chinese gout remedy.

So I purchased a can of cherry pie filling, and my gout symptoms *vanished within minutes* after I ate a dozen tart cherries (picking them out of the pie goop while still parked in

front of the little country store). From then on, I ate one or two dozen "tart" (pie) cherries every day without otherwise altering my diet, adding a few extra tart cherries whenever my toe squawked, which it reliably did if I forgot to take cherries.

Although dried tart cherries - or a couple of tablespoons of "black cherry concentrate" from health food stores - worked wonders (relief within minutes!), sweet Bing cherries afforded little benefit. And an occasional batch of dried cherries proved “totally ineffective” until I realized those dud “cherries” were dried cranberries in the wrong bin at the store.

Over a decade ago, a brief Science News item mentioned that an interesting anti-inflammatory molecule had been extracted from tart cherries. But with or without that explanation, I was delighted to get off ibuprofen, which had never let me forget I had gout and also gave me high blood pressure (180/100) within weeks.

Like others with gout, I occasionally feel millimeter size, sharp-edged, non-tender uric acid crystals between the skin and cartilage of my ears. Uric acid is a product of nucleotide breakdown. Nucleotides are building blocks for DNA, RNA, ATP, and so on, thus uric acid is present in all of our cells.

Fortunately, the antioxidant activity of uric acid is comparable to that of Vitamin C (see “Biochemistry” by Lubert Stryer, 3rd ed, 1988 p622). For while elephants and other long-lived mammals still regenerate their own Vitamin C, early primates (the common ancestors of humans, apes, monkeys, lemurs, etc) lost that ability, as did guinea pigs independently.

Indeed, uric acid’s antioxidant activity may be why humans prosper despite near-saturation levels of uric acid in their blood and other body fluids. In contrast, more primitive primates with far lower blood uric acid levels, have shorter lives and higher cancer rates.

So those high uric acid levels (as well as Vitamins C and E, and bilirubin) appear to protect our cellular DNA from the

oxidative damage that permits early-onset cancer and premature aging. Given our normally high intracellular uric acid levels, any significant escape of intracellular fluid into nearby tissue fluids can cause uric acid crystal formation. Which makes uric acid crystal formation is a reliable signal of nearby cell damage in humans (except under our ear skin).

One report suggests that uric acid crystals (but not dissolved uric acid) initiates inflammation which encourages immune cells to seek out and destroy microbes whose proteins appear along with cell damage signaled by uric acid crystals. That was probably more than you wanted to know about how a fall/injury stirred up my inflammatory problem (aka gout).

Summary: My fall in the forest damaged many cells. The resulting widespread release of intracellular uric acid focused a nasty inflammatory response at the base of my right great toe. Uric acid crystals may also underlie some cases of chronic inflammation and autoimmunity in genetically susceptible individuals (see Nature, 2 Oct. 2003, pp460-1 and pp516-21).

Tart Cherries also relieve my Angina

I have taken tetracycline for relief of angina since 1999 (discussed later in this chapter). However, over the recent half-decade or more, I again developed initially minimal but slowly increasing angina that gradually interfered with our walks in the woods. After a while, *I noticed that if I swallowed two or three extra tart cherry capsules as we headed out, my angina was less annoying.* Soon those added tart cherries allowed us to resume our usual "speed" and distance walked in the woods.

But cheese nearly killed me

However, my general downward trend never reversed entirely and by two years ago, I was again on an increasing angina trend – at which point an (even) older doctor friend and his young wife happened by. The young wife chatted about

giving health lectures in their small Alaskan community, and incidentally mentioned that she regularly taught about the bad effects of dairy foods.

On departing, they left a gift copy of Colin Campbell's "The China Study" – in which Campbell summarized the extensive research he did for Chairman Mao on possible relationships between diet and health among Chinese adults. So I decided to see if quitting all dairy food (other than a little probiotic yoghurt twice a day) might make a noticeable difference.

Having especially enjoyed my evening snack of home-made fresh sourdough bread with parmesan or cheddar cheese, I found that temporary deletion of cheeses annoying. *However, within 24 hours of quitting cheese, my angina was totally gone!* Thereafter, I no longer missed cheese at all.

My current assumption is that cheeses fermented by bacteria and fungi (molds) are "inflammatory" - at least for those like me who seem to be "inflammatory types". While I suspect I could tolerate fresh feta cheese without risking angina, I have had no desire to check, after that amazing relief from angina when I quit cheese (and see next paragraphs).

My sudden relief from cheese-related angina persisted quite well. But late in 2011, an older neighbor (a good friend of 44 years) went to visit relatives over Christmas (as usual) and asked me to keep an eye on her place (as usual). Well, it snowed most of the time she was gone (as usual). So I shoveled out her place as well as ours (as usual).

Tart Cherries may even stop a serious heart attack

One day - having just shoveled our neighbor's driveway - I was finishing our own when an apparently persistent heart attack began (rather than just the temporary bit of angina when I overdo). Soon I went inside to rest and took two tart cherry capsules per hour for three hours – though I had no further discomfort after taking the first two capsules.

My mistake was that I had deferred shoveling until later in the day - and had just eaten - when Marianne reminded me that we were going out that night to a party. At which point, my shoveling "in a rush" was just plain stupid as I already knew that (at least for me) rushing an exertion with food in my stomach was asking for trouble.

I missed our in-town-son's Holiday party that evening so Marianne explained that I was still tired. The next day it snowed as usual, and our son, his wife and their three young kids, showed up early and did all that day's shoveling and snow-blowing duty in record time, without any effort by me.

Thereafter, I stuck with the snow blower until my cold-weather-and-exercise-tolerance returned to normal after about a week. With the neighbor and her grown children back in town, I resumed shoveling our driveway which I prefer to "snow-blowing" unless the snow is too wet/heavy or "too much" - or until our snow banks get too high for me to easily shovel more snow across. I also shoveled our roof several times during these heavier-than-usual snowfalls.

That seemingly successful "instant control" of my "first heart attack" *by a couple of extra anti-inflammatory tart cherry capsules that cost just 12 cents* was also exciting as an apparent confirmation of "the inflammatory basis of coronary heart disease". Yet even if such beneficial outcomes are eventually replicated countless times, tart cherries will likely neither interest nor convince high-income statin peddlers or statin prescribers, nor costly-stent-inserters - until tart cherries are eventually mandated by a Single Payer.

The only now-known-to-me adverse-side-effect of tart cherries might have caused health problems for an older friend to whom I gave tart cherries for severe "sciatica" (an olden day term for hip/leg pain). He had sensibly mentioned that he was on Coumadin (for an artificial aortic valve), but I was unaware - or had forgotten - that cherries delay blood clotting.

Fortunately the doctor monitoring my friend's coumadin, noticed the cherry-induced clotting delay within two or three days. At which point, my friend quit tart cherries (with his sciatica cured) before he developed any bleeding problems. So now I wonder if tart cherries might be a safer (milder, less easily overdone) way to partially anticoagulate a patient, rather than more powerful and expensive coumadin?

Ordering tart cherries on the Web

There are many web sites offering tart cherries and tart cherry products - often at lower cost than your local Health Food Store. Many are in Michigan, where tart cherries mostly grow. *Swansonvitamins.com* (1-800-437-4148) offers excellent quality tart cherry capsules from North Dakota at low cost. A good friend discovered the Swanson site. We have no conflicts of interest and also assume they don't know we recommend them. And we pay full price except during “sales”.

The rise and fall of tart cherry pies is another interesting tale, for they were truly popular while farm and industrial work still involved a lot of physical effort. Indeed, only within the last generation or so, as most North Americans became accustomed to more sedentary jobs, was there a marked drop in cherry pie consumption. At one point, some tart cherry farmers recently considered cutting down their trees. Quite possibly, the wider dissemination of our information on tart cherry's benefits has helped tart cherries again become a good cash crop after the millennium.

Turnips also control my gout

In the summer of 2002, I planted turnip seeds. Before long I had a bumper crop of turnips in several large pots on a balcony that moose couldn’t reach. And during the several weeks that home-grown turnip greens and sliced turnips featured on our daily menu, I totally forgot to eat tart cherries.

Nowadays I order “Tart Cherry Herbal Supplement” from Swanson (this herbal supplement includes no herbs, just dried cherry fruit, but calling them “herbal supplement” may evade costly FDA paperwork or inspections), or else I can munch a turnip to prevent or stop my great toe from squawking.

Turnips have always been easy to grow, but are attractive to cutworms (caterpillars, laid by moths). Being cheap and often visibly infested, turnips and turnip greens (no part wasted) were both formerly considered food fit only for slaves who surely benefited from turnip's anti-inflammatory effect.

At the same time, rich folks like Charles Darwin’s physician father suffered agonies and eventually died from gout and its mistreatment, without knowing of simple anti-inflammatory foods growing nearby that could easily have relieved his problem.

Commercial "red-and-white" turnips work for me raw, fried or heated in a soup, where they might almost pass for potato. My own organic turnips are just rinsed and eaten. The peel has the strongest radish-type flavor so it may also offer the most benefit. However, Marianne occasionally comments on my "turnip breath".

A large, 1/4 inch thick slice once or twice a day is usually enough. However, Nature rarely delivers standard dosages so, as with dried cherries, some turnips seem noticeably more effective against gout than others.

Tart cherries may be safer than Glucosamine

One day in 2003, I awoke with several swollen and tender joints in my hands. This resolved soon after I began swallowing glucosamine capsules—so I continued to take glucosamine for a month or two. One medical study (Lancet, Jan 27, 2001 pp251- 6) had suggested that glucosamine might help preserve joint cartilages - which I suspected could be useful as my fingers were gradually becoming more crooked.

The article pointed out that short-term studies showed glucosamine safer “than standard NSAIDs (aspirin, ibuprofen, Vioxx, etc.), especially with respect to the gastrointestinal tract . . . (and comparable) to placebo in safety” with no apparent effect on blood sugar. The FDA allegedly views glucosamine as a possibly effective remedy. It seemed to work for me.

But like other alternative remedies and health food supplements, glucosamine capsules made in U.S.A. need not meet any dosage or purity standards. And it might be well to avoid chronic glucosamine intake anyhow, since glucosamine allegedly inhibits “inducible nitric oxide synthesis” - which implies it might reduce small-artery blood flows and sexual function (see Mollusks, and also Viagra, in Chapter 13).

Indeed, after taking daily glucosamine "religiously" (without thought) for five years, a friend developed small vessel circulatory problems including a mild unexpected frostbite of his toes during winter.

Low-dose Tetracycline relieved my coronary insufficiency

In February of 1999, almost sixteen years after Tector installed my six coronary artery bypasses, I developed “unstable angina.” In my case, this meant any little thing, getting out of bed, eating a sandwich, a brief stroll inside the house—caused significant chest pain with discomfort down my left arm.

A cardiologist friend dropped by and we discussed my options. In the early years after my coronary bypass operation, I had occasionally experienced a few weeks of reduced exercise tolerance. Each of these episodes suggested yet another vein bypass graft had closed (vein grafts attached to arteriosclerotic low-flow vessels like mine often close within a few years).

So by 1999, my entire coronary circulation almost surely depended on a single long skinny internal mammary artery graft. Repeat coronary catheterization would have meant filling

my last open graft with X-ray dye at a time when my heart needed more oxygen-bearing blood—an unattractive option.

The known sorry state of my coronary arteries offered little hope that more could be learned from a new angiogram anyhow—nor was reoperation to connect additional bypasses into my severely corroded arteries, likely to offer benefit.

The "turtle-heart treatment" in its latest incarnation involved burning many laser holes through left ventricle muscle into the cavity of that blood pump, but probably didn't lead additional oxygenated blood out into heart muscle either, though it sometimes relieved angina—as did other "soon-recognized-as-useless-placebo" interventions like cardiac surface abrasion or internal mammary artery ligation.

My cardiologist friend knew of no new medications that were likely to help. Thus my situation seemed grim. In fact, he advised "Anyone wishing to *see* von Hippel alive" to drop over soon. So John, our original heart-lung-machine-perfusionist - came by. But given all the folks I had irritated over the years, there might have been a better turnout had he invited all those wishing to *view* von Hippel.

The following week some old friends insisted we come to dinner. On returning home after an unusually light meal, I had severe angina for an hour. Fortunately, this was some years after Finnish researchers discovered the DNA of an intracellular bacterium—Chlamydia Pneumoniae—in 80% of coronary artery plaques they tested (this work deserves a Nobel prize, but as they surely work outside of the "good old boy network" - it won't happen).

Anyhow, after two straight weeks of unstable angina, I decided to experiment with low-dose tetracycline – an effective "Chlamidia-suppressing" antibiotic long given to feed-lot cattle as a food supplement (thousands of tons consumed annually) to improve health and growth.

In earlier times, I had treated variously infected adult

humans with up to 4 grams of tetracycline per day. So I started myself on a half gram of tetracycline (which is also an anti-inflammatory metalloprotease inhibitor) twice daily.

Within eight days, my heart seemed well enough for me to slowly climb a dead spruce dragging a heavy chain. My 77 year-old neighbor, Al Moe and I then used my good ancient two-man crosscut saw to drop that tree before it could fall on our garage.

For the next half-decade or more, I remained essentially angina-free on this same dose of tetracycline. I only stopped tetracycline once, for two weeks, while taking penicillin for a "strep throat" (as tetracycline suppresses bacterial growth while penicillin only kills actively growing bacteria).

So there I was—somewhat surprised to be still enjoying life—puzzling over which tetracycline effect provided what benefit. Bacterial suppression may have played a role, as did the known anti-inflammatory action of tetracycline. Perhaps tetracycline's metalloprotease inhibitor effect helped my heart as well.

For by inhibiting matrix-degrading enzymes, tetracycline ought to stabilize vulnerable atherosclerotic plaques and thereby reduce the risk of plaque rupture and coronary artery clot. Over the decades before I went on tetracycline, I had noted chronic tendon soreness (inflammation), and a gradually increasing tendency of my tendons and ligaments to rip.

Thus at different times, during minor exertion, I had snapped inconsequential plantaris tendons in both calf muscles. During another effort, I felt a ligamentum teres break (this ties the hip bone directly to its socket and sometimes brings important circulation to that bone), and for years thereafter, that hip often urged "cautious use".

Once I separated a shoulder falling from my bicycle. Another time I slipped and my boot heel hooked on a root as I was descending into a gully - which caused my entire

quadriceps (front-of-thigh muscle) to contract so suddenly that it ripped away from my knee-cap; this required and got an excellent surgical repair.

Then the outer joint of my left thumb dislocated as I hung from a sturdy root climbing down a rock face. One might say I was falling apart or aging ungracefully. But since 1999 when I began tetracycline, I only slightly tore my other quadriceps slipping on ice in the woods (after which we got better ice grippers), and one day the well-worn "long" tendon of my right biceps parted (both minor events).

Overall I seem to be holding-together better since starting daily tetracycline. Tetracycline's metalloprotease (collagen-dissolving enzyme) inhibition may even have blocked enzymes produced by oral bacteria and thereby secured my gums more tightly to my teeth. And I no longer feel occasional minor ripping sensations inside my chest (which pleases me since my aorta was already a bit enlarged at surgery – but see also "Mollusks" in Chapter 13).

Given these positive anecdotal findings, one might expect some cardiologists to seek fame by elucidating tetracycline's effects on coronary artery disease. Such a study could easily be funded out of office "petty-cash" or "party-cash" since several companies produce inexpensive generic tetracycline capsules.

Note: In bottles of 100 capsules, retail tetracycline costs me about 36 cents per day. However, outdated tetracycline can damage the liver, so whenever we purchase larger quantities, we make sure the expiration date lies far ahead.

There actually have been clinical trials of antibiotics on coronary artery disease, but Big-Pharma Corporations only support trials to find beneficial effects of their patented (costly) antibiotics. Unfortunately, none of those costly drugs relieved the signs or symptoms of coronary artery disease, even when blood tests documented Chlamydia pneumoniae infection. So since Big Pharma had relatively few costly

antibiotics to hype at the time, they apparently lost interest in antibiotics for coronary heart disease.

In contrast, a Lancet article points out that "Recent trials and guidelines have resulted in a substantial increase in use of invasive cardiological procedures and *new pharmacological treatments."*

"Without necessarily being at high risk, previously well patients with a first acute coronary are increasingly likely to undergo invasive coronary procedures with implantation of one or more stents, and to receive intravenous . . . platelet receptor blockers, in addition to heparin, aspirin, clopidogrel, beta blockers, ACE inhibitors, and lipid lowering agents . . . in accord with guidelines based on results of randomized trials published in peer-reviewed journals . . . and strongly promoted" in other publications, roundtables, forums, workshops and conferences subsidized by industry (Lancet, May 24, 2003 pp 1813- 16).

The authors went on to point out many serious limitations of these clinical trials including *careful patient selection, short follow-up, statistical manipulations of minor differences and conflicts of interest,* that together would impose a costly conformity of care on many other patients who will not benefit—in accordance with the wishes of a powerful pharmaceutical and device industry that builds up "Opinion Leaders" who are often researchers now strengthening the conclusions of their studies by also revising consensus guidelines and recommendations.

However, the widespread coronary inflammation seen in unstable angina is strongly associated with systemic markers of inflammation such as elevated levels of C-reactive protein. And much evidence suggests that the above recommended focal treatments (angioplasties, stents or bypasses of obviously narrowed coronary arteries) in patients with unstable angina—as well as in many others with stable angina—may be

less important for preventing future coronary events than systemic anti-inflammatory treatments such as dietary manipulation (more fruits and vegetables, **ongoing** gradual **weight loss**)—or tart cherries and tetracycline—and see also New England Journal of Medicine, July 4, 2002 p56.

So once again, as we saw when discussing high quality MRI studies of the spine in backache patients (see Chapter Six), modern medicine has managed to derive and display a lot of obviously important information with coronary angiograms. Yet that information has often misdirected or complicated our therapeutic efforts.

Anyhow, despite the above-mentioned negative reports on cardiac benefits from costly antibiotics, I know or know of several people taking low- or even far-lower-dose tetracycline to avoid familial - or suppress presumed actual - coronary artery problems. But while these folks claim to benefit, their belief - and my positive experiences reported here - for now remain undocumented anecdotes. And tetracycline's known positive effects on health and growth of feed-lot cattle may have nothing to do with cattle coronary arteries either.

Dermatologists have treated patients with low-dose tetracycline for years to help suppress acne. One could easily look for obvious differences in the incidence of coronary artery disease between acne-treatment groups and similar populations to encourage further investigation.

Chlamydia pneumoniae has even been detected in temporomandibular joints of some individuals with TMJ problems (pain or inflammation of the joint where jaw meets skull). Chronic Chlamydia pneumoniae infections in blood vessels also seem associated with an increased risk of stroke.

I go to a good dentist whenever I break a tooth on my crusty bread (more than 8 molars so far). I am also two inches shorter and scrawny compared to my brawny younger self. And lengthwise gravitational compression has expanded my

soft center to the same circumference as my chest and hips.

With my gut now confined in a smaller space, a belt is neither comfortable nor secure, so I rely on suspenders. And since it takes far less food to fill us up, Marianne and I often just stop for coffee and a snack, or split a single restaurant meal after our walks in the woods (and compensate by leaving a larger tip).

Speaking of restaurants, in the uncommon event of food poisoning, my belly aches and becomes bloated. This is a quite common complaint among older folks in any large hospital emergency room, but that is no place I wish to appear.

So under such circumstances, this condition—often referred to as *ileus* or *partial bowel obstruction,* likely won't get worse and usually improves if one walks rather briskly as much as is tolerable (inside the home is fine), since walking naturally jiggles and rearranges gut loops, thereby assisting the onward passage of bowel gas - and so might prevent that unwanted trip to the hospital for tubes, tests and treatments.

Marianne and I are convinced that walking is the best exercise for most older people. As mentioned, those who suffer chronic backache find that a daily walk with comfortable shoes on a proper surface is an important way to control back spasms and remain mobile. Daily walking also encourages weight loss and reduces the risk of diabetes. Increased nitric oxide production within small blood vessels of those who walk and exercise daily may also help lower blood pressure.

I began this little book by mentioning common microbial epidemics and infections of pre-antibiotic days. At that time "experts knew that widespread chronic bacterial invasion of the body could not occur without obvious illness." Yet it now appears that many chronic inflammatory, autoimmune or even malignant ailments may be associated with and perhaps even elicited by ongoing internal, often intracellular, microbial infections.

A brief report in The Week (Oct. 10, 2003 p22), which obviously merits further investigation, even claims that chronic infection with Toxoplasma gondii—a parasite common in cats that spreads easily to humans—can change the personalities of humans that it infects.

Prof. Jaroslav Flegr of Charles University in Prague, Czech Republic said that he, along with investigators in Britain and the US, found that women infected with toxoplasmosis tended to become more fun-loving and promiscuous (perhaps, the origin of the term "cat house"), while infected males often became anti-social and aggressive (like alley cats).

Although such effects might seem implausible, it is well known that many microbes alter animal behavior in ways that encourage microbial dissemination. For example, infections that cause coughing, sneezing or diarrhea are far more likely to spread than those that dry up body secretions. Indeed, few if any travelers were ever disabled by infectious constipation.

Modern researchers commonly scrutinize huge libraries of molecules—including already-FDA-approved therapeutics—seeking appropriate shapes to jam up or otherwise relieve another specific microbial disease or molecular malfunction. And as scientists seek new therapeutic roles for old or new molecules, I hope they will reinvestigate the still unexplained empirical benefits of tetracycline on feedlot cattle, feedlot hogs and their former consumers like me.

Of course, no reasonable argument prevents individual physicians from trying tetracycline and other low-risk low-tech low-dose low-cost treatments on a whole variety of chronic, currently incurable conditions. After all, widespread trial and error was how medicine slowly advanced in the days before Big Pharma took control of medical experimentation and discovery at our expense—in their favor.

I suspect that responsible committees in larger hospitals would not encourage physicians in private practice to test

tetracycline or turnips on hospitalized patients. But such studies could easily run on ambulatory patients through a medical office. After all, well known researchers working for Big Pharma often revert to that same old empirical approach, seeking additional profitable applications for patented drugs like the “statins”—the previously mentioned (Chapters Ten and Eleven) family of cholesterol-lowering drugs, many still under patent and heavily hyped despite nasty side effects.

What About Cholesterol? (Initial quotes are from Wikipedia)

"Some scientists believe that statins are overused. Their use has expanded into areas where they provide lesser benefit, and lesser evidence of benefit. The lower the risk of cardiovascular events, the lower the ratio is of benefits to costs. The US market for statins nearly tripled when the National Cholesterol Education Program (NCEP) revised its guidelines to recommend statins as primary prevention. Although the panel cited randomized trials to support statin therapy for primary prevention of occlusive cardiovascular disease, Lancet notes **"not one of the studies provides such evidence."** *Journalists have questioned the interests of the doctors who made such recommendations, as eight out of the nine doctors on this panel were discovered to be making money from the companies whose cholesterol-lowering drugs they were pitching to 20 million Americans. "*

"A smaller group of scientists, The International Network of Cholesterol Skeptics, question the lipid hypothesis and argue that elevated cholesterol has not been adequately shown to cause heart disease. These organizations maintain that statins are not as beneficial or safe as suggested."

"The commonly held belief that high fat and cholesterol consumption causes atherosclerosis has been questioned. Because fat and cholesterol are the substances of which plaque

consists, they are both considered to be contributors to the cause of atherosclerosis, though this remains to be verified. **Inflammation** is considered to be a cause of atherosclerosis rather than fat and cholesterol. In addition, various non-dietary things can trigger inflammation such as bacterial infection. Syphilis is a major trigger of artery damage in persons under the age of 50, but it has become rare in the developed world since the discovery of penicillin in the 1920s. Tobacco smoking is a major risk factor in atherosclerosis due to inducing vasoconstriction and inflammation of the artery walls. Certain drugs such as cocaine are also implicated in atherosclerosis. Finally, some genetic conditions may cause overproduction of cholesterol that accumulates in the arteries."

"A team of scientists recently discovered the earliest known case of atherosclerosis in ancient Egyptian mummies. The findings could mean that some scientists may not understand heart disease as well as previously thought in regard to the conditions creating that condition. It may not be a modern disease at all and could have been common throughout human history."

"This team began by running mummies through a CT scanner. "Our hypothesis was that they wouldn't have heart disease, because they were active, their diet was much different, they didn't have tobacco," he says. But they were wrong. One of the mummies the team scanned was a princess in her 40s. "That she would have atherosclerosis," the researcher says, "I think we're missing a risk factor. Right now we know that high blood pressure, smoking, cholesterol, inactivity and other things cause atherosclerosis, but I think that we're less complete than we think." On the other hand, the mummies were all members of the Egyptian upper class, who would have had access to higher-calorie foods than the lower

classes, whose bodies have largely not survived for examination."

My View (AvH): Most physicians are aware of occasional families with high blood cholesterols in which adult males tend to die young (in their 30s and 40s) of strokes and heart disease. At autopsy, those persons often have narrowed or blocked arteries with fatty cholesterol-thickened walls.

Most physicians also see families with very high cholesterols in which members usually enjoy good health, often well into their 90s - with decent-looking blood vessels.

To date, no one has *legitimately demonstrated* whether a significant population-wide reduction of blood cholesterol by statins can reduce early deaths from vascular disease without increasing early deaths from other causes. Nor have I seen useful information on whether population-wide statin treatment changes the incidence of arteriosclerosis.

Yet it has been known for centuries that *chronically infected individuals;* e.g., with chronically carious teeth (a possible cause of artery disease in the mummy princess cited above), *often die with markedly atherosclerotic vessels. And that* chronic inflammation from other causes such as smoking or obesity also leads to arteriosclerosis.

Other modern aggravating factors include consumption of heavily sweetened or "diet" soft drinks, as well as high salt (but multi-vitamin and mineral depleted) **manufactured foods** (foods that by law must display their extensive list of ingredients), and also the excessive consumption of unhealthy, overfed-to-the-point-of-illness cattle/pigs/fowl.

But life evolved over billions of years. During those eons, innumerable molecular modifications and interactions appeared and were deleted. A few changes that increased fitness at the moment, tended to endure and undergo further (disadvantageous or occasionally advantageous) changes—some of which persist to this day.

Consequently, human biology rarely is as simple or straightforward as those promoting patented health care products would have you believe. So our ears perk up when statin manufacturers brag that the beneficial impact of their particular statin on survival for patients with heart disease begins almost immediately, even before cholesterol levels start to "improve".

This alone suggests that statins don't act as advertised, and that statin-altered cholesterol levels are of secondary rather than of primary importance. But instead of admitting that statins may beneficially hit unknown targets while aimed elsewhere, Big Pharma promotes statins as *also* having anti-inflammatory and many other unexplained health benefits (see New Scientist, 11 Jan., 2003 pp37-9).

Recent studies suggest that each of us has inherited particular proteins that determine the size of cholesterol particles being transported through our blood. And that individuals with naturally larger cholesterol particles are less likely to have cholesterol deposits in their blood vessel walls, regardless of blood cholesterol levels.

In other words, merely having smaller-size cholesterol-transport-particles in your blood *might* increases your risk for arterial disease—and therefore make it more likely that you will suffer heart disease or stroke. Yet I have seen no evidence that statins beneficially affect cholesterol particle size. Nor do many/any? hospital laboratories publicize the availability of reliable tests for cholesterol particle size.

And among those who peddle statins, some even claim that up to half of all adult Americans have sufficiently "elevated" cholesterols to benefit from taking statins. But we already know that half of all heart attacks occur in those with "normal" cholesterols.

So if the population with high cholesterols has a similar overall risk of heart attack to the population with normal

cholesterols, logic suggests that reducing blood cholesterol levels of most people with elevated cholesterol could only lead to small decreases in coronary artery disease at best.

Furthermore, current evidence indicates that cholesterol deposits in blood vessels are not directly related to high blood cholesterol levels anyhow. Indeed, atherosclerotic cholesterol plaques in arteries usually follow damaging inflammation such as Chlamydia pneumoniae infections or auto-immunity.

So if such causative conditions could be detected earlier—say by testing blood for elevated levels of C-reactive protein ("a strong independent predictor of future vascular events"—Lancet, Sept. 22, 2001, pp946-7)—they might then be treatable in a more direct and timely fashion. But so far the specificity of such evidence remains unclear.

Among its other functions, C-reactive protein (which is produced in the liver), tags bacteria for destruction. High levels of two other inflammation-related proteins, interleukin-6 and tumor necrosis factor alpha, also seems associated with coronary artery disease. And high interleukin-6 levels may be associated with increased risk of stroke, while low levels of adiponectin have been associated with an elevated risk for heart disease (see Science News, Nov. 22, 2003 p334).

Fortunately, a simple, tasty Greek diet, rich in olive oil, fresh fruits and vegetables (but little red meat), lowers C-reactive protein, interleukin-6 and tumor necrosis factor (Science News, Nov 22 p 334, and Dec 6, 2003 p366).

I would guess that other inexpensive anti-inflammatory regimens—perhaps including tetracycline and gradual weight loss—might reveal similar benefits. So maybe costly statins merely accomplish whatever it is that tetracycline or gradual weight loss or a Greek diet achieve more safely at far lower cost. The British National Health Service spent an estimated $900 million on statin drugs in 2003. How much of that $900 million might better have been spent subsidizing imports of

fresh Greek food?

Interestingly, given the apparently important contribution of infection or inflammation to blood vessel disease, it now appears that antibodies themselves generate ozone to directly kill bacteria— whereas formerly it was believed that antibodies merely tagged bacteria for destruction by immune cells. Recent evidence also suggests that ozone produced by antibodies and immune cells during inflammation can contribute to arterial plaque formation by oxidizing cholesterol (see Science, 7 Nov. 2003 p965 and p1053).

We have noted that more widespread use of statin-type drugs is frequently encouraged by statin manufacturers and their researchers, based upon statin's apparent benefits in limited trials. But as discussed previously (see screening tests in Chapter 10)— apparently beneficial results with high-risk populations should never be used to infer acceptable cost/benefit ratios in low-risk populations.

For example, "minor" side-effects of statin treatment include signs of generalized mild-to-moderate muscle destruction, with regular reports of "non-significant" rises in blood levels of muscle enzymes. Of course, in old or ill patients, the gradual appearance of statin-caused muscle weakness or polyneuropathy or even cognitive decline might pass for natural decline.

Yet it would be catastrophic to extend such effects over a far larger population of healthy younger individuals— especially for truly dubious benefits. Am I the only one impressed by the skinny arms and legs of some middle-aged persons on statins? Or by a healthy older person on statins who cannot get up unassisted after a non-injurious fall to the floor?

Even Viagra—originally devised for other indications—is once again being tested against all sorts of conditions unrelated to erectile dysfunction, such as pulmonary

hypertension or high altitude pulmonary edema—where nitric-oxide-induced relaxation of lung arteries is known to bring benefit.

On the other hand, Viagra has been associated with hundreds of cardiovascular deaths. Initially, these deaths may have been dismissed with a leer and a wink since Viagra was supposedly the geezers' last chance. Thus we could assume that they all died enjoying a better life through chemistry.

However, recent reports suggest that Viagra may adversely affect blood clotting. As yet this is unclear. In general, there is no reason to assume that any single chronic condition has only one cause or cure. Nor is it likely that any single medicine has just one effect.

And we ought not expect that the multi-step molecular progression which eventually gives rise to chronic illness will have only one point at which treatment can intervene. Thus the "turnip or cherries?" decision I regularly face when my toe squawks, suggests that there are many ways to relieve symptoms, and that among these ways, some may act earlier on an undesirable cascade of chemical events than others.

Or if it turns out that cherries and turnips contain the same active ingredient, this implies that there are probably other similar remedies for gout out there as well. But surely it would be simple and worthwhile to study the impact of gradual weight loss, cherries, turnips and tetracycline (individually and together) on inflammatory diseases in general and on autoimmune problems in particular.

In this regard, it is especially interesting that several Big Pharma companies have developed—and are currently testing—slightly modified tetracycline molecules that each presumably hopes to sell at a very high price by alleging that their patented variant of tetracycline is best at whatever generic tetracycline already seems to do very well.

And if Big Pharma tetracycline research meets with any

success, I predict increasing calls to get generic tetracycline out of animal feed (allegedly to avoid bacterial resistance)—as losing that huge market might make it unprofitable for generic manufacturers to produce cheap generic tetracycline at all.

My Medical Parameters

My only cholesterol tests—drawn in 1983 near coronary-bypass surgery time—were on the high side (220-240). I don't recall the HDL or LDL. My customary breakfast had long been a tough piece of steak and an egg with homemade sourdough bread. I ate and drank lesser amounts throughout the day, often including plain low-fat yogurt (see later this chapter).

In the spring of 2003, I again began to feel run down and more tired than usual—especially after eating a high-protein omega-6 fed, steak. By this time it was becoming clear that severe atherosclerosis or arteriosclerosis—the sort of corrosion that extended widely throughout my coronary arteries—was basically an inflammatory, and to some extent an autoimmune process, rather than a simple deposit of excess blood cholesterol in the walls of those arteries (see Nature, 6 March 2003, pp 27-8; New England Journal of Medicine, July 4, 2002, p5-12 and p55-7; Science News, Sept. 15, 2001, p175; and see Inflammatory Fat, Science News, Feb. 28, 2004 pp139-140).

Furthermore, there was increasing evidence that an overweight person could reduce inflammation and suppress autoimmune conditions most easily just by losing weight. Apparently, this beneficial result of slowly reducing fat is partly related to the inflammatory impact of hordes of macrophages (cells that dispose of tissue debris and bacteria) drawn to expanding visceral fat stores (perhaps as overfilled fat cells start to rupture).

For the enzymes and inflammatory signals released by macrophages (including tumor necrosis factor-alpha which can

increase insulin resistance and lead to type II Diabetes) have body-wide impact. Consequently, I chose to progressively reduce my food calories slightly so I would continue to lose weight very slowly over a prolonged period of time.

Since the rate of weight loss seemed less important than sustaining it more or less indefinitely, the initial target I chose was a half--pound of weight loss per week. My first ten pounds of weight loss was easily achieved without major changes in my intake except for eating wild salmon and fruit more often, lots more veggies and considerably less meat.

Within a week or two of starting this sustained weight loss program, I again felt well and my walking speed returned to my usual slow comfortable pace. So after that first ten pounds, I lost interest in continuing the weight loss program until I again felt "the dwindles" about half a year later.

At this point, it is worth mentioning that persons with coronary artery disease tend to have intermittent bad days for no externally obvious reason such as a cold, or stress or a lack of sleep or something they ate. I have often attributed my bad days to "having done too much" the day before.

But given the modern understanding of coronary artery disease as a manifestation of body-wide inflammation—or of body-wide inflammation as an attribute or cause of coronary artery disease— it makes more sense to explain such occasional episodes of feeling unwell (being unusually tired, intermittently warm and cold and so forth) as part of a sporadic body-wide inflammatory process.

So in 2004 I decided my "bad days" were a signal to increase my low daily consumption of turnips or some form of tart cherries, and to adhere more faithfully to my gradual anti-inflammatory weight-loss program. My appetite for steak soon disappeared without calling upon will power because I felt better and was more productive after a big breakfast of one egg, lightly fried vegetables (in a bit of olive oil) and a little fish,

along with my home-baked multigrain sourdough bread.

I still ate sweets for a while but gradually discontinued them as well, and now usually nap one or two times a day and weigh myself every day rather than every few years as before. Though I hadn't seen an ophthalmologist for 30 years (until recently), I saw other things well enough to renew my driver's license without glasses.

Heart Rhythms, Muscle Cramps And Magnesium Ions

Soon after my coronary arteries were bypassed in 1983, I noticed many extra heartbeats. Those premature ventricular contractions (PVCs) often made my heartbeat quite irregular. And coffee clearly aggravated my rhythm disturbance. But with atenolol often reducing my heart rate (pulse beat felt at inner, thumb side of wrist) to the low 50's and high 40's, I needed coffee's boost to my pulse and pep to remain useful.

Modern American manufactured "fast food" - a roughly 40% corn-product diet - is generally low in potassium and magnesium. Yet potassium (K+) and magnesium (Mg++) ions are your predominant intracellular "cations" (positively charged ions) - and if either is depleted, your cells become more irritable – making extra heart muscle and leg muscle contractions more likely.

Therefore, I often advise friends and relatives to self-treat with Mg++ (as enteric coated Magnesium Chloride or Mag 64) when hoping to alleviate extra heart beats, leg cramps and related cell-irritability disorders. Note specifically that I did not suggest self-treatment with K+ (potassium ions) since too much potassium can easily kill by stopping heart contractions.

On the other hand, my kidneys had tested OK in 1983 (hence were probably able to eliminate any minor excess of potassium), and I already drank plenty of fluid (see Gatorade below), so to slowly build up my cellular potassium, I switched from ordinary table salt (pure sodium chloride) to Morton's

Lite Salt (half sodium chloride and half potassium chloride).

In contrast, magnesium ions can be cheaply purchased as Epsom Salts or pure magnesium sulfate - which is safe to eat but so poorly absorbed that it retains fluid in the bowels and causes diarrhea. This made the English town of Epsom famous among constipated Brits for the powerful salts in its waters (the same Brits similarly appreciated Siberian rhubarb brought back by the British East India Company from its earliest forays).

Anyhow, based upon long experience with my sourdough bread microbes - which readily recycle stale bread, potatoes or even chopped citrus peels, I had confidence that they could also convert Epsom salts into a more easily absorbed magnesium ion combination.

So I concocted an initial effective dietary magnesium supplement by tossing some pure magnesium sulfate into a batch of sourdough bread. Thereafter, I simply defrosted a half slice of “Epsom Salt bread” each day for my magnesium ration—which effectively soothed my heart rhythm without annoying the bowels.

Before long, I was told about "Slo-Mag", an enteric-coated over-the-counter tablet that contains easily absorbed magnesium chloride. So now I simply take one Mag 64 tablet (the generic version of Slo-Mag) daily or occasionally twice a day if I have many extra heartbeats.

An occasional overdose of magnesium ions merely makes me a bit sleepy, in which case, I just skip a dose and then resume a lower dose – usually about one Mag 64 per day. Some people apparently use Mag 64 to reduce the frequency of their migraine headaches, since low blood magnesium levels may raise the risk of a migraine attack. Clinical studies also suggest that magnesium ions inhaled or taken internally may help control bronchospasm (wheezing)—see Lancet (June 21, 2003 pp 2095 and 2114).

It would be interesting if someone would run a decent clinical trial evaluating patient-initiated Mag 64 therapy for reducing the frequency of epileptic seizures: But since that might lead to far safer and less costly epilepsy treatments, expect no interest from Big Pharma or University researchers.

Recently I recommended self-treatment with Mag64 to an old overweight individual with a troublesome heart rhythm (arrhythmia). This intelligent man (whom I did not know) sent an e-mail seeking questions to ask the cardiologist about his *already scheduled* ***atrial ablation*** *- an expensive, widely used, risky-for-him, heart-catheter treatment for atrial arrhythmias.*

I advised the old man to avoid cardiologists and home-treat himself with Mag 64 - which worked so well that he no longer had significant arrhythmias – nor did he need ablation. Are you at all surprised that cardiologists undertake costly, risky atrial ablations without ever considering a trial of self-medication with over-the-counter Mag 64?

Atenolol (a good old beta-blocker)

Beta-blockers such as atenolol inhibit the sympathetic nervous system (and at times made me sweat excessively). But atenolol is inexpensive and a lifesaving drug for cardiac patients as it minimizes the adrenalin rush of a “fight-or-flight” reaction. Atenolol also helps me avoid becoming annoyed.

Some politicians take atenolol before a speech when they fear their voice might tremble. Other liars take atenolol to fool lie-detection equipment. However, as far as I know (trust me!), atenolol neither forces one to lie nor to tell the truth.

Beta blockers are known to prevent bone loss in those affected by reflex sympathetic dystrophy. Because activation of the sympathetic system in animals results in bone loss, beta-blockers were evaluated by Gerard Karsenty’s team at Baylor College of Medicine as a possible way to prevent osteoporosis. And in 2005 they published in "Nature on-line" that beta

blockers protected mice from osteoporosis.

Beta blockers also help preserve muscle tissue of burn victims by blocking epinephrine and other catecholamines that cause posttraumatic hyper-metabolism (see Herndon et al, NEJM Oct.25, 2001).

Gatorade

Gatorade is a sucrose/glucose-fortified salt solution that closely copies salt levels in blood "serum" (blood minus cells). It is widely sold as an inexpensive, easily dissolved powder, or ready-to-drink in bottles offering various flavors.

After I began taking Atenolol tablets (which as mentioned, reduce my pulse rate, as well as stress on the heart and blood pressure, while letting smaller blood vessels dilate), I often found myself feeling a bit wobbly if slightly dehydrated. Soon I learned to keep a pint of Gatorade close by in case I needed to top up my fluids—especially when hiking in warmer weather.

Perhaps I could instead have eaten foods that released their nutrients slowly, and thereby encouraged a more gradual absorption of water taken with that food. However, I now cannot exercise comfortably except with an empty stomach and Gatorade provides me with a more lasting blood-volume expansion than plain water, soda, coffee or even tea.

When one is not sweating heavily, any surplus fluid intake soon becomes urine. Ordinarily, this is no problem, as we prefer to walk where there are many more trees than hikers. Only once have I encountered a bear behind a tree while I was urinating. In that case, the unsuspecting adult black bear, approaching from upwind, promptly ran off when I rapped the tree sharply with my walking stick (I also carry a 44 magnum revolver when in the woods).

ACE inhibitors are anti-hypertension drugs that seem to improve the outlook for patients in heart failure by inhibition of the kidney-based renin-angiotensin blood pressure

regulating system. Allegedly ACE inhibitors also help older hypertensive women preserve their muscle strength.

Incidentally, cooked (but not fresh) **tomatoes** seem to include compounds beneficial to the prostate. An enlarged prostate interferes with urine flow. Hence older men may maintain or improve their urine stream by consuming one or two canned tomatoes daily—or the equivalent in canned tomato juice, tomato paste and so on.

Since tomatoes (like turkey and many other foods) may stir up gout, they also remind me to eat my turnips or tart cherries. Life is a balancing act.

Antibiotic ointments: Antibiotic ointments usually contain several strong antibiotics that should not be used internally. However, a few sequential appropriately-timed dabs of triple antibiotic ointment rubbed into and near any small red sore place (where you scratched or cut yourself) usually ensure rapid healing rather than red streaks up the arm and an urgent visit to the Emergency Room (see also Chapter One).

Salt was formerly a common antiseptic, but when rubbed into even a minor cut or scrape, it really hurts for several minutes - hence the old adage "*like rubbing salt into a wound".*

Statins and anti-depressants debunked on TV as ***patents lapse***

"The CBS news show “60 Minutes” **made waves with a story** asserting that the antidepressants taken by millions of Americans daily are actually no more effective than sugar pill placebos. Also recently, the national evening TV news reported on a research publication from Harvard that found a 50% increase in the chance of diabetes among women who took cholesterol lowering statin drugs like Pfizer’s Lipitor, and that cheaper generic statins **were as effective** as the more expensive branded statin Crestor.. . ."It is quit rare for national

TV news to report on any data critical of blockbusters despite plenty of research over the last several decades questioning the risk/benefit profile of numerous commonly used drugs. . .

"The most likely explanation is that the same drugs now being exposed as unsafe and ineffective have also **lost patent protection**, and therefore, are no longer generating the huge advertising revenue for the networks. A significant portion of **the revenue for the broadcast networks** is derived from pharmaceutical advertisements.

"It might still be "better late than never" to expose the true risk/benefit profile of blockbuster drugs. However, the millions of patients who have been diligently taking their Lipitor or Prozac daily, and now learn that they have been wasting their time and money, not to mention possibly having been harmed, would be very justified in screaming at their TV sets, "You're telling me this now?!"

"If the mounting **evidence linking** increased Type 2 diabetes risk to statin use is correct, then tens of millions of patients have developed diabetes as a result of their Lipitor, while at the same time **not benefiting** from any reduction in mortality. "Likewise, if the evidence that the published data supporting the efficacy of antidepressants is skewed because the **negative results were never published**, and that a sugar pill is just as effective without the risk of increased suicide, per the 60 Minutes story, then millions of depressed patients have been harmed. Making matters worse, a large percentage of those patients prescribed antidepressants are children.

"American healthcare is at a watershed period in history. In the United States, total healthcare spending represents almost $3 Trillion a year, or 18% of the entire gross domestic product. America spends more on healthcare than on the entire Defense Department. There is bipartisan consensus that much

of this spending is on wasteful, ineffective, and often harmful, therapies. No drug is without side effects. Few blockbuster drugs have randomized controlled studies supporting use in millions of patients (see hypertext links above).

"While the recent trend in national media to finally expose ineffective drugs is long overdue, this type of awareness raising is crucial before the broken Congressional machine will ever act to cut healthcare spending. The ACA law (also known as "Obamacare" by many) mandates a $500 Billion cut in Medicare spending, and no progress has been made on that front. The failure of the bipartisan deficit reduction "Super Committee" is supposed **to trigger mandatory cuts** to Medicare, and even that seems unlikely to happen in an election year. Given the dysfunctional status of our federal government, the national media might be the most powerful force to wrestle the American healthcare monster."

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CHAPTER THIRTEEN
Is there a difference between food and medicine?

Do we need a computerized database of "old wives tales"? Inexpensive foods and common sense versus drugs like Viagra. Herbs and herbal teas. Aphrodisiacs. Menopause and testosterone therapy. Did Prohibition increase alcoholism? Omega-6 fats. Omega-3 fats. Probiotics: Kimchi, Yoghurt and other fermented foods. Cranberry juice. Avoiding Salmonella Infections. The World of Soy.

Around the world, humans consume or apply externally different parts of countless varieties of plants and animals. Many foods are seasonal in their ripening, or when ingredient concentrations are deemed most favorable, or as they become accessible through migration. Humans, bears and pigs are omnivorous. Sufficiently hungry humans, bears or pigs may consume pigs, bears or humans.

More generally, eating may be viewed as self-medication, as all life selects food items to relieve a current or potential metabolic deficiency or treat an infection or other complaint. As Cynthia Engel reported in "Wild Health", inquisitive humans and other animals frequently taste and eat unusual foods and even soils, especially after observing others apparently prosper by such consumption.

Some diatomaceous soils are eaten to deter intestinal parasites. Clay soils such as kaolin, a fine white clay used in Kaopectate (long mined from Kaoling "high hill" Mountain in China for the manufacture of fine porcelain), absorb plant toxins. Other soils are consumed because they contain essential sodium or important trace elements.

Of course, some potential foods require prolonged soaking or more complex preparations to ensure safety or

palatability. And any act observed may be misleading. A medical instructor who taught us clinical skills and patient observation, demonstrated the old-fashioned urine test for diabetes—dipping, then licking a finger, to detect sweetness. He then passed the urine around so we could try it. Some did, others didn't and several just dipped one finger and licked another as the instructor had done.

Not surprisingly, the more complex, variable and risky their environment, the longer an intelligent animal takes "to learn the ropes, or branches". An average female orangutan may only give birth to an infant every 7 or 8 years, in order to educate each child on what, when and where to eat, and how to self-medicate for common parasites and other ailments. Older female elephants—like human elders in many cultures—are similarly important sources of environmental knowledge.

Early human immigrants into North and South America included ancestors of modern Alaskan Natives. Those same ancestors were also closely related to ancestors of East Asian inhabitants of Southern Siberia who still live between the Altai Mountains on the west and the Amur River on the east (Scientific American, Nov, 2011 pp 36-45).

Asians entering America from the West, 25,000 to 15,000 years ago, arrived during an Ice Age that froze so much water into glaciers and Continental Ice Caps that sea levels dropped over 100 meters - thereby exposing solid ground from Siberia to Alaska. But whether they walked across "Beringia" or came over in small boats, their descendants have foraged over North and South America's beaches, rivers, lakes, seas, forests, savannas, tundra, deserts and mountains ever since.

City-dwelling Natives readily resume subsistence activities as opportunities present. Recent Asian immigrants to Alaska regularly become competent foragers here as well. Yet few European immigrants find much to eat in the wild, beyond the standard selection of birds, beasts and berries. Why is this?

Well, in traditional subsistence societies, men probably roamed farther and dominated the killing of large game animals, while women specialized in local food gathering and child-rearing activities. Females were also more involved with - hence better informed about - treatments for “women’s complaints” and assisting at childbirth. Those especially skilled were sought out for health care as midwives and herbalists.

These older women presumably developed and passed along their huge botanical knowledge base wherever they lived - including information on the herbal control of female fertility. But at least in Europe, those age-old social activities and that separate female-controlled knowledge base eventually became an intolerable challenge to the wealth and authority of the male-dominated Catholic Church.

The Church’s inherent anti-female bias surely drove its desire to dominate human reproductive activities and all knowledge thereof. But Catholic religious power also had an important—though less visible—secular and fiscal underbelly. For to maintain and expand an increasingly World-Wide Faith required high taxes and wealthy church estates to support costly explorations, missions and wars, as well as to sustain the profligate and dissolute life styles of Church leaders.

Naturally, all of these activities demanded and consumed an endless supply of impoverished peasants, soldiers and sailors. In addition, the development of towns and growth of business travel between them, encouraged epidemic diseases which, together with poor pay, inadequate shelter, rags for clothing, overwork in unhealthful conditions (noise, toxic smoke and dust, polluted water and rotten food) consumed a comparable stream of desperately poor workers.

These changes coincided with early lobbying efforts by male barbers and medical practitioners to gain professional status and eliminate competition from midwives. So between 1450 and 1700, various Popes declared many hundred

thousand European midwives "witches" and burned them at the stake. At the same time, the Church and its cooperating male medical practitioners, tried to learn who was pregnant and bully them into remaining so, on fear of death (additional information from "Eve's Herbs" by John M. Riddle, below).

Everyone knows that in 1492, Columbus “discovered” (was first to publicize) an inhabited, fully self-aware, equally civilized America. Because Columbus initially thought he had reached India, America’s native inhabitants were thereafter known as "Indians". *Descendants of the Indians protest every Columbus Day about diseases purposely spread and massacres carried out by their supposedly "civilized" European conquerors.*

William Withering became famous in 1775 when he “discovered” that a plant called foxglove—in proper dose—could help those with heart failure. However, Withering only learned of this use for foxglove—the source of digitalis and related drugs—from a receipt for treatment made out by “an old woman from Shropshire” whose herbal mixtures cured heart-failure patients that male practitioners could not help.

Note that Withering got all the credit—and he and other male practitioners were fully identified rather than being labeled “an old man from X.” There is no record that anyone bothered to reward that old woman or burn her at the stake.

Even as recently as sixty years ago, women entering health care fields were still pretty much restricted to low-paid nursing positions. But now that men are becoming professional nurses, female nurses are at last receiving decent salaries. And so many females are now entering medical schools that women doctors may soon outnumber the men.

Furthermore, midwives and female physicians are already reclaiming their traditional dominance of childbirth, "female complaints" and medical care of children. Physicians who are also mothers providing much of the family’s child-care, tend to enter specialties offering regular schedules.

Do We Need A Computerized Database of Old Wive's Tales?

In the summer of 1947, my older brother Peter and I worked on a small construction crew in then remote Passaconaway Valley, New Hampshire. Our father subsidized our "room and board" while we helped build a log cabin for our family. We worked hard and learned a lot.

Pete and I lived in the cozy log cabin of our boss, Cliff Pratt and his wife Mabel, along with 2 bird dogs, 2 milk cows (in a small shed), and a few pigs out back. The following summer I returned and earned 65 cents an hour, while Peter went off to work on the AMC trail crew.

Cliff and Mabel enjoyed discussing the history of this forested valley which had been logged and farmed in the 19th century. For example, Cliff related that local sheep had often died with "the blind staggers" until someone found that this condition was related to a cobalt-deficient diet. A cobalt salt supplement eliminated that problem.

That tale later made me wonder if those sheep had scrapie, and if cobalt salts might benefit animals with scrapie and related diseases such as Mad Cow or even Creutzfelt-Jacob disease? After an excellent science magazine wisely ignored my vague ruminations, I went on to more pressing matters.

Nonetheless, an easily searched, cross-referenced data-base of such "old wives' tales" surely would include useful nuggets of traditional knowledge for researchers willing to sift through entertaining rhetorical debris, as long as someone - perhaps a Single Payer for health care - considered such a historical project deserving of a small subsidy.

The herbal knowledge relayed by Mabel proved equally interesting, and her gently amused smiles now make more sense. For example, it was a local New Hampshire custom for adults (perhaps just the women?) to brew a strong tansy tea for the "spring cleanout". At the time, I had assumed tansy must be a laxative. But as John M. Riddle points out in his

comprehensive book, Eve's Herbs: A History of Contraception and Abortion in the West—tansy tea was formerly a well-known abortifacient.

Riddle lists many other commonly consumed herbal teas—such as pennyroyal—that still cause unsuspecting consumers to miscarry. For many flavorful herbs that remained popular and available over centuries, were initially domesticated to ensure easy access for those seeking "pharmacological effects" that no one later dared explain.

This makes consumption of herbal teas a risky way to protest the past dominance and extreme abusiveness of the Church and its affiliated medical establishment. So while I would be the last to criticize anyone who feels pleasantly subversive by drinking herbal teas, ordinary black or green teas, coffee or even hot vegetable broths are definitely safer for those without the knowledge and experience of old midwives.

From an evolutionary perspective, tansy and similar herbs likely prospered and spread because they happened to include chemicals that could abort pregnant herbivores. Though I never tasted tansy tea, I can vouch for another of Mabel's herbal remedies, having on several occasions gotten immediate relief from troublesome diarrhea by drinking a cup of raspberry leaf tea.

And more than once I heard Cliff describe how—after feeling fatigued over many months—he had consumed an entire case of celery, and immediately felt "like a new man". Most of us have had similar moments, and I relate some of my own in this book. Perhaps the lesson to take away is that humans eat thousands of different "natural" (as opposed to manufactured) foods, many of which—like tart cherries or turnips or celery or raspberry leaf tea—may sometimes be "good for what ails ye."

Indeed, as we age and develop recurring symptoms or chronic illnesses, we are ideally positioned to try out different

interventions or to notice how some non-customary food—or even a change in the weather—may affect a chronic complaint.

An example: Every cubic centimeter of seawater allegedly contains billions of viruses unwittingly manufactured and released into the environment as a host bacterium, alga, fungus or protist finally ruptures. Everyday knowledge and experience suggests that to prosper, such viruses must infect common ocean microbes. In contrast, it would neither be likely nor useful for these viruses to evolve clever attacks on rarely encountered human cells.

So when we submerge our skin in seawater, some viruses might harm resident bacteria or fungi on our skin surfaces, but except for microbes in sewage effluent, oceanic microbes generally lack a "key" for entering human cells in order to reproduce there. Indeed, my chronic dermatitis nearly cleared after several ocean swims in Hawaii.

As for how useful knowledge about foods and herbs was compiled; most of us inherit the good judgment that leads us to avoid restaurants or foods that previously made us ill. Just as rats learn about new foods by watching who eats what and remembering who keels over after binging on which food or drink, thereby avoiding a similar fate.

Many kings formerly had official "tasters" living high off the hog, whose sudden demise might be bad news for the cook. Other rulers just slipped suspect samples to their pets. In contrast, studies by Mason et al reported in Science (Dec.9, 2011), reveal that rats show more empathy and prosocial behavior than the above-mentioned monarchs. For a rat will not only work very hard to rescue a trapped companion, it then shares its own treats with that rescued animal.

It is well known that Big Pharma supports countless thousands of mice and rats who cannot give informed consent for experiments into which they unknowingly are entered. Similarly, Big Pharma “clinical trials” routinely enroll poor,

desperate and misinformed humans. These circumstances suggest that few if any "consents" to a clinical trial by mice or rats or women or men are ever truly voluntary and "informed".

Inexpensive foods and common sense versus Viagra

Computer spam messages declare that costly Viagra will help you “Make love till you drop!” The old joke about “life’s three stages” (tri-weekly, try weekly, try weakly) suggests that adult human male sexual potency tends to declines with age. Nonetheless, aging men often hope that some rare or exotic foods will rejuvenate their fading sexual prowess.

As young Wyoming ranch hands, we joked about the popularity of fresh “Rocky Mountain oysters” (recently removed sheep or bull testicles) “in season” on local restaurant menus. Presumably, such testosterone-packed food items provided elderly males with a needed boost.

Yet many men still seem unaware of ordinary factors other than alcohol (renowned for heightening desire and reducing performance) that can impair their sexual abilities. For example, cigarettes accelerate arterial aging and lead to premature termination of male sexual function.

So here are a few more physiological insights that could help you make love inexpensively without dropping or drooping. Let’s begin with the circulation. Your heart pumps blood through all the capillaries of your body. However, even a healthy young heart cannot deliver maximal blood flow to all your organs and tissues at once. So while you may occasionally think great thoughts, or exercise maximally, or digest a huge meal, or enjoy “a few beers” or have great sex, a wise man only engages in such activities serially if at all.

Indeed, elderly males may already be aware that even the usual shift of body fluids into the gut during digestion of an ordinary meal may temporarily reduce sexual and other physical performance. Men should also avoid hot tubs, for

overheated testes take a while to recover, during which period they produce far less testosterone and few sperm.

Hot tubs are dangerous for old folks anyhow, especially those with known cardiac problems. For heat dilates and pools blood in near-surface veins, meaning not enough blood may return in timely fashion through the heart to the arteries for ongoing circulatory support. The final collapse may come as an overheated geezer stands to leave the hot tub.

And while chest pain during intercourse may be “a downer”, it is better to let your body set limits than try to override its "advice" (your symptoms and signs) by use of drugs like Viagra without competent medical guidance.

While we are on the subject of listening to our bodies, the commonsense stuff increasingly matters as we age—like "stop eating or drinking when you feel full enough". And if tired, take a short nap whenever possible (30-45 minutes works for me), or at least drink some Gatorade to see if your wobbly or washed-out feeling signals mild fluid depletion.

According to Graham Giles of Cancer Council Victoria in Melbourne, more men could also do their prostate a favor by spending some "quality time" alone. For when Australian scientists compared the sexual habits of 1079 men with prostate cancer to 1259 healthy men, they found that men who had ejaculated at least five times a week between the ages of 20 and 50, faced one third the risk of prostate cancer as men who rarely masturbated.

“Semen is a very potent and strong brew of lots of chemicals . . .and could be carcinogenic if left to lie around” said Giles. And if masturbation is “normal . . . healthy and beneficial, why not?”

Men should also avoid hard narrow bicycle seats or vigorous mountain biking without excellent shock absorbers, for these seats and activities repeatedly injure blood vessels at the base of the penis, thereby increasing the likelihood of

impotence. And small calcium collections in frequently injured testes of male "extreme bikers" may be associated with increased risk of testicular cancer.

Adult human male blood-testosterone levels are highest in the morning, so older men often find morning the best time for intercourse. Elderly men who have not regularly expelled sperm through intercourse or by masturbation, may be dismayed to discover how much their performance has declined—for sperm and testosterone production both fade to match chronic low demand. As usual, “use it or lose it”.

Older folks with stiff arteries can be surprisingly sensitive to changes in their blood volume. Removing or adding even an ounce or two of blood at surgery may significantly impair or enhance their blood pressure and circulation. Since penile erection easily entraps that much blood temporarily, adequate sexual performance in older men increasingly depends upon preparatory hydration (e.g., drinking a pint of Gatorade) and perhaps "activating" the circulation with a leisurely cup of coffee and a walk. And don’t be in a rush—for getting full systemic benefits of oral fluids often takes 30-45 minutes.

Manufactured foods regularly incorporate soy products. Such soy may retain significant estrogenic activity so males ought to avoid soy milk or soy solids and check ingredients lists of all manufactured foods for soy additives (see book report on Soy at end of this Chapter). Furthermore, other plant foods may contain estrogen-like substances. So consuming too much of certain plants could have an oral contraceptive effect.

A varied diet helps you avoid toxicity from normal plant or animal ingredients (or low levels of toxic substances that all living things may acquire). This makes evolutionary sense. For tasty plants would gain little by raising estrogen or other toxin levels to a point that punishes random acts of grazing. But such plants could benefit by minimizing populations of mammals, insects or dinosaurs that might otherwise overgraze them.

Thus some plants reduce the sexual performance of aging human males who overgraze them. Even non-manufactured natural foods often include chemical contaminants that affect health or sexual performance. And common herbicides and pesticides, as well as some ingredients of plastics, may be potent estrogen mimics, even in tiny doses. Research suggests that modern farm workers have low sperm counts. So take care to wash or peel market-origin fruits and vegetables.

Herbs and herbal teas

In "Eve's Herbs" - The history of contraception and abortion in the West referred to above - John M. Riddle "showed... that women from ancient Egyptian times to the fifteenth century ... relied on an extensive pharmacopoeia of herbal abortifacients and contraceptives to regulate fertility...(So) Riddle explores a new question: If women once had access to effective means of birth control, why was this knowledge lost to them in modern times?

"Beginning with the testimony of a young woman brought before the Inquisition in France in 1320, Riddle asks what women knew about regulating fertility with herbs and shows how the new intellectual, religious, and legal climate of the early modern period tended to cast suspicion on women using "secret knowledge" to terminate or prevent pregnancy.

Knowledge of the menstrual-regulating qualities of rue, pennyroyal, and other herbs was widespread through succeeding centuries among herbalists, apothecaries, doctors, and laywomen themselves, even as theologians and legal scholars began to advance the idea of a fetus as fully human from the moment of conception.

"Drawing on previously unavailable material, Riddle reaches a startling conclusion: while it did not persist in a form that was available to most women, ancient knowledge about herbs was *not* lost in modern times but survived in coded form.

Persecuted as "witchcraft" in centuries past and prosecuted as a crime in our own time, the control of fertility by "Eve's herbs" has presumably been practiced by women world-wide since ancient times."
Conclusion: Herbal teas often affect drinkers in subtle and unexpected ways - so if you would rather not drink medically active solutions, avoid herbal teas.

Aphrodisiacs

Oysters have long been valued as an aphrodisiac. A few years ago New Scientist reported that oysters, so presumably all other mollusks (including clams, squid, snails, scallops, etc), bear a modified amino acid that causes mammals to secrete more testosterone. Which suggests that eating mollusks might let athletes enhance their own testosterone production legally.

However, to avoid getting involved in parking lot fights (due to testosterone-fueled aggression), or paying surgeons to deal with prostatic swelling or obstructed urine flow, it is best to increase your own testosterone production slowly - starting with small meals of clams, etc.

But merely enhancing your sex drive through additional testosterone production is not enough. For nitric oxide is also required to sustain an erection. Fortunately, just a small portion of nitrate- or nitrite-preserved meat or fish is easily converted into sufficient nitric oxide to sustain erections inexpensively without Viagra's many side effects including a rare risk of blindness. However, eating any nitrate salts (aka, saltpeter) i*nterferes* with erections (and a bit more saltpeter can poison you - see Eleven Blue Men by Berton Roueche).

In his book about New York, “The Big Oyster", Mark Kurlansky mentions that most "All-you-can-eat!" Oyster-Houses used to maintain an active whorehouse out back for the relief of their customers.

Summary: A small to moderate intake of mollusks plus a

bit of nitrate- or nitrite- preserved meat - e.g., a side of clams plus a half Reuben sandwich (or a few slices of nitrate- or nitrite-preserved salami, or similarly preserved hot dogs or salmon - read those labels!) should do.

Menopausal Testosterone Treatments

Menopausal females sometimes are prescribed a testosterone patch for "loss of libido." But unwanted side-effects of such a patch may include new facial hair, or the undesirable transfer of patch testosterone to a child by a hug. Thus it is simpler, safer and more fun to eat tasty inexpensive mollusks now and then. But no matter how great they may taste, lobsters, crab and prawns are *not mollusks*.

Prohibition led many to Alcoholism

Prohibition created a whole generation of alcoholics. Similarly, after being liberated from a boring minimal-meat "healthy" WWII American civilian diet when I was a lad, I then screwed-up my own coronaries and health by eating a lot of high-protein, high fat (thus high-omega-6 feed-lot corn-fed) meat - in other words, an "inflammatory" diet - for 25-30 years.

After undergoing coronary bypass surgery, I quit while I was still barely ahead, retired and reconsidered. My "excuse" for deciding that "meat protein and fat" could represent healthy eating had been that many Alaskan Natives – especially those living by often-ice-covered Arctic Oceans, survive to old age on a mostly meat diet - which I truly enjoyed at the time.

Omega-6 Fats

But now I finally understand another important difference between wildlife and feed-lot cattle: *Neither whales nor buffalo in their natural habitats were ever corn-fed.* In any case, nowadays even a tiny bite of meat almost immediately provokes my always-pending body-wide (including coronary

arteries) inflammation - then I get angina with far less exertion than usual. A slight weight gain brings on similar symptoms, as obesity fat itself is inflammatory ***while losing just a pound or two quickly gives anti-inflammatory relief*** (see tart cherries).

I assume that "just a bite" of feed-lot beef sets off my inflammatory responses because those poor cattle are so overfed with corn-based omega-6 that some actually become "downers" - unable to walk - and must be dragged into the slaughterhouse.

With omega-6 "bites" now so inflammatory for me, I bless anti-inflammatory tetracycline, tart cherries and turnips for keeping me from the "downer" state so far. In contrast, Doctor Atkins' *high protein, high fat diet* was still being promoted after he died (of a "head injury"). But by then Atkins had become hugely obese - a totally disabled "downer" - without those then running his diet-business publicly admitting that his diet must have been badly wrong.

Omega-3 Fats

The oil in wild-caught salmon and herring contains omega-3 fat (anti-inflammatory) that moved up the food chain after being produced by algae. Omega-3 originates in chlorophyll, so you can also get your supply from broccoli or leafy greens. A proper balance of omega-3 with omega-6 is important for good health. But modern manufactured “fast food” is predominantly corn-based (inflammatory omega-6).

Probiotics

A few years ago, an article in New Scientist mentioned that Koreans seem to avoid flu by eating Kimchi. Korean scientists soon found that Korean flu resistance merely required consuming the live microbes that ferment Kimchi (with or without those tasty fermented vegetables).

The following information from Wikipedia was abbreviated by me.

Kimchi (/ˈkɪmtʃi/; Korean: 김치 [kimtɕʰi]), also spelled **gimchi**, **kimchee**, or **kim chee**, is a traditional fermented Korean dish made of vegetables with varied seasonings. There are hundreds of varieties of kimchi made with a main vegetable ingredient such as napa cabbage, radish, green onions or cucumber. It is the most common banchan, or side dish, in Korean cuisine. Kimchi is also a main ingredient for many popular Korean dishes such as kimchi stew (김치찌개; *kimchi jjigae*), kimchi soup (김칫국; kimchiguk), and kimchi fried rice (김치 볶음밥;*kimchi bokkeumbap*).

History

Ancient Kimchi: The oldest references to kimchi can be found from 2600 to 3000 years ago. The first text-written evidence of its existence can be found in the first Chinese poetry book, *Shi Jing* (詩經). In this book, kimchi was referred to as *jeo* (菹). The term *ji* was used until the pre-modern terms *chimchae* (hanja: 沈菜, lit. soaked vegetables), *dimchae*, and *timchae* were adopted in the period of the Three Kingdoms of Korea. The word then was modified into *jimchi*, and is currently *kimchi*.

Early kimchi was made of cabbage and beef stock only. Red chili, a New World vegetable not found in Korea before European contact with the Americas, was introduced to Korea from Japan after the Hideyoshi Invasions (1592-1598) and became a staple ingredient in kimchi. Red chili pepper flakes are now used as the main ingredient for spice and source of heat for many varieties of kimchi. In the twelfth century other spices, creating flavors such as sweet and sour, and colors, such as white and orange, were added.

Main ingredients

Kimchi varieties are determined by the main vegetable ingredients and the mix of seasonings used to flavor the kimchi. The most popular type of kimchi is the baechu (napa cabbage, a long white-colored cabbage) variety, although there are many regional and seasonal varieties.

The Kimchi Field Museum in Seoul has documented 187 historic and current varieties of kimchi. Although the most common seasonings include brine, scallions and spices, ingredients can be replaced or added depending on the type of kimchi being made. Common seasonings also include ginger, chopped radish, garlic, *saeujeot* (hangul: 새우젓), and *aekjeot* (hangul: 액젓, fish sauce).

Kimchi is made of various vegetables and contains a high concentration of dietary fiber, while being low in calories. One serving also provides over 50% of the daily recommended amount of vitamin C and carotene. Most types of kimchi contain onions, garlic, and chilli peppers, all of which are salutary. The vegetables being made into kimchi also contribute to the overall nutritional value. Kimchi is rich in vitamin A, thiamine (B_1), riboflavin (B_2), calcium, and iron, and contains a number of lactic acid bacteria, among those the typical species *Lactobacillus. kimchii*. *Health* magazine named kimchi in its list of top five "World's Healthiest Foods" for being rich in vitamins, aiding digestion, and even possibly reducing cancer growth.

Kimchi jjigae. A popular stew made with kimchi, it is commonly cooked with kimchi, fresh vegetables and pork or tuna although countless variants exist.

One study conducted by Seoul National University claimed that chickens infected with the H5N1 virus, also called avian flu, recovered after eating food containing the same bacteria found in kimchi. During the 2003 SARS outbreak in Asia, many people even believed that kimchi could protect against infection, although there was no scientific evidence to support this belief. However, in May 2009, the Korea Food Research Institute, Korea's state food research organization, said they had conducted a larger study on 200 chickens, which supported the theory that it boosts chickens' immunity to the virus.

1996 Japanese kimchi dispute

In 1996, Korea protested Japanese commercial production of "kimchi" arguing that the Japanese-produced product was different from kimchi (in particular, that it was not fermented). Korea lobbied for an international standard from the Codex Alimentarius, an organization associated with the

World Health Organization that defines voluntary standards for food preparation for international trade purposes. A Codex Alimentarius standard was published in 2001 that described production methods similar to those traditionally used in Korea, which prohibited marketing of Japanese produced traditional "kimchi" in international trade.

The first point being made here is that neither Japanese (who also eat Kimchi frequently) nor Koreans contracted bird flu despite exposure to sick fowl. But in other countries such as Indonesia, Malaysia, China and Thailand - where human populations also live in close contact with fowl but don't eat Kimchi - some people became very ill (and a few even died) during the last poultry flu pandemic.

So if eating Kimchi-fermenting-microbes affords protection from flu, those same microbes fermenting other foods should be equally protective - which seems to be the case for fermented sour cream, buttermilk, sauerkraut, yoghurt and old-fashioned pickles like "Bubbies" in cloudy solutions of microbes producing *lactic acid* (thus without added "vinegar" on ingredient label), and so on.

My current impression is that by ingesting Lactobacillus microbes and the others that regularly ferment all sorts of foods, one can prevent or alleviate many infectious illnesses - not through some special microbial gift or kindness - but as a fortunate side-effect of methods fermenters evolved to protect the food on which they live from other hungry microbes.

Of course, lactobacillus and other probiotic microbes in yoghurt protect us from flu "only incidentally" (as flu viruses are inanimate molecules that don't "eat" anything anyhow). Some of this protection comes about because some fermenting microbes extend stringy pili with multiple attachment sites that keep harmful microbes from attaching to the fermenter's food supply (or to your throat, lung or gut cells).

Many antibiotics produced by microbes in soil and elsewhere provide similar food-protection purposes. But while purchased probiotic capsules of live microbes may prevent gastrointestinal problems, those swallowed capsules won't coat your throat and lung en route, as probiotic foods do.

I cannot eat Kimchi regularly as it eventually annoys my non-Korean gut - and Marianne is not fond of Kimchi breath - so nowadays we both eat a couple of tablespoons of tasty yoghurt (such as “Nancy’s” that advertises "mixed live cultures”) twice a day, which apparently protects us from almost all throat, lung and gut infections brought in by visiting grandchildren. An added advantage of live/fermented yoghurt for those with lactose intolerance is that yoghurt lactose is allegedly mostly dissipated by fermentation.

Over the past several years, only once did I become ill despite near-regular intake of yoghurt or other fermented "live culture" foods. And that time it seemed that “live” Kimchi conferred additional benefit as I struggled with an upset gut and flu-like illness. In particular, during my week-long illness, whenever I became more feverish or short of breath, *I could reliably return quickly to "just being ill"* by eating a small quantity of my simple home remedy of “live yoghurt mixed with live Kimchi” - which was easy for me to consume and may have helped minimize further viral or bacterial invasion, thereby helping me stay alive.

Furthermore, throughout that entire week-long illness, I also swallowed ***extra*** *tart cherries (beyond my usual 6 capsules per day) whenever I felt I was getting worse (*it is well known that rather-old and also rather-young people frequently fight flu far too vigorously and end up severely damaging themselves. Indeed, many become sicker or even die of *immunopathology caused by a too-vigorous inflammatory resistance reaction* to flu - which often impairs a person's ability to survive a subsequent bacterial pneumonia.

Being able to modulate your own immune response to flu or other diseases according to your own symptoms in real time is truly interesting, and hopefully will allow you to minimize such illness-related damage. Indeed, "frequent patient-controlled adjustments" seem a rational way to sustain the balanced "partial" ***tolerance condition***. It certainly made me feel better to think I could simply *titrate my illness to minimize my symptoms* with self-administered tart cherries and Kimchi or some comparable anti-inflammatory/probiotic combination.

These primitive efforts to alleviate an apparently serious flu infection may offer a useful starting point for those seeking therapeutic approaches to *reduce host resistance* and *induce tolerance*. But while increasing a host's disease *tolerance* can surely benefit a host's survival acutely, it might also enable some microbes to persist chronically (and see Science, 24 Feb, 2012 pp 936-41 "Disease tolerance as a defense strategy" by Ruslan Medzhitof, David S Schneider, and Miguel P Soares).

Salt-Preservation: The major reason for sufficiently thick layers of salt between layers of food in sauerkraut, cod, pickles, meat and other fermentable foods is that the salt draws moisture out. Salt-dehydrated food submerged in the resulting strong salt solution, allows probiotic fermenters the time they need to multiply until they can suppress other microbes thru fermentation, and thereby prevent microbial putrefaction of that salt-dehydrated, salty-solution-submerged food.

Of course, fermenters ferment only to nourish and protect themselves while they grow and reproduce. Luckily, humans often enjoy that fermented taste, and have long appreciated fermentation's ability to preserve food without refrigeration.

Probiotics may remain active agents for relatively long periods in fermented foods that have not been re-pasteurized or heated. As mentioned, fermented foods often include a lot of

salt. Cheeses may be up to 5% salt. Some salami-type products are similarly fermentation-preserved.

Overview: Many fermenting microbes offer protection to your throat, lungs and gut if you eat them in food as live cultures a couple of times per day. Microbes are tiny so we don't require more than spoons-full of live yoghurt or half a kosher pickle or a bite or two of “truly pickled” herring (not preserved by refrigeration in wine sauce), or “natural” sour cream or buttermilk, or uncooked sauerkraut, or raw Kimchi.

Cranberries (or concentrated Cranberry Juice) taken three times or more per day, will often suppress minor urinary tract or prostatic infections.

Avoiding Salmonella Infection

Cilantro/coriander and wasabi have long protected diners from otherwise-higher risks of Salmonella infection.

The World Of Soy

A quick summary of what I learned from "The World of Soy" edited by Christine du Bois and others (300 pp, 2008).

Main message: "The soybean is protected from pests by a number of chemicals that range from unpleasant to fairly poisonous, and thus is more or less inedible when raw. Nor is it a good food if roasted or otherwise cooked in dry heat, for the proteins and other compounds bind into indigestible complexes."

Despite the above, with proper mold-fermentation and/or prolonged wet cookery, soy has been eaten safely in East Asia for millennia. But soy is a really good example of how a food enjoyed in certain cultures cannot necessarily be tolerated by those unfamiliar with its often tedious or complicated, but essential, preparation.

In other words, you should not munch raw or heated soybeans, for soybeans contain no starches, just peculiar

oligopolysaccharides that the human gut cannot handle, so such intake can produce flatulence and illness. Furthermore, soy contains trypsin inhibitors that make protein digestion difficult and can eventually cause growth inhibition and pancreatic hypertrophy (and soy can cause pancreatitis in non-alcoholics).

And soybeans often develop an unpleasant beany flavor if improperly processed. In addition, soy contains isoflavones or plant estrogens (phytoestrogens) that presumably boys and men neither need nor want - and there are no guidelines on how much soy an average pre- or post-menopausal female might safely eat. "In the wild," such estrogens presumably have a contraceptive effect that limits populations of soy-eating mammals.

Nonetheless, soy is prized because 1) it grows well, even in poor soils, and 2) because soybeans contribute nitrogen that enriches the soil for other crops, and 3) because when properly fermented and/or cooked, soybean's high protein and oil content helps poor folks or voluntary vegetarians get additional needed fat, lysine, etc.

In any case, almost all processed or manufactured American foods includes some "hydrolyzed vegetable protein" or otherwise-labeled soy components. All Japanese soups include miso flavoring unless otherwise specified. Thus soy is hard to avoid - but not necessarily bad for those who don't routinely cook their own food.

However, the American Academy of Pediatrics no longer recommends soy milk - a cloudy solution of (presumably properly prepared) soy plus other ingredients.

CHAPTER FOURTEEN
Health Insurance, Health Care, and Prescription Drugs Cost Too Much

What can be done? What should be done? What should not be done? Too many internists become cardiologists. Many medical fees are now regulated. So what must we do? When it comes to health care, "better" is hard to define

What can be done? What should be done?

We finally consigned our three huge decades-old $14,000 IBM word processors (the last two bought "used" for $150 and $50) to the dump when they no longer could compete with vastly more convenient and capable laptop computers costing less than a tenth as much (inflation factored in). Equally incredible advances in pharmaceuticals and medical technologies simultaneously altered the facts of medical care.

What should not be done?

Unfortunately, many of those attracted by rapid medical and technological advances, were drawn in by the chance "to make a killing" and other business reasons unrelated to patient need or product safety or the more efficient production and distribution of desperately needed products at a lower price.

And soon enough, their hugely expensive, highly touted, often less-safe-and-effective drugs or medical technologies drove overall health care costs up over ten times (inflation factored in).

One might reasonably conclude that "misuse" (e.g., theft by computer hacking) or "inappropriate overuse of costly medical technologies and highly touted pharmaceuticals" (e.g., theft by misrepresentation) were equally corrupt practices, as

multitudes of trusted and highly trained white coats profited mightily by prescribing their most costly (but often more dangerous) drug or procedure - *over an easily available, safer, far less expensive alternative that was not even considered.*

We have seen how Big Pharma Corporations hold prices way high while their patent monopoly persists. And that as a patent expires so several manufacturers can compete, the price of simple, potent, generic medicines like tetracycline or atenolol, suddenly become a bargain - finally profitable for all.

Dramatic advances in medical care have mostly reduced hospital stays of weeks or months to hospital stays of hours or days. "Nurse-watchers" report increasingly rare sightings as hospital charges rise without apparent top despite declining bed occupancy rates or entirely vacant high-tech wards.

In contrast, a discreet friend once told me that his outmoded out-of-town motel did better with modest charges and short stays as he could then rent the same room several times in a day. Of course, my friend only had to clean and change the linen of his simple high-occupancy rooms.

Nowadays, most urban hospitals cannot compete without supporting an entire gamut of modern health-care specialists with fancy equipment and convenient services. Large hospitals often benefit from accounting skills and shifts of funds among related units in far-flung localities. However, they still must make enough money to pay employees, utilities and suppliers, as well as repay loans.

Furthermore, the executives and shareholders of for-profit hospitals expect annual increases in their salaries and hospital earnings, even if that means many underpaid, overworked employees must intermittently be laid off to meet earnings targets.

Universal Health Services, the nation’s third largest hospital chain, began with venture capital backing in 1978. It now owns and operates 100 hospitals. Over the prior ten years

UHS has averaged 29% returns on investment (Business Week, Sept. 15, 2003 p112). HMO's may try to keep 15% of every health dollar they collect, yet larger disbursement organizations like Medicare or the Canadian government health care plan, retain just 3% to 6% for overhead.

The direct diversion of private health-insurance dollars from health care easily exceeds 25% if you include executive perks, agent costs, marketing, administration, subcontractors, legal counsel, investment, dividends, and so on—without even considering all the extra employees physicians and hospitals must hire to deal with purposely misleading insurance papers or unjustified insurance refusals to cover insured-patient costs.

Every health care institution wants more paying patients, but the supply of such patients is limited. Nonetheless, there is no overt price competition, nor can we find public information that elective patients might use to select a hospital charging less than $25 for a tube of toothpaste—or under $1200 for an Emergency Room visit to determine that a broken clavicle needs no treatment—or less than $3700 (including two CAT scans) to learn that a kidney stone is small enough to pass unassisted—or less than $5,000 for appendectomy with overnight care—or under $8,000 for a full MRI study.

Technological and surgical advances simplify most operative procedures and reduce operative-times for ophthalmologists, orthopedists, gastroenterologists, oncologists, cardiologists, general surgeons and heart surgeons. Yet specialists rarely if ever cut fees as new techniques allow them to treat more patients.

In former times, hospitals bought sturdy glass one-gallon cider jugs full of delicious fresh cider (or wine or vinegar or whatever), then washed and sterilized those gallon bottles, added a sterile rubber cork with two or three good-size holes for glass or plastic straws, plus some tubing - all for less than 10% of the market price of an equally functional, disposable

plastic chest-drainage device with plastic tubes attached.

But no large hospital could afford that simple cider jug device today. It would involve too many specifications, meetings and hospital departments; from Purchasing ("How much cider? What supplier? Put out bids.")—to the Kitchen ("The cider went hard. We have no space. No one drinks cider.")—to the Wash Room ("We don't have space. Order a new jug washer.")—to Sterile Assembly ("How does this thing go together?")—to Surgery ("Some idiot put this together backwards!")—to the Emergency Room ("We have plenty. Oops! Rush 6 more units—they all broke.")—to Infection Control ("Improperly sterilized. Cannot be reused.")—to Waste Management ("Which department gets charged for discarding this?"). *Yet at one time all of this was done more quickly and more sensibly by a single pleasant human.*

On the other hand, physicians frequently invest in out-patient Surgery Centers, free-standing Sonography, CAT scan, or Mammography units, and so on—wherever they can divert paying patients from local hospitals and prosperous hospital-favored radiologists, pathologists and other specialists. But even here, I have never seen published prices or price wars.

Our health care system is rife with unplanned and usually perverse financial incentives and disincentives. It is replete with monopolistic specialties and subspecialties protected by arcane rules and regulations—including sensible requirements to ensure adequate training and certification of expertise. Yet as each subspecialty defends its own turf, it simultaneously promotes products and services in other subspecialty areas.

We have seen that the level of compensation accounts for major differences between how many doctors train in a particular specialty and how many may still be needed—regardless of whether that "need" is essential to patient care or if it merely allows a hospital to provide often optional, but hugely profitable, 24 hour services such as costly MRI exams

for every accident victim (who might otherwise go home and recover without such a study to confirm the diagnosis).

To a considerable extent, historical biases determine which services and specialties are most richly rewarded. But highly paid specialists can make larger political contributions, so their interests and protests receive priority attention from politicians and bureaucrats. And being appointed to Medicare committees that determine payments for various services, ensures they will remain highly paid.

The problem really is quite simple. Most people seek meaningful work. So they begin their working careers truly hoping to make a difference. But during internship and residency, most physicians of our day cared for so many desperately ill patients that they hardly had time to sleep, let alone visualize a future beyond some institution, clinic or busy practitioner who might hire them.

Once they train in a field and have a job, professionals naturally seek the best return on the time, money and energy they have invested in developing new skills. As a result, doctors and medical researchers usually focus on diseases prevalent in wealthy industrialized nations, since that default option represents the established track toward a decent life style and professional recognition.

Like many others of our peer group, Marianne and I lacked the time, money and information necessary to discover a pleasant practice area where our medical skills would be in reasonable demand. Most young shopkeepers, entrepreneurs and businesspersons face comparable difficulties—many soon mutter "Had I known then what I know now . . ."

Fortunately for us, we chose to settle in an area with sufficient growth potential so we could become increasingly useful. However, from day one, we had to adapt, improvise, upgrade our skills and offer new services in order to avoid early obsolescence.

Even had we fallen into ideal practice opportunities, they could not have remained that way. For there would have been endless challenges as our interests and skills matured, and health care evolved, and our region became medically sophisticated. The often unhappy later-lives of those who make it big in their youth (perhaps as TV, rap, rock or sports stars), certainly suggest that it is easier to stay productive and optimistic in a slowly improving situation than to tolerate a gradually declining one—even if “still plenty rich enough.”

Having entered medical school with hopes of becoming a simple country doctor, I especially appreciated my school's approved unpaid externship at Twillingate. But as our family grew and my training continued, a lifetime of providing needed medical care on Newfoundland’s northern shore gradually became increasingly unrealistic.

Nonetheless, it would have been hard to resist occasional requests for free medical services to this needy population through its struggling but already organized, health care system. For such temporary, valued, out-of-area experiences often revitalize physicians whose ordinary practices offer few opportunities to really make a difference.

In our day, if you didn’t want to be a military doctor, or medical missionary, or join the Peace Corps or the Indian Health Service, you just had that big white nicely refurbished hospital ship named "Hope". And there mid-career physicians cheerfully donated professional services and taught local health workers for a few weeks or months—on foreign duty, without family.

More recently, physicians seeking a non-religious workplace where they might utilize youthful energies to help a populace with no other options, can also join Medecins sans frontiers. Freedom from rigid oversight was certainly a special concern of mine since I required plenty of elbow room to do my innovative best in our rapidly evolving specialty.

But I also needed to be with my family, and hoped for easy access to a natural ecosystem. Though I had long been enamored with Alaska, Marianne remained unconvinced. One elderly physician had said “Enter practice where you wish to live, then provide needed services there.” Simple, and so true.

Marianne and I finished our Boston residencies about three months before mid-summer when our training was scheduled to commence in Iowa. Initially, I applied for various short-term surgical positions—sending out two-page resumes about my sterling qualifications, and mentioning Marianne’s training in Pediatrics as an afterthought.

The response from American Samoa was typical. “We have an immediate opening for your wife, and will try to find something for you to do.” Eventually we packed all we owned into our roomy 1960 Pontiac and took a ten-week meander over America’s byways en route to Iowa—seeking the perfect place to eventually settle down. In those slower driving, bigger-car, pre-seat-belt days, our one-year-old son bounced happily on his crib mattress in the back seat.

At that time, rather than focus on developing altruistic workers committed to decades of service in ghettos or less developed lands, famous medical schools vied to produce famous researchers and teachers who might attract potentially famous students and endow new buildings.

But while I had many fine teachers and nice classmates, we shared few interests. And soon after graduating, I lost all contact with classmates and medical school. In fact, when we left Boston, I was convinced that most academic physicians were pompous and overrated.

Yet I now suspect that many medical students and academics would enjoy more meaningful careers if several students in each class specifically entered school on a subsidized "tuition-free, expenses-paid" career track to develop, broaden and upgrade the health care of a particularly

underserved and impoverished population at home or abroad.

For if all classmates had one or more friends in such a situation—or conversely, if those who accepted these opportunities remained in touch with the medley of medical school classmate's interests and skills—the average regular-track medical students might find it truly rewarding to advise and occasionally deliver care where physician friends dedicated to care for the underserved had settled down.

Each small, ready-made cohort, held together by a medical-school-based organization and monthly newsletter, could schedule occasional visits by academics, researchers and practicing physicians to deliver needed consultations, specialty clinics and surgical care. Surely all would benefit if First-World medical personnel could experience Third-World realities at a working level, rather than merely passing through as tourists.

The three-part goal of such an effort would be to bring valuable, culturally relevant medical care to those in need—to promote communication in a way that helped everyone involved remain up-to-date—and to remind all parties why they entered medicine, thereby helping them avoid burnout.

If every year's class of a school routinely accepted long-term responsibility for enabling and enhancing the delivery of important health care services by a few classmates, all participants in such meaningful activities would gain.

Despite countless valid criticisms of Big Pharma, their occasional donations of essential drugs to improve the health of impoverished workers or peasants still deserves applause. For example, Pfiser gave great quantities of a long-acting antibiotic to control chronic eye infections, and Merck gave great quantities of antihelminthic medicines to eradicate invasive worms.

But except for such rare and deservedly well-publicized good deeds, Big Pharma has shown little interest in Third-World health problems - beyond insisting upon strict

enforcement of their hugely profitable pharmaceutical patents.

Even the World Health Organization has serious conflicts of interest: For researchers have shown that untrained medical practitioners or improper vaccination techniques (e.g., reused needles) were to blame for many of Africa's new AIDs cases.

So far, the WHO apparently prefers to emphasize the role of unsafe sex, and divert blame from WHO-supported immunization programs—some of which likely involved dirty needles. But many Africans already believe AIDs is a white man's plot to kill them off. Thus some Nigerian tribes initially refused to accept polio vaccinations upon which final World-Wide eradication of polio may depend.

Once again, it seems prudent to first eliminate errors of commission (promote safe injection techniques world-wide) before worrying about errors of omission (inadequate immunization). And good evidence also suggests that polio vaccination with live attenuated virus may itself lead to new polio cases.

In any case, trained and motivated individuals who promote better health care and research in undeveloped nations can make a huge difference for the poor (e.g., Nature, 11 Sept. 2003 p142). And recent inputs of Gates Foundation money have encouraged important new health care projects in Africa and elsewhere. Yet Big Pharma's priorities still remain developing costly quality-of life-drugs to suppress hay fever symptoms without making you sleepy, or helping a short child grow an extra inch or two taller, rather than helping the poor.

Worldwide, over 200,000 children have been prescribed costly, largely unjustified growth hormone treatments. Many thousand short children also received expensive natural growth hormone extracted from human cadavers before artificial growth hormone was developed. And some of those pooled extracts inadvertently transmitted the human version of Mad Cow Disease known as Creutzfeldt-Jakob disease.

Other costly elective treatments like laser reshaping of the cornea for minor cosmetic or functional benefits, similarly bear major risks including blindness. On the other hand, logic suggests that repeated botox treatments for wrinkles might build up a sufficient immunity against botulism so wealthy dowagers could survive terrorist attacks with botulinum toxin. When all else fails, they might even be able to subsist on poorly stored meat or improperly canned preserves.

Too Many Internists Become Cardiologists

As this century began, Anchorage, Alaska had over twice as many Cardiologists as Internal Medicine specialists. The few younger, more recently trained, still up-to-date internists were relatively underpaid and overworked while - in contrast - a*ll of those cardiologists did very well as members of a single large Cardiology Group - which monopoly offered plenty of leisure time* with fine coverage, plus high patient-care income shared by the many partners.

This unsatisfactory situation—at least for internal medicine patients and internists—is not a reflection of low patient demand or internist disinterest in medical practice. Rather it is a rational response of highly intelligent and motivated physicians to a skewed fee structure that neither group designed nor could control.

In fact, cardiologists train to be internists before entering cardiology residency programs. But while internists are diagnosticians especially trained to recognize and treat a variety of uncommon or complex ailments, they ordinarily subsist on much the same everyday patient problems that family practitioners, nurse practitioners, and physician assistants (PAs) handle in their daily practices.

At the same time, many of the more complex medical interventions that previously required "an internist's cognition and caring", have largely been ceded to or captured by more

narrowly trained, better equipped and more costly diagnostic and interventional subspecialists who restrict their practices to single branches of internal medicine such as cardiology, endocrinology, gastroenterology, nephrology, neurology and rheumatology.

And when our ordinary underpaid internists go extinct, these overpaid subspecialists plus family practitioners, nurse practitioners, PAs and PCs (easily updated, interactive personal computers) of necessity will take over the lower-income internists' remaining roles. This is basically not a matter of right or wrong, or of efficiency or greed. Rather it reflects the fact that with no certainty in life, we all want the best-qualified, most competent person to diagnose and treat our own particularly complex and important conditions.

But as more and more people train to deliver ever more highly specialized care that most of us will likely never need nor be able to afford, the best becomes the enemy of the good. And if their only tool is a highly specialized hammer, those specialists will still try to remain useful and make a good living.

Consequently, the whole world will increasingly appear in need of their highly specialized "nailing". Sadly, those who obviously don't need or simply cannot afford such a "nailing" will too often be mishandled or lost in the shuffle.

And overall, it is increasingly difficult to educate—let alone maintain the competence and income of—an internist who knows enough about most things, and understands how to find other answers in a timely fashion. Of course, it is not possible for any internist to remain truly up-to-date with all modern advances in such a broad field.

And it is even harder for a patient with limited knowledge and resources to figure out who knows too much about too little or too little about too much. Therefore, many patients just head for the local hospital emergency room in hopes of getting an appropriate referral at a tolerable price. And those who are

truly ill, without health insurance or other resources, soon go broke.

No matter whether certain outdated, counterproductive financial and life-style incentives or disincentives arose by chance or had valid historical reasons or were simply put in place by "the powers that be"—those affected soon adapted to that reality, just as older towns adapt to the winding roads laid out as long-since consumed cows compulsively retraced pathways once followed.

For every established cow path still veers toward previously present vegetation, or meanders around a long-filled bog, or deviates for no-longer-present fences or large trees that formerly fell in a bygone wood—until increasing development of nearby land eventually makes that persistent path the most practical route from here to there.

When Marianne and I applied to medical school there were several applicants for each opening. During our medical school years, most aspiring physicians anticipated a life of service in a medical practice and/or in a research position that would support a comfortable but not extravagant middle-class life style.

Few doctors then expected to become wealthy, though many did. Among these were some highly respected old-timers who got Internal Revenue Service approval to continue running their low-overhead Depression-era "cash-box" offices (no billing, no paperwork, hence no audits—with all income and expenses added to or subtracted from their cash box).

Those doctors especially avoided conspicuous consumption since they only paid income tax on profits they chose to declare. In my childhood—when $2000 was still a decent annual income—one physician killed himself after someone stole or otherwise drew attention to $80,000 or $100,000 stashed in the doctor's shoebox. Shame still mattered then.

In earlier times, patients were uninsured and paid for medical care at once or as possible. Working-class physicians often had little to offer except sympathy and a plausible diagnosis. Fishermen still pulled commercial nets by hand. And no one anticipated a highly efficient ten-mile-long plastic-mesh drift net. Now our miscued health care system resembles a lost drift net, still catching countless fish as its makers and users intended, but hugely wasteful and dangerously out-of-control.

Many medical fees are now regulated

Medical care often seems essential, regardless of cost. Hence publicly supported health care programs increasingly regulate physician's fees—especially Medicaid programs that serve needy and less-well-off children, and Medicare programs that pay many medical costs for the elderly or disabled. But federally regulated prices neither signal nor respond to changing times, so such payments are often inappropriate and not cost-effective.

Medicaid payments for institutional or technological services are sometimes too high, leading to unnecessary services and hospitalizations for as long as payments continue (often a month or so). Then the patients are discharged back to their former medical practitioner without evidence of having undergone useful treatments, no apparent improvement and no plans for aftercare.

On the other hand, Medicare's remuneration for an ordinary office evaluation or treatment is widely seen as insufficient to cover the office expenses for that patient's visit. A physician friend doing part-time work mentioned that his employer billed him a token $54 for the amount that patient-related-office-costs exceeded his total earnings from Medicare after a day spent treating Medicare patients.

When we first came to Anchorage, frustrated physicians often complained about local welfare payments. Many would

rather have provided totally free care than hear visiting welfare workers reassure sick patients that their doctor's bills were "all taken care of"—especially when a welfare payment might just be two or three dollars of a $50 or $200 dollar fee.

Many medical offices are currently unable to care for more than a few long-time patients after they retire - once Medicare has responsibility for paying their medical charges. Some practices advertise that they won't accept Medicare payments but are pleased to see well-to-do older patients who pay cash in advance.

Unlike true free-market competition, regulated prices cause ongoing inefficiencies, inequities, mislabeling of illnesses, and costly but inappropriate diagnostic or therapeutic enhancements. It is worth remembering that state-owned businesses and state-established prices and production quotas helped destroy the Soviet economy. Similar strictures still burden great nations like China and Japan.

As medical fees become established and regulated, they elicit persistently wasteful behavior by mismatching supply and demand (e.g., for internists or cardiologists) over such prolonged periods that most people eventually adapt and restructure their lives and businesses to this more costly and inefficient alternative.

Thus instead of fully utilizing costly hospital diagnostic equipment, it is often better for cardiologists to purchase and staff comparable "expensive" office equipment as this allows them to charge less restricted global fees for diagnostic procedures, rather than just billing standard procedural or hourly fees. But the same high overhead that currently maximizes their income from procedures may one day prove burdensome if cardiologists must respond competitively to effective pricing.

So What Do We Need To Do?

America would clearly be a better place if all its inhabitants had access to safe nutritious food, adequate shelter, decent education, basic medical care, clean air and water, a healthy environment, liberty, justice and freedom from governmental intrusions. Not surprisingly, the bumpy road toward that Promised Land requires constant inspection and repair.

With regard to basic medical care, a Single Payer, whether a private, or non-profit or public health-care program, and no matter if it is organized on a local, state-wide or national basis, could easily adjust its payment policies to draw physicians into specialties or geographical areas with insufficient coverage.

A Single Payer would also be able to reduce remuneration in certain specialties or locations that had more than enough practitioners. And while physician surpluses or unfilled positions would not self-correct overnight, they could easily be remedied with some lag time for retraining, completion of training or turnover.

Of course, to avoid restricting or delaying medical progress, we would want a Single Payer to anticipate new developments—but bureaucracies are rarely good at that. Thus a Single Payer system will forever be playing catch-up with population shifts, technological advances, evolving medical problems and their new solutions.

Then how about paying a standard salary to all medical practitioners with comparable training so they choose a practice specialty on the basis of interest, abilities and patient needs rather than according to which provides a better income? After all, we want to attract people of quality, empathy and intelligence into all medical specialties and locations.

But some sites are unattractive or downright dangerous, so add a differential for that. And some salaried physicians might prefer to spend their time at meetings or fishing or both—as some salaried folks already do—rather than

providing more patient care. So we had better keep some sort of “fee for service” incentive.

Under such circumstances, a few might turn their offices into oxycontin mills or give every patient an injection to promote volume of care at the expense of quality. So here comes quality control again. And how can we measure and respond to that?

Well, in Canada, doctors who order much over the average number of tests in their specialty may have their practices reviewed (Feb. 2003, The American Prospect, pp37-8). Or we just might end up paying better salaries to those who are nicest to the Administrator.

In any case, it seems safer to let the system evolve slowly, adjusting specialty fees, and perhaps requiring a two-year medical duty in an under-served community in exchange for free medical tuition plus basic room and board for doctors and nurses and other needed medical practitioners who are in fully accredited training programs.

And where possible, allow patients to select their own physicians. For major revisions of complex systems incite many feedbacks and abrupt changes in health care delivery—like other revolutions—rarely deliver the anticipated result or even a desirable alternative.

What if our government simply provided all citizens with basic health insurance paid for by a progressive tax so those who couldn’t afford anything had free care while those who could afford a little paid a little and so on up the ladder? You might ask, “What would prevent the poor from abusing such a system?”

I once worked in such a system at the Boston City Hospital. And in my experience, that system was mainly abused from above by politicians and administrators, not by the destitute below. But there may be no inherent reason for all administrators to be corrupt, or all young doctors to be treated

badly, or all politicians to outrank doctors and patients.

As a rule, those who steal billions—as Enron leaders did from Californians and their own employees—are treated far more leniently than poor folks trying to squeeze a few more dollars or a better deal out of a system than some biased, comparatively wealthy prosecutor deems permissible. Hence many “welfare cheats” are swiftly jailed for the little scams they use to survive, while some Enron leaders remained pillars of Bush’s Billionaire Buddies.

But if harsh punishments are needed so poor malefactors won’t misrepresent their situation to obtain essential medical care, then the usual non-prosecution or minimal punishment of Republican Donors Who Steal Billions will surely motivate vast multitudes to attend Future Billion Dollar Thieves of America meetings where Republican dignitaries will endlessly explain why only the wealthy deserve deliverance from evil (taxes).

Of course, no matter what solutions are devised for American health care, they will require ongoing changes as flaws, errors and new ways to scam the system become evident. Overall, I suspect that hospitals would function more responsively and responsibly as widely distributed, small to medium size, competing facilities subject to some local control—rather than as gargantuan politician-controlled institutions like Boston City Hospital.

When I first came to Anchorage, an experienced surgeon (Dr. Mills) pointed out that despite its many deficiencies, our relatively friendly and open, moderately democratic and efficient, 90-120 bed hospital would one day be recognized as a great working environment—in contrast to what we would get once our hospital exceeded 200 beds. And he was right.

For Providence Hospital became hugely complicated as we “advanced” from an "open-door" nun-administrator and assistant administrator - with all hospital department phone numbers listed on one side of a single sheet of paper—to

departments uncountable and administrators unknown who were always at meetings or unavailable.

Our hospital phone book eventually became larger than the phone books of nearby small towns—at which point it became difficult to get a final decision, employee morale went down the tube, and costs skyrocketed as bed count rose while bed occupancy declined. Before long, the lay administrator (whose office included a small putting green) was "too busy" to see me, and outraged when called at home about a hospital emergency.

When It Comes To Health Care, Better Is Hard To Define

Price becomes a minor consideration when the life or limb or eye of a loved one is at stake. Nevertheless, patients cannot choose a competent specialist who charges less unless they have access to a list of standard rates charged by competing specialists, and some objective way to determine who achieves better outcomes.

Quite naturally, most physicians - still paying off major investments in education, office space, medical equipment, multiple homes, sailboats or airplanes - will not voluntarily reduce rates, especially when changes already underway in their specialty are likely to include mandatory fee reductions, or declining patient referrals as others offer a better-sounding technique or less invasive services.

And wherever there are more physicians in practice than seem necessary for relatively urgent health matters and proven treatments, one will likely encounter increasing interest in optional or less-treatment-amenable problems. At that point, unproven or even useless remedies reliably emerge—even though, on average, no one benefits much from those costly investigations and treatments except the provider.

More specifically, the number of specialist visits or x-rays or other medical services provided have little to do with the

average citizen's health or longevity but everything to do with the regional availability of specialists and medical facilities (see, for example, The Over-treated American by Shannon Brownlee in January/February, 2003 issue of The Atlantic Monthly, pp 89-91).

A big part of the problem is that after many glowing reports about great new diagnostic and therapeutic advances, seriously ill patients assume we will operate or offer strenuous chemotherapy or provide major X-ray treatments or do something "BIG"—regardless of whether such options are likely to be helpful or merely might conceivably be so. "After all, miracles do happen!"

And if all else fails, some patients will take their last dollar and head off to Mexico for the latest alternative medicine "cure". Of course, all of us who don't die suddenly or by accident must die with some sort of terminal illness. Perhaps some of those terminally ill would have more confidence that every reasonable therapeutic option had been considered if they could select an uninvolved practitioner in a relevant specialty from a list of volunteer physicians willing to read the patient's chart and meet with those concerned (at no charge) to discuss options.

After rendering such a service, the volunteer physician would come off the discussant list for a month or so, as seemed practical. Presumably all parties in the patient's corner would preview their questions just before such a discussion so that it could be useful and still last just 15 minutes (as in local house calls—see Chapter One).

This would be an off-the-record, neighborly, Good Samaritan act rather than the formal second opinion so often demanded and reimbursed by an insurer hoping to deny expensive procedures.

In Anchorage, where we have many hundred physicians, the daily obituaries rarely include more than one or two deaths

from a terminal illness for which such a discussant option might have been requested.

When facing death, even I—a well-informed physician—found it a great comfort to chat with an objective practitioner. This option might even prove to be a great money-saver for the average patient and for the medical system, as well as a useful experience for the average physician who might—when not directly challenged to "Do something!"— find it easier to offer a thoughtful opinion on the lack of reliable options for further treatment before mentioning additional inexpensive options "outside of the box".

Many patients might opt to gamble on a traditional or alternative treatment or off-the-wall remedies as I did, rather than risk dying at the hospital with more tubes than orifices. Such a patient could also consult a traditional healer about various herbal remedies (a course on this topic is offered in Anchorage at the Alaska Native Medical Center).

Or perhaps a non-physician volunteer could help the patient or family research traditional Indian remedies such as Devil's Club tea for cancer, which the patient or family might even prepare on their own (physicians would likely be uninformed—and also uninsurable—if directly involved in such therapies).

Surely such a terminal patient support system would be better for most old folks than what we now have with competing cardiologists and cardiac surgeons evaluating various expensive procedures to remedy irregular heartbeats because irregular heartbeats definitely have risks and these specialists now have the time and it might well be a beneficial service. And even if long-term benefits are unproven, the herd mentality is in favor.

Although I know little about some of these advanced procedures, it seems unfortunate that cardiologists are apparently unwilling to even discuss—let alone try—my safe

and inexpensive Mag 64 treatment (see chapter 12) pre-operatively on any of their patients coming in to undergo a costly "atrial ablation" procedure for heartbeat irregularities.

After all, up to 50,000 patients may have died of cardiac arrest while taking supposedly useful and definitely costly anti-arrythmia drugs for minor heartbeat abnormalities in the 1980s (see Chapter Eleven, and "Protecting America's Health" by Philip J. Hilts—pp230-2 and 323).

I previously commented on costly lasers formerly found in most heart surgery centers, ready to punch holes through left ventricle muscle into the ventricular cavity of any insured. While no one ever showed benefits for the patient's heart, "It might help."

One really cannot predict whether medical progress might be slowed or advanced if expensive or intrusive new remedies first had to be tested and confirmed in published clinical trials before every patient had access to them.

But surely a Single Payer system could save huge amounts of money by demanding some evidence of efficacy before a treatment became generally available. We learned that same lesson the hard way with Gastric Freezing (Chapter 4)—as did AIDS activists who initially pushed to have every possible treatment available ASAP whether plausible or not.

Those who claim, "We are too soon old and too late smart," surely understand why each new medicine or treatment tends to spread too soon and be carefully evaluated too late.

Oregon begat one useful idea when it democratically prioritized an inclusive list of proven remedies that the state would provide for uninsured persons within the (now rapidly shrinking) budget available for low-income medical care.

Would chemotherapy do more good or less harm if cost-versus-benefit and risk-versus-benefit ratios were determined by objective analysts, and if cost-effectiveness parameters and

even relevant DNA studies were developed before the more risky and expensive sorts of chemotherapy became widespread?

If so, a Single Payer would have to demand higher quality trials, since most studies of new treatments have been inadequate, purposely and otherwise, to settle the questions of efficacy and cost/benefit that they purport to address.

Presumably, the final responsibility for clinical trials should be returned by Big Pharma to academia, since Big Pharma has such a vested interest in positive outcomes. Of course, academics with stock options whose value hinges on the outcome of trials, may also be less than objective.

Over the years, Insurance Corporations with cost-plus contracts and their entire cash flow earning healthy stock market gains, have had little incentive to approve proposed surgeries promptly or to pay their bills quickly. In fact, Insurance Corporations have always been notable for the confusing and annoying paperwork barriers a patient must overcome before the Corporation eventually pays at least part of the insured's legitimate claim; as mentioned, this sometimes illegal ploy is referred to as *rationing by inconvenience*.

Even the partial insurance payments from my health insurance policy to my friend Tector, who performed emergency heart surgery on me almost thirty years ago, were delayed more than a year for no apparent reason other than that they could. But the burden of delayed insurance payments usually falls upon insured persons—many of whom pay up front for insurance that is supposed to cover treatment, and then must finance the treatment while the insurance company ponders whether it really should reimburse the patient.

Nor had Health Insurance Corporations bothered (before recent stock and bond market crashes) to negotiate reduced payments when formerly difficult and dangerous procedures became routine and more efficient, while the patient's risk and

surgeon's time-invested diminished and patient numbers ballooned. After all, the larger the premiums, the greater their opportunities for gain (or loss) on the stock or bond market.

Of course, every time the stock or bond market crashes, malpractice and health-care insurers immediately reduce their exposures and request huge increases in premiums that are totally unrelated to risks they currently insure, simply to offset market losses. Indeed, malpractice insurers would rather not let it be known that malpractice claims in many regions are stable or falling, since insurers want policyholders worried enough to pay exorbitant and ever-escalating insurance rates.

For rather than reflecting policyholder risks, *insurance rates are eventually adjusted so that policyholders insure insurance companies against stock and bond market losses*. And as suggested previously, some insurance policies that are required under state law or hospital policy may overlap or otherwise be unnecessary, outmoded or even against the public interest.

Being responsible for quality control, a Single Payer would also need independent ombudspersons, timely arbitration and an appeals process for patients harmed by gross error or provider incompetence. Proper patient education might also encourage more realistic expectations. Malpractice claims would then be less like winning a lottery and more about "Does this incident show us something that needs to be corrected?" and "How can the injured party best be helped?"

Internists who enjoy hospital practice often find they can work better hours for better pay as Hospitalists. Others accept predictable hours and a good paycheck as Emergency Room physicians, rather than risk burnout trying to keep up with all relevant developments in human health while coordinating a decent family life with unrelenting patient-care obligations.

Medicine is changing. The latest version of in-hospital

patient care—hyped as team care—has problems and benefits that require clarification. Certainly, the concept of team care is not new. In the meanwhile, many apparently stable and profitable specialties will morph into entirely new forms or disappear.

Retraining for some months, as I did, will increasingly become an essential aspect of modern medical practice. Medical costs have been uncontrollable for many reasons, including the unmatched political clout of HMO's, and Insurers, and Multinational Pharmaceutical Corporations, and established physician organizations such as the AMA—all of which are far more "conservative" than the majority of those whom they employ, insure, bribe, mislead or claim to serve.

CHAPTER FIFTEEN
Potential benefits of a Single Payer (SP) System

More jobs, better pensions, fewer strikes; No need for health insurance; Fewer personal bankruptcies; Minimal medical paperwork; Free choice of physician; More reliable and effective diagnostic tests and treatments; Coverage of mental, dental and negotiated pharmaceutical costs; Regular retraining options for health care workers; Better (longer, and honestly presented!) clinical trials; ***One Single-Payer Federal-Health-Care-System to care for All Americans including Veterans, Congress, the Judiciary and the Executive branch.***

A Single Payer can provide far more at lower costs; No need for pharmaceutical management groups; Subsidize generic drugs of proven efficacy; Regulate all health-care-related monopolies; Ongoing evaluations of all medical practice outcomes; Cover mental and dental care; Cover drug and alcohol rehabilitation; Was plumbism (lead poisoning) another reason HRT became popular? Request and reward cost-effective health care ideas; Promote healthy life styles for all ages; Provide competent on-line education in human biology; Encourage self-care. ***Convert all Government Subsidies or Rebates for Corporations into Public Ownership Interests.***

More Jobs, Better Pensions, Fewer Strikes

Government estimates in 2004 indicated that at some point during the prior two years, almost 80 million Americans had neither health insurance nor access to regular medical services other than public hospital emergency rooms—which were frequently so overloaded that they had to refer true emergency patients elsewhere.

Our Nation faces extraordinary losses because so many low-wage workers wait so many hours to be seen and are

delayed so many weeks or months for routine but important publicly financed examinations or procedures that might prevent (or if more timely, might have prevented) chronic illness or early death.

In 2003 we spent over 1.6 trillion dollars on health care. This is 2 to 4 times more per person (and a far higher percentage of our $11 trillion gross national product) devoted to medical care than in other developed countries. Yet no other First-World nation offers such inadequate health care coverage for the lower-income working population that has the most tedious, dirty and dangerous jobs.

Over 14% of our gross national product is consumed by our chaotic and inefficient medical system. Non-affordable medical insurance is the major cause of labor unrest. Most strikes are called, at least in part, to settle heated disputes over how much employer and employee shall each contribute to the escalating cost of health care. They fight each other locally over national political problems that neither side can correct.

Many industries move overseas to escape that heavy burden. Low or middle-wage workers regularly become trapped in unsatisfying, stressful dead-end jobs because these jobs include otherwise unaffordable insurance coverage for their current medical problems. To evade health care and pension obligations, companies like Nestle have shut down efficient profitable plants when most workers reached their 50s. Duty, loyalty and trust no longer matter. Everyone feels betrayed.

No need for health insurance; Fewer personal bankruptcies; Minimal medical paperwork; Free choice of physician

Medicare is the only tax-subsidized, generally affordable, nationwide health insurance program for older Americans. Unfortunately, it requires so much documentation and pays so poorly that most family practitioners and internists cannot

make a living or pay staff salaries and other overhead costs if caring solely for Medicare patients.

On the other hand, though I am now "out of the loop", I suspect that the subspecialists who perform costly diagnostic and therapeutic procedures still do well with Medicare funding. Not by coincidence, the groups representing 170,000 of those highly paid medical and surgical specialists combined their lobbying efforts some years ago.

A fully empowered Single Payer System responsible for all health-care-related payments will markedly increase health care efficiency and greatly reduce provider overheads, for Health Insurance Corporations have notoriously made Health Insurance payouts as restrictive and difficult as possible.

With increasingly computerized medical records, a Single Payer could easily monitor most current patient outcomes, and initiate early investigations of worrisome variations. In this way, a Single Payer might soon *eliminate most paperwork* and minimize computer entries other than patient information. At that point, ineffective documentation requirements would become obvious, so after checking how other National health care programs document, they could be reduced or eliminated.

At present, whether or not a worker is insured, or a retiree has Medicare, their uninsured cost of pharmaceuticals and medical appliances may reach many thousands of dollars per year for ordinary older Americans, and many tens of thousands for some cancer patients or those with severe chronic illnesses.

Overall, health care can suddenly become unaffordable for at least half of our citizens. One need only read the daily newspaper to become aware of spaghetti feeds and other fund-raisers for ordinary individuals who ran up massive medical debts as a result of cancer, stroke or other serious illness—though many had thought they were adequately insured.

Now too many are allegedly doomed unless friends

quickly raise money to get costly chemotherapy or whatever. For insurance policies frequently don't cover chemotherapy or other expensive or unproven treatments that might bring worse outcomes than the untreated disease.

Many patients only get to see a physician if they pay regularly or even in advance. Patients evaluated by "specialists who do costly procedures" usually undergo costly procedures. And patients are increasingly pressured to immediately pay medical bills for unexpected illnesses or injuries.

Uninsured accounts are even "Sent to collection" while a still-hospitalized patient cannot hide. Thus sick folks get unsustainable balances on their credit cards and pay extortionate interest until they lose their homes and jobs. Yet before credit cards were common, medical offices often used simple payment plans to protect patients from crushing debts.

Not surprisingly, medical expenses are a leading cause of personal bankruptcy in the United States. Those pushing high-interest-rate credit cards especially prey on the elderly, the poor and the uneducated. And by lobbying and major campaign contributions, those same bankers minimized the debt relief afforded poor folks who filed for bankruptcy protection. Not surprisingly, bankruptcy rules remain far less onerous for those who have businesses and costly homes.

Over the past 50 years, health care costs increased far more rapidly than overall inflation rates. Individual health insurance policies are only selectively available and don't cover preexisting illnesses (whatever was probably wrong with you) as Health Care Insurance Corporations greatly prefer to insure individuals for conditions they won't develop.

More reliable and effective diagnostic tests and treatments

Investor-owned Health Maintenance Organizations or HMOs often delay or minimize patient care to maximize returns for their investors. The annual premium for an

insurance policy often rises rapidly when stock or bond markets fall. Various estimates suggest that medical errors seriously injure or kill at least 100,000 Americans a year.

Our current problem, costly but inadequate health care, has long been obvious to thoughtful players on all sides. But inexpensive remedies or cures will never be investigated unless a Single Payer or a major foundation funds ongoing investigations of practical low-cost remedies for common complaints (New Scientist, May 26, 2001 pp 31-40). 260

By this I do not mean "Music therapy to raise the chi", nor would I encourage further evaluation of scientology, chiropractic, chelation or the many other favorite causes of those seeking medical care with a more human face. At present, the NIH-based Office of Alternative Medicine is funding studies of glucosamine as well as other more questionable therapies (Lancet, Aug 18, 2001 p566).

A Single Payer could easily evaluate and set up a public-information web site on possibly useful alternative therapies such as raspberry leaf tea for diarrhea, turnips or tart cherries for gout, tart cherries or tetracycline for some acute and chronic cardiac or inflammatory problems, tryptophan-rich foods that might allow many persons to stabilize their moods through diet (Science News, July 8, 2000 p23), anti-inflammatory effects of honey bee stings (to suppress autoimmunity), and an entire host of other inexpensive dietary-or-other traditional remedies that patients might easily access and afford outside of the Single Payer care system.

Thousands of traditional remedies from around the world could be evaluated simultaneously with standardized studies run by ordinary practicing physicians and designed by the best talent a Single Payer could find. Many safe, inexpensive (even home-grown) remedies might finally challenge Big Pharma's billion-dollar drugs in honest head-to-head competitions.

A Single Payer could also underwrite international

evaluations of remedies for safety and efficacy (e.g., the neem tree of India, or the antibiotic tea tree oil of Australia and New Zealand—Lancet, Oct.13, 2001 p1245— or the wound-healing manuka and jelly bush honeys made from tea tree nectar—New Scientist, Oct. 7, 2000 pp32-5).

If any of those "remedies" were deemed effective, Research Agreements would ensure that small surcharges reached responsible local parties in the source country. This might even help Third-World Nations reduce deforestation (see Ethnobotanical knowledge, Science, Mar. 14, 2003 p1707).

In contrast, Big Pharma has routinely "patented" potentially profitable traditional remedies (as if they were "new and non-obvious discoveries") to monopolize that market as well. Too often this has occurred with our Government's connivance, despite outcries from areas where such remedies grow and are traditionally used. A Single Payer might markedly lower its own drug costs by bulk-buying safe and pure herbal remedies, while banning potentially toxic herbs such as those containing ephedra and other dangerous ingredients.

A Single Payer could evaluate if, when and for whom various screening tests such as PSA and mammography are cost-effective. It could sponsor studies and circulate regular updates on whom might benefit from colonoscopy, gastroscopy or mammography, or if blood cholesterol or C-reactive protein levels were useful indicators of future coronary events, or compare outcomes of persons on statins with those on tart cherries or tetracycline and figure out how best to utilize that information.

Coverage of mental, dental and negotiated pharmaceutical costs; Regular retraining options for health care workers

Most specialists are well aware of obvious problems that their competitors in other specialties now face. A cardiologist

recently said, “These new drug-releasing stents will prevent restenosis after we dilate a vessel.” He gave me a nudge. “It won’t be long before you heart surgeons go out of business.”

My response was “And what about tetracycline? It won’t be long before that puts you cardiologists out of business.” He shrugged, “Well, tetracycline was big four years ago, but interest faded after some negative studies.” I said, “Of course. Tetracycline is off-patent and costs me 30 cents/capsule so no one will fund studies—except perhaps long-term studies that won’t report until all current drug patents expire.” He nodded.

By chance, that day’s mail included a notice on upcoming heart-surgery meeting topics. Included were three talks on whether the new drug-eluting stents might reduce our Nation’s need for heart surgeons. But while every medical specialty is affected by advances in medical care, the entire medical care enterprise currently tilts ever more unreasonably toward the investigation, development and teaching about ever more expensive remedies for ever-less common problems.

A point I have repeatedly tried to make in this book is that it would be unprofitable and hugely difficult for a busy doctor to study and apply inexpensive remedies against such a strong tide of opinion. Nor would her peers wish to join such efforts. And his malpractice insurance carrier might disown him if possible difficulties arose with their use.

A major problem for those who really want to change how things are done, is that most doctors fear criticism and a loss of business if their practice deviates too markedly from what they were taught, as pointed out in previous discussions of tetracycline, electrocoagulation, radioactive gold, tart cherries, turnips and so on.

Secondly, greedy practitioners or those with “a screw loose” often grasp simple ideas such as chelation or balloon pumps and promote them far too widely ("prevention creep"), making it that much more difficult for others to devise

appropriate indications for their use.

Nonetheless, without truly qualified leadership from Academia, or strong sponsorship by Single Payer scientists, all efforts to develop effective low-cost remedies will swiftly die, since Corporate interests stand ready to sue or have outside investigators fired for threatening Corporation business plans. For example, one article on my desk favors legislation that would only allow antibiotic usage in animals for treatment of current illnesses (allegedly "to reduce the risk of antibiotic resistance in infected humans").

Naturally, the long list of precluded antibiotics includes tetracycline, which has now been fed in feedlots for many decades at thousands of tons per year "to spur animal growth". Might tetracycline's main effect simply be to minimize animal inflammation caused by the cheap corn-based omega-6 feedlot diet that makes so many animals and meat eaters ill (see ref. in "WHO urges farmers to cut use of antibiotic growth agents", Lancet, Aug. 23, 2003 p626).

A mid-September, 2003, fisheries report in the Anchorage Daily News mentioned that Japanese researchers found trace doses of tetracycline in farmed salmon. And here tetracycline was incorrectly described as an extremely toxic fungicide rather than one of the safest antibiotics known.

Was someone misinformed? Or are commercial interests out there already undermining tetracycline before it can become a serious threat? Might this be the start of a campaign to eliminate cheap ordinary tetracycline before costly, patented modified-tetracyclines hit the market? Stay tuned.

At this point, the only sure thing is that tetracycline is so inexpensive that no one will spend much money defending it. And given its history of heavy feed-lot usage, microbial drug resistance to tetracycline surely has occurred as often as it can.

In fact, chronic feedlot usage alone easily discredits stupid remarks such as “Physicians shouldn’t test antibiotics

like tetracycline against symptomatic coronary heart disease since using tetracycline for such an unproven indication would encourage antibiotic-resistant bacteria."

Yet just such a remark was made several years ago by a Seattle physician conducting a costly long-term study on the use of antibiotics for coronary artery disease. Nor did he reply (in pre-spam days) to my e-mail describing personal experiences with tetracycline. But he was surely wrong!

So did he really expect the World to await the potentially amazing results of his long-term subsidized investigation? Or do his grants restrict him to studies of costly antibiotics still protected by patent? In any case, times are changing and many of today's health care workers will need to upgrade or alter their job description within a few years.

As previously discussed, no evidence was ever offered in support of mandatory Continuing Medical Education, nor of mandatory Recertification. However, it does seem sensible to offer beneficial retraining challenges for health care workers anytime new proficiencies could increase their productivity and alleviate boredom, burnout or simple redundancy.

Their patients would obviously benefit as well. So under a Single Payer, any competent physician or surgeon could retrain in a related field where demand is unmet or growing - just as my three-month fellowship in Heart Surgery improved my skills and our local care for Alaska's Heart Surgery patients.

Better (longer, and honestly presented!) clinical trials; ***One Single-Payer Federal Health Care System to care for All Americans including Veterans, Congress, the Judiciary and the Executive branch.***

Government programs, Insurance Corporations and HMO's often (relatively) under-compensate those who deliver basic medical care. As a result, more physicians prefer to enter higher-income interventional specialties such as radiology,

orthopedics (especially the repair and rebuilding of joints), cardiology, eye surgery, urology and plastic surgery. And the volume of care provided by these costly specialists more closely tracks the available number of specialists than any objective measure of need or benefit.

A Single Payer could easily document or refute the commonly held notion that half of all diagnostic and therapeutic studies or procedures are unnecessary, poorly performed or otherwise contraindicated. *For eliminating the contraindicated half of all tests or procedures would definitely promote better health care at half the cost.*

It might also free-up currently over-used CAT scan, MRI and EEG machines for inexpensive long-term studies on prison inmates or patients in mental institutions—seeking correctible causes (such as chronic subdural hematomas or variant epilepsy) of abnormal symptoms or behaviors

Business Week (Oct. 27, 2003, pp84-5) reports that an estimated 2-4% of the US adult population and *a third to a half of the adult prison population has attention deficit hyperactivity disorder or ADHD*—an increasingly recognized dysfunction treatable in 60-80% of cases.

Although drastic change is always risky, a Single Payer should apply equally to all Americans who - in the words of Thomas Jefferson - "hold these truths to be self-evident, that all men are created equal, that they are endowed by their Creator with certain unalienable Rights, that among these are Life, Liberty and the pursuit of Happiness. — That to secure these rights, Governments are instituted among Men, deriving their just powers from the consent of the governed..."

To date, our National Politicians have avoided stirring up vicious opposition (by wealthy opponents of Single Payer who are heavily invested in the Medical-Industrial complex) simply to improve a system that will never provide care for them or their families. For these far-seeing folks long ago established

their own First-Class health-care-and-retirement system, funded by "the taxpayer."

However, whether it is organized as an offshoot of Social Security or Medicare, or as a new quasi-governmental entity comparable to Fannie Mae, a competent nationwide (or regional or statewide) Single Payer system could immediately and impressively reduce the current cost of medical care. Even Veteran's Hospitals which during my years of training already offered separate and often less-than-equal care to those who had earned the very best, could meld seamlessly into a new Single Payer system dedicated to lifelong First-Class medical care for everyone including "the important people" like you!

A Single Payer can provide far more at lower cost

In view of Medicare's and Canada's early SP experience, the entire Single Payer Health Care Services Organization - operating with open books plus ongoing public oversight by consumers, providers and an efficient research arm - could run efficiently on 3-6% of total Single-Payer funds.

A Single Payer would generate huge savings immediately by negotiating reasonable reimbursement rates for non-profit and for-profit Health-Care services and equipment. Assets invested for policyholders by Health Insurance, Malpractice Insurance and Workman's Compensation Insurance would be transferred to the Single Payer in exchange for better coverage.

This might seem a heartless way to end a long-term relationship with your favorite Insurance Corporation and its flocks of friendly employees, but those companies repeatedly move in and out of health care and malpractice markets in an equally heartless fashion, often without harm to themselves, though sometimes they do go broke.

As far as the big picture is concerned, not much new or different is being suggested here. Many insurance markets would remain. And those huge investments made with your

Health Care payments, currently being held in the bond and stock markets to cover your risks as the insured, would simply change their nominal ownership from Health-Care related Insurance Corporations to the Single Payer who thereafter would cover all health care problems including preexisting and genetic diseases.

Naturally, such Insurance Corporation stocks and bonds could not simply be dumped on the market. Rather, the Single Payer, as new owner of all assets dedicated to health care or malpractice insurance, representing all of us, would audit and take early possession to minimize gambling away of value or other thievery.

Based upon discounts negotiated by the Canadian Government, Internet pharmacies are able to sell patented drugs at 50% to 70% below current U.S. prices. Hence a fully empowered American Single Payer could surely obtain all important pharmaceuticals at less than half the price that uninsured American patients currently pay. Additional huge savings would come from not buying drugs deemed unnecessary, risk-ineffective or cost-ineffective.

No need for Pharmaceutical Management Groups

What about the four huge pharmaceutical management organizations—Medco Health Solutions, AdvancePCS, Caremark RX, and Express Scripts? All recently reported large revenues (Medco's 2002 revenues were $33 billion). As mentioned, those revenues include payments for services to drug-makers that these companies would rather not disclose. But regardless of whether those revenues originated from Health Care Corporations or Big Pharma, these pharmaceutical management organizations are very profitable.

As also mentioned, Caremark bought the bigger but less profitable AdvancePCS. And on 6/23/03, federal prosecutors alleged that Medco Health Solutions—a hugely profitable

pharmaceutical management organization which was set up to help health plans find low-cost prescription drugs, had instead pressured doctors to switch patients to medications made by Merck, after Merck bought Medco in 1993.

When accused of providing misleading information in connection with its contract to manage drug benefits for federal employees, Medco responded that these charges were either untrue or reflected old isolated issues that had been identified and corrected. But whether or not pharmaceutical management organizations initially or recently provided ***any*** benefits to health care organizations, Medco still retains 2 cents on each dollar in pharmaceutical sales that it handles.

The point here is that a Single Payer would monitor prescriptions and negotiate its own discounts so it would have no use for such services—whether somehow performed faithfully or crookedly as usual with serious conflicts of interest. Direct savings to a Single Payer eliminating these useless middlemen would be many more billion dollars.

Subsidize generic drugs of proven efficacy. Regulate all health-care-related monopolies. Monitor all medical-care practice outcomes. Cover mental and dental care. Cover proven-effective drug and alcohol rehabilitation programs

A Single Payer might initiate its important new obligation to subsidize essential drugs by approving most of the 325 drugs listed as essential by the World Health Organization, subject to negotiated discounts. Thereafter, it could easily add other discount-negotiated drugs as physicians or Big Pharma demonstrated the need for and efficacy of such drugs.

In addition to requiring proof of efficacy before any candidate drug could be reviewed for the SP drugs list, a Single Payer might also limit expenditures by refusing to list more than one or two comparable ("me-too") drugs unless newer candidate drugs had fewer or less serious side effects, or

greater efficacy, or offered equal benefit at a much lower cost.

To prevent scams, this would be an appropriately open process. A Single Payer should also be required by law to publish important negative information on any drug, whether or not that drug's toxicity or inefficacy was "a trade secret".

Another huge reduction in drug costs will follow when all exclusive licenses on partially or entirely *publicly funded drug discoveries* are automatically opened to legitimate generic manufacturers in exchange for a fair licensing fee.

Only Big Pharma drugs developed entirely in-house without any public funds would remain a monopoly for the duration of the drug patent. However, such monopoly drugs prices would be publicly regulated just as radio, broadcast or cable television, electricity, gas, phone, water, railroads and other natural monopolies are - and then negotiated with SP.

Using just a portion of such savings, SP could greatly reduce current health care costs, yet develop coverage for negotiated dental care and psychological services, as well as drug and alcohol rehabilitation. Since SP would unburden all employers of ever-growing Health Care and Workman's Compensation Insurance costs, the new laws initiating and regulating a Single Payer could also demand one-time offsetting options like higher, irrevocable employer pension contributions, more paid time off, increased worker educational opportunities and—for companies over a certain size—licensed child care with preschool activities on site or nearby.

The computerized SP data base would be open to a fully funded research arm that could design or support inexpensive evaluations by practicing physicians—with guidance from statisticians—of physician practices that appeared unusual or unsound.

In addition to supplying real-time information for quality control studies—and identifying outliers in need of counseling,

retraining or discharge—these studies would reveal which medications and procedures were unproven, unsafe or not cost effective and therefore ought not be offered or reimbursed.

For example, the postulated health benefits that led to postmenopausal Hormone Replacement Therapy being widely recommended over recent decades have now been largely discredited. For it turned out that HRT users had an increased incidence and severity of breast cancer, more strokes and pulmonary emboli, and were more likely to die of Alzheimer's Disease.

HRT users also showed a lower incidence of colorectal cancer and hip fracture, and no change in the incidence of endometrial cancer or coronary heart disease. Nonetheless, some gynecologists continue to promote HRT. So how did this "Selling of a dream and triumph of marketing over science" ever get started? And why did it persist?

Well, according to Barbara Seaman—who wrote "The greatest experiment ever performed on women: Exploding the estrogen myth"—it all began when E. Charles Dodds published the formula for an estrogen in 1938, to prevent Hitler from cornering the sex hormone market through patents. But as it became apparent that estrogen caused breast growth in men and cancer in mice, The Council on Pharmacy and Chemistry declared "it should not be recognized for general use at the present time (1939)."

Nonetheless, "no patent" meant no royalties to pay! "Therefore, a dozen drug companies quickly joined forces to strong-arm the FDA into approving this new biologically active molecule. The first estrogen tablet was approved in 1941. Then in 1942, Premarin (derived from pregnant mare urine) was also approved, and the race was on.

Especially disastrous results followed the widespread clinical use of an estrogen called diethylstilbesterol as a possible way to stabilize troubled pregnancies. Not only did

this totally unproven application cause fetal malformations, but over subsequent decades it led to many cases of a rapidly fatal (otherwise exceedingly rare) vaginal cancer in daughters born to pregnant women who took diethylstilbesterol. So how did Big Pharma respond? Irresponsibly, of course!

Indeed, rather than discontinue these highly profitable, sometimes disastrous treatments, they repeatedly revised their estrogen formulations - hyping each slightly-altered-product as yet another great advance that was even more likely to keep older women from becoming "ugly and unpleasant".

Was lead poisoning another reason HRT became popular?

In my youth, many older women were indeed crabby or worse, but that cohort had the misfortune to live in an environment replete with leaded gasoline, leaded paints, lead solder in water pipes and food cans, and even lead arsenate sprays on apples to deter worms.

But while all Americans thereby took a lot of toxic lead into their bones - absorbing the lead along with calcium that they needed - it was mainly women just beginning menopause who then mobilized much of that lifetime lead burden into their blood sufficiently rapidly so they developed lead poisoning (plumbism) right along with their post-menopausal osteoporosis.

Thus many menopausal females did develop the severe headaches and other symptoms of plumbism including hypertension, kidney disease, crabbiness and possibly dementia. And as Silbergeld et al showed in 1987, postmenopausal women had significantly more blood lead than younger women, even with no additional environmental exposure. Indeed, he reported that blood lead levels may rise as much as 25% in the five years after menopause.

So was it the legitimate problem of plumbism mainly causing problems for menopausal females that helped Big

Pharma peddle their estrogens? For when HRT slowed the rate at which older women lost calcium and developed osteoporosis, it also would have slowed the release of lead and thereby brought some relief to many lead-poisoned menopausal females.

the following quotes are from Wikipedia

Lead arsenate was the most extensively used arsenical insecticide.

Until 1930s-1940s, lead arsenate was frequently prepared by farmers at home, by reacting soluble lead salts with sodium arsenate.

As an insecticide, it was first used against the gypsy moth in Massachusetts, as a less soluble and less toxic alternative to then-used Paris Green. It also adhered better to the surface of the plants, further enhancing and prolonging its insecticidal effect.

Lead arsenate was widely used in Australia, Canada, New Zealand, USA, England, France, North Africa, and many other areas, principally against the codling moth. It was used mainly on apples, but also on other fruit trees, garden crops, turfgrasses, and against mosquitoes. In combination with ammonium sulfate, it was used in southern California as a winter treatment on lawns to kill crab grass seed.

Lead arsenate was also used in the early part of twentieth century for controlling pests of cranberry (fireworm, cranberry girdler) in Massachusetts.

Basic lead arsenate, Pb5OH(AsO4)3, was used in some areas of California.

The search for a substitute was commenced in 1919, when it was found that its residues remain in the products despite washing their surfaces. Alternatives were found to be less effective or more toxic to plants and animals, until 1947 when DDT was found. The use of lead arsenate in the USA continued until the mid-1960s. It was officially banned as an insecticide on August 1, 1988.

Morel mushrooms growing in old apple orchards that had been treated with lead arsenate may accumulate levels of toxic lead and arsenic that are unhealthy for human consumption.

Under these circumstances, Big Pharma Corporations hired the same public relations firms that so skillfully diverted public attention from tobacco health issues. Further formula and dose revisions were heavily hyped to gynecologists and the public on flimsy evidence for the next five decades. In 1994, estrogen manufacturers even claimed that studies showed estrogens could prevent Alzheimer's Disease.

It is true that one study did reveal that a group of older women on estrogens had one-third less Alzheimer's than a

comparable Alzheimer group that reported rarely taking estrogens. But when physicians actually checked pharmacy records, they found that both groups had used estrogen equally—the Alzheimer patients just didn't remember.

A responsible Single Payer would surely want to evaluate indications and follow-up data on new or unproven therapies in close cooperation with the FDA *before* these could be widely sold or given Single-Payer support (see Evidence from randomized trials on the long-term effects of hormone replacement therapy, Lancet, Sept. 21, 2002 pp 942-44).

As mentioned in Chapter 11, 25-60% percent of the approximately 1.6 billion prescriptions written in the USA each year involve off-label uses. Quite possibly, a nationwide survey of physicians and prescriptions to tabulate and computerize all such usages would become a compendium of additional useful treatments for troublesome conditions, as well as a monument to failed ideas.

Request and reward cost-effective health care ideas

With no other entity to share the blame, a Single Payer would be under great pressure to improve early analysis and corrective measures for cost control and ensure safer, more effective care. Most physicians would likely respond to SP requests for useful insights on important health care problem areas in their own experience.

How did health care become so expensive? Why did computers and automobiles become better and relatively cheaper while medical care became ever more costly and impersonal? Is it simply the inefficiencies implicit in one-on-one care? Or does it reflect a lack of effective competition?

Can we make medical care more widely available and affordable for all without reducing the best quality care currently available to a select few? Might there be easily instituted positive incentives that would elicit better care for

most Americans at lower cost? Is it possible that many failings of our current medical care system reflect positive feedbacks from perverse incentives?

Since being admitted to medical school in 1953, I have watched medicine change from respected individual primary caregivers with limited options for therapy or referral, into organizational care with almost unlimited access to new specialties and therapies that may brilliantly restore your health or waste all your money and ruin your health and life.

Promote healthy life styles for all ages; Provide competent on-line education in human biology; Encourage self-care: ***Convert All Government Subsidies or Rebates for Corporations into Public Ownership Interests.***

A Science editorial (7 Feb. 2003) on "The ironic politics of obesity" by Marion Nestle offers a fine summary of the current obesity epidemic in the USA. People use extra income to eat more and be less active—spending more time sitting in their cars for short trips (rather than walking or bicycling) or before a television or computer.

Most American adults are overweight. Our food supply provides 3800 kilocalories per person per day, nearly twice as much as is needed by many adults. Food companies compete through advertising, providing larger portions and campaigns directed at children. Nestle points out that almost every major American industry would suffer if people ate less food or became more active.

Consequently, our agriculture, food product, grocery, restaurant, diet and drugs industries all employ armies of lobbyists to discourage our Government from doing anything to inhibit overeating. "The Department of Agriculture's primary mission is to promote U.S. agricultural products ("eat more") but it also issues advice about diet and health (sometimes meaning "eat less")" . . . which accounts for "the

confusing nature of the USDA's food guide pyramid."

At present, litigation is the only way to confront obesity promoting practices of food companies. Professor Nestle's hope for political progress in confronting the food industry rests on getting important changes in campaign contribution laws and giving a "Government Agency—independent of industry . . . clear responsibility for matters pertaining to food, nutrition and health."

It sounds to me like Nestle is talking about a big agency with a lot of clout and significant financial independence. The proposed Single Payer would seem to fit that bill, especially as it would have treatment and payment responsibility for all the extra heart disease, diabetes, stroke care, stomach surgery, joint replacements, and other disabilities that obesity engenders.

One estimate suggested obesity cost the US economy $117 Billion in 2000 (see Childhood obesity: public health crisis, common sense cure Lancet, Aug. 10, 2002 473-82). Another study "pegs 2003 medical costs from conditions linked to excess weight at $75 billion" (see Inflammatory Fat, Science News, Feb. 28, 2004 pp 139-140).

Presumably a Single Payer might save anywhere up to such amounts by helping people eat sensibly. As for what sorts of pressure the food industry can apply, consider its response to the new guidelines by the World Health Organization and the international Food and Agriculture Organization on nutrition and exercise published on April 23, 2003.

The WHO/FAO study, compiled by 30 independent experts, recommended a fat intake of 15-30% of total daily energy intake; saturated fat at less than 10%; carbohydrates at 55-75% but free sugars below 10%. The recommended daily intake of iodized salt was under 5 gm/day; protein should be 10-15%; and fruits and vegetables should be at least 400gm.

Finally, the report recommended walking or similarly

intense exercise for an hour each day (see Lancet, April 26, 2003 p1442—which also has a brief note about the beneficial impact on hypertension of eating more fruit and vegetables). Well, the US Sugar Industry (Big Sugar) immediately demanded that Congress cut all funding for WHO unless it revised the new rules for healthy eating.

WHO insiders called this "blackmail worse than the response of the tobacco industry". And those sugar folks supported their tantrum with an Institute of Medicine report that allegedly insisted 25% of food and drink calories could come from sugar. But the WHO has 23 national reports that all support the 10% limit on sugar, so perhaps we cannot rely upon IOM's "independent" analyses of anything.

Anyhow, the Sugar Association, along with a coalition of major "food" groups that includes Coca-Cola and Pepsico, also asked US Health Secretary Tommy Thompson to get the WHO report withdrawn. Nowadays, many poor countries produce sugar so cheaply that Big Sugar cannot survive without ongoing heavy infusions of your hard earned tax dollars.

Naturally, some of those subsidies are then spent on lobbyists, lawyers and political contributions as our politicians might otherwise decide to stop harming America's poorest trade partners, damaging the Everglades, promoting obesity and destroying our teeth.

Should it be illegal for subsidized industries to lobby Congress with our tax dollars? A subsidy is "a grant or gift of money from a government to a private company, organization, or charity to help it to continue to function."

In theory, a subsidy allows or encourages a struggling individual or Corporate entity to provide essential charitable services—or to pursue an essential research program—or gives it time to modify an outdated business plan—or helps it to maintain an unprofitable but essential research or production capacity (e.g., for vaccines, or items essential to

National Defense).

However, in practice, ongoing subsidies to Corporations usually support outmoded or inefficient or otherwise non-competitive businesses or industries like Big Sugar. The usual result is a gross misallocation of resources and that bi-directional political-corporate dependency known as *corruption*.

Corporate subsidies generally transfer cash from Government coffers to politically powerful but failing industries, and are now our most costly welfare program. For example, legislative mandates and price supports for using ethanol as an oxygenated gasoline additive include huge subsidies to mega-Corporate farms and giant Corporations like Archer-Daniels-Midland that routinely return regional votes, political contributions and personal favors for politicians.

Though a little ethanol may help fossil fuels burn more cleanly, mandating more than that doesn't seem sensible—at least yet—since it currently requires about as much fossil fuel energy to produce ethanol as ethanol then releases upon ignition in an engine. And when fossil fuel spills, any (oil-and-water-soluble) ethanol present will encourage that fuel to spread into nearby aquifers and surface waters.

In summary, ongoing governmental subsidies and rebates undermine international markets, encourage misallocation of productive assets, sustain uncompetitive uses of land and products, and damage the environment. ***It takes huge political contributions and other bribes to sustain stupid subsidies.***

Yet rather than being grateful, the wealthy Corporations that depend upon and are empowered by our tax dollars, become demanding, politically powerful paymasters. Subsidized industries thrive on Corruption and Crony Capitalism. Therefore, any subsidy deemed temporarily essential to a for-profit corporation should face an early expiration date with no option to renew.

When our Government subsidized Chrysler to help it stay in business, it acted as a venture capitalist—receiving Chrysler shares that it later sold for a profit. Similarly, if subsidies to a profit-making Corporation or other entity persist for over two or three years, the total subsidy amount should automatically convert into a full-subsidy-value citizen buy-in or ownership stake.

A Single Payer could save truly enormous sums by developing and promoting effective drug and alcohol programs and lobbying for total elimination of alcohol and tobacco advertisements (or sales) to minors. For minors currently account for about 20% of all alcohol and tobacco sales (see also Lancet articles July 26, 2003 pp 258-9, 281-5, 304).

Minors may stunt their later cognitive development when they drink alcohol. And cigarette manufacturers have long understood that minors are far more easily hooked on tobacco and other drugs than adults (since brain development is incomplete into the early 20's)—and see Aaron White's www.duke.edu/~amwhite/ adolescence.html and www.duke.edu/~amwhite/blackouts.html

In New Scientist (22 Feb. 2003, p25), Professor Nestle suggests ways to make the food supply safer that could save a huge number of Americans from food poisoning each year, as well as protect our food supply from bio-terrorism. Once again, the food industry is opposed. But as investigations of a "Mad Cow" in the Pacific Northwest amply demonstrated, we desperately need a governmental organization that will investigate, stand up to, and regulate the food industry and its cleanliness. "All it takes is political will, some basic intelligence, and relentless testing." ***Sounds like the call for Single Payer!***

CHAPTER SIXTEEN
Are Wealth and Happiness related?

Enough beats too much. Wealth and happiness may be incompatible. A great medical career neither needs nor justifies a huge reward. Must it always be wealth versus happiness? ***Complementary currencies*** *enhance prosperity and happiness. Building social capital with complementary currencies.*

Enough beats "Too Much"
A house that warms in winter
yet opens wide for spring
a summer house and loving spouse
is there some better thing?

A harvest house with food to share
where children like to be
Some space for books in quiet nooks
and conversations free

Yet many who could have all that
prefer to seek more power
their lives on hold while assets cold
make money every hour

But all need love and love's a thing
that's neither bought nor sold
for love takes time and time runs out
on even wealth untold

Sweet time that's spent in discontent
can never be repaid
While others try to rule the sky
I'd rather just get laid

Wealth and Happiness may be incompatible

Patients don't benefit when procedural physicians making millions become more concerned about investments than remaining up-to-date or treating others as they themselves like to be treated. Many of our local specialists own several airplanes. One medical couple has five luxury Houses around the Globe, but quite possibly no Home.

Too much remuneration is a distraction from enjoyable patient relations in a medical practice. The well-known over-justification effect—first demonstrated by Lepper, Greene and Nisbett in 1973, and repeatedly confirmed since then—says that when there is more than ample justification for engaging in an activity (e.g., medical practice) because (a) it is intrinsically rewarding and (b) well remunerated, people tend to lose focus on reason (a) because reason (b) is much more apparent.

In the original study, Lepper et al found that children who were promised a gold star (bribe) if they did a good drawing, later showed less interest in drawing than did kids who unexpectedly received a gold star (reward) for having made a good drawing.

So while all received a star, apparently those who worked for a bribe concluded that they needed the star to perform because they actually didn't like to draw that much (see "Undermining children's intrinsic interest with extrinsic reward: a test of the Over-justification hypothesis," J. Personality and Social Psychology, 28, pp129-137, and also "The hidden costs of reward" by Lepper and Greene, pub. 1978,

These findings on the impact of bribes appear to justify Marianne's long-held position that children tend to lose interest and do worse in school when parents bribe them with money to improve their grades. For the common childhood interpretation of being bribed to perform is that the student is

learning or working just to please or benefit the parents.

Marianne also speaks against the use of food for reasons other than the satisfaction of hunger, since holding dessert hostage, or offering extra dessert as a bribe to eat your carrots or finish your homework, simply encourages the consumption of sweet and fatty foods for non-hunger reasons in later life.

Now think of all those health care workers who devote their lives or holidays or retirements to volunteer work in mission hospitals, or to Medecins sans frontieres. Here we encounter skilled persons who willingly labor under arduous conditions for minimal compensation. Note that these volunteers especially treasure "the simplicity of that life, and the intrinsic rewards of bringing essential medical care to those with no other options."

Do you envy those who perform surgery where housing is poor, electricity occasional, water polluted, biting insects bring hazardous diseases, equipment ancient, and personnel inadequate or untrained? Can you imagine how such a life in an area with dangerous civil unrest could possibly be simpler or more rewarding than undertaking far more efficient lifesaving efforts in your usual clean modern hospital?

If so, you can also understand why the crass commercial transactions of First World Health Care Systems so often dominate, depersonalize and damage the comradeship that otherwise arises when people make great efforts to help one another. For when patients must first navigate complex insurance forms - then satisfy office rules demanding prepayment - care-givers inadvertently distance themselves from the joys and sorrows of shared goals and common concerns.

Throughout my 18 years in practice, I routinely charged "Insurance only" even though this eventually became illegal (see Chapter Seven). Soon I also dealt with the issue of shared concerns and common goals in my preoperative discussions by

promising each patient and any family that if she or he was unsatisfied or died, I would refund any insurance or other money received on their account to them or to their Estate - in essence, an ordinary warranty—“Satisfaction guaranteed or your money back”.

Thus I preempted any unspoken concern that I might need the operation more than my patients did, or that I would benefit even if they didn’t. Though I never tried to hide nor make an issue of my insurance only or refund policies, at least one wealthy doctor expressed annoyance because patients might expect the same from him. Surprisingly, his concern had some merit, because diagnosticians are less likely to become a focus of gratitude than a patient’s surgeon.

Our insurance-dominated fee-for-service model of medical care often results in inadequate, delayed or denied medical care. Yet many physicians fear that a Single Payer system, often derogated as Socialized Medicine, might detract more from the doctor/patient relationship than the "justified rewards" their offices currently extract for jobs done.

Yet soldiers, firepersons, paramedics, police and many others, regularly risk their own lives to rescue others. And their skilled services are usually taxpayer-funded through some Governmental Agency. Hence we already have Socialized Soldiers, Socialized Firepersons, and so on. Although these workers commonly consider themselves understaffed, underpaid and overworked, there are always other citizens who claim they cost too much or their services were ineffective or too slow.

Nonetheless, few on either side of that debate would insist that desperate applicants-for-help fill out multiple forms and/or pay in advance before a well-trained team will initiate an appropriate response to a foreign attack—or a house on fire—or a drowning—a heart attack—a kidnapping—a robbery—or a rape-in-progress.

By law, hospital-based emergency medical care is available to all in most areas. But as mentioned, for the poor and uninsured or inadequately insured (which at times includes a quarter to a half of our working population), that care is often brief, insufficient, substandard and unsuccessful.

A Government-supported Single Payer medical system would likely do better – which is why Chapter 15 and the Epilogue consider the Single-Payer idea at length. Hawaii has a mandatory-health-insurance-based medical-care program that deserves careful study. And our National politicians and judiciary have long enjoyed essentially free medical care through their separate Socialized (Government-run) program.

As was mentioned, the main opponent to a Single-Payer-Program-For-All-Health-Care has been our Medical-Industrial-Complex. Yet many health care providers now believe that a *Single Payer could help return compassion, equity and intrinsic rewards to our currently money-grubbing Health Care System.*

Think of it this way. "Strictly business" attitudes undercut important interactions. Central heating and TV dinners do not encourage the easy conversations and new relationships, those memorable tales shared between generations and with others who were strangers—the way a large stew pot does as it simmers on a old wood stove.

Nor can TV simulate the calm camaraderie that envelops those watching food roast slowly on an evening campfire. That may be an important part of why so many physicians volunteer their services overseas in search of a more meaningful professional life.

Patients can sense from a physician's body language - through helpful hands-on assistance versus never putting down the clipboard - whether she or he truly cares about them or merely wishes to close another transaction. I have often felt physically and mentally joined to extremely ill patients while holding them up so they could cough or breathe and just

survive the next moments.

Sometimes such a non-verbal burdens-shared approach is essential to elicit yet another huge effort from a weary patient in pain who is ready to give up. Every good physician or nurse has seen what such a sharing of concerns can achieve.

On the other hand, as an unpaid extern, I was properly embarrassed when, in my effort to "bond," I casually sat on an arthritis patient's bedside, hence accidentally on his sore foot which came off his knee at an unexpected angle under the covers.

Similarly, as a doctor in practice, and later as a teacher, despite being there to help, I regularly embarrassed myself by various things said or not said, done or not done, in my many interactions with my patients or students.

But everyone makes mistakes - and the more you do, or try to do, the more mistakes you must make. And unless you wish to live unoccupied as a hermit, *that's life!* So when you publicly goof, just admit it, and restate what you meant to say or apologize, if either seems appropriate.

In any case, the more money we make, the more we worry about making more or not losing what we have. An old song goes "The folks with plenty of plenty, they got a lock on the door, afraid somebody will come and rob 'em while they're out a' makin' more. What for?"

As Alaska's only heart surgeon (hence competing largely with myself), I cut my supplementary charges for additional coronary bypass grafts by 20% when I began making more money than I needed. But I must also confess that, as the song suggests, after three break-ins while I was "out makin' more," I finally signed up for an expensive lock on the door (home burglar alarm system).

Wealth-accumulating physicians become increasingly conservative as they seek moral comfort in blaming the daily problems and worries of the poor on inadequate effort and

sacrifice. A surprising number of wealthy physicians won't even pay college education costs for their own children.

Rather, having "made it on their own" (an obviously untrue claim as that is impossible), they would rather grow their own wealth while encouraging others to copy their great virtues ("dumb luck"). *Consistent generosity* (giving what you can according to need, rather than when you happen to feel like it) *is so difficult to achieve that it is best taught by example.*

As refugees, my parents rightly considered themselves extremely fortunate to have been accepted into this great land. They worked hard to uphold all that was good in their adopted country, and viewed education as the best cure for narrow-mindedness. They especially understood the importance of timely help for those in need—even while my mother still scrubbed our laundry on a washboard.

But everyone, no matter how wealthy, needs real help occasionally. And every reasonable opportunity to assist others through your companionship, abilities or money—in order to advance their education, help them cope with personal problems, or regain a productive life—makes both of you feel better about yourselves and others, and even makes the world "better". Those who regularly help others may even live longer.

A great medical career neither needs nor justifies a huge reward

In 1900, a physician's annual income was $750-$1500 or slightly below average for the entire workforce. In 1928, physicians averaged $6,354, which fell in 1929 to $3,758 with the onset of the Great Depression. In 1945 it was $8,000, and in 1969 it was $32,000.

Currently an average physician makes 4 to 10 times the average national income, depending upon the specialty (see Bulletin of the American College of Surgeons, March, 2003, pp11- 12). Marianne and I believe that all health care workers and their patients would benefit greatly if everyone (including

fee-for-service doctors) knew from the start that they would never earn more than a good (productivity and outcomes related) salary.

Perhaps one day soon, remuneration for physicians will simply reflect years in training, competence and productivity. That salary could still be several times the wages of an unskilled worker, and might best be determined by negotiation (just as present salaries are established for unionized government employees).

Upon graduating from medical school, Marianne and I considered it a great honor and responsibility to practice medicine, whether we were "busy saving lives" or simply helping others cope with illness or disability. And while I have often cursed when called away from another family dinner or rushing off at midnight to deal with an emergency, we did our best for each person who apparently needed or sought our help, whenever we could make any real difference.

We believe that most physicians feel the same way—especially recent graduates and those not yet seduced by excessive wealth. We also suspect that plenty of talented people will continue to view medical work as a rewarding career—perhaps even more so if they know from the start that they cannot thereby become extremely wealthy. Certainly, low pay never stopped motivated folks becoming veterinarians.

We also suspect that initially kind and generous doctors are more likely to remain that way if not over-burdened by education-related debts. And as mentioned, we are truly impressed by how many health care workers devote their lives or vacations or retirements to providing needed medical services for those unable to pay.

Indeed, it might be better for all patients (all of us), and for the reputations of physicians in general, if those pursuing great wealth went into banking (where they soon learn "the price of everything, and the value of nothing"), or joined Wall

Street firms, or started their own businesses, or concentrated on sleazy deals with greedy politicians, or whatever.

I don't know anyone who has been quite wealthy for long, who seems truly content with a money-dominated, often "gated" existence. Too much money is an impediment and a distraction. And the pursuit of great wealth easily becomes a consuming addiction.

Yet unless you can display it, being rich means nothing. Those who can afford almost anything are rarely content for long with anything they can afford. One very good surgeon who grew up in poverty, upon finally becoming wealthy, triumphantly declared he would never again need to ask anyone for anything.

He remained very generous to all who had helped him when he was in need, as well as to those with whom he worked, and took great pride in giving his wife whatever she wanted. But being wealthy and unsophisticated and unwilling to seek help for poorly comprehended personal problems, made him a juicy target. Soon enough, a scheming nurse prospered mightily by destroying his marriage and his life.

So I repeat—at some point in their lives, everyone needs assistance or advice from another trusted human in order to deal effectively with personal or health problems. For when our pets, teachers, friends and families are not enough (or too much), we all depend upon and greatly appreciate help from competent, caring fellow humans.

I have always been impressed by how many competent and caring people there are in these United States, and how few unpleasant jerks (though the latter are often too obvious). When I have personally needed help, my experiences have routinely been very positive. Of course, this is anecdotal evidence, and I am aware that many others have had truly terrible experiences they did not survive to relate.

In one typical experience as a teenager, my motorcycle

died, as usual, at least one hundred miles from any town in Wyoming. As I struggled to right the problem with inadequate tools, a car stopped and the driver—who identified himself as a mechanic—offered to help. Then he pulled out a heavy tool chest while his wife and kid spread a tablecloth on the ground and insisted that I share their delicious fried-chicken picnic.

An hour later, my new best friends and I parted company with my bike repaired and my tummy full. He refused money - of which I obviously had little. And his parting request was one I have often heard in rural communities and even cities, and have repeated on occasions myself where I was able to help— "Just lend a hand to someone else".

On another trip, I was motorcycling at night in flattest Ohio through the most impressive lightning storm I had ever seen. It goes without saying that I was totally drenched and generally the tallest object around. I stopped late at a small motel. The owner apologized but said all her rooms were full. So I inquired if I might sleep in the barn. She said "No!"

Then, after a moment's hesitation, she invited me to sleep in her son's bedroom, as he was off to college. And the following morning I received an amazing free breakfast.

More recently, Marianne slipped on crowded, wet subway steps in New York City, which caused her to lose and dump her suitcase. Two separate strangers immediately stopped— helped her recover her scattered possessions and repack— then assisted her down to the subway level so she wouldn't screw up again. And I suspect all of you have had similarly positive experiences.

Must it always be wealth versus happiness?

Happiness is an elusive concept. So is wealth. Yet we know them when we see them. And once they can enjoy a decent environment in which basic needs are met, most free and law-abiding humans seem happier if they have meaningful

work, love and fun.

Here meaningful is a purely personal call that might include anything from accounting with an abacus to child care, farm work or a quiet janitorial job that supports your family and allows you to be a weekend DJ—to military service, selling software and volunteer activities, or playing a zither at the zoo.

Indeed, Marianne recommends work, love and fun as the "Big Three" of happiness, though one cannot be sure whether happier people are more likely to have the Big Three or the Big Three define the route to happiness.

An old song claims that "The best things in life are free!" But it takes insight, preparation, flexibility, persistence and LUCK to get, modify and sustain a satisfying job or marriage. In these changing times, one also needs to develop the common sense to recognize a dead-end situation and the courage to know when it is time to retrain or move on.

Those without a decent education or a strong work ethic often call it luck when others succeed while they still await the perfect job. Similarly, many may seek and even demand a perfect spouse despite personal imperfections that would prevent any "perfect person" (who can exist only in theory) from giving them a second look. Not surprisingly, the few persons who really do strive for personal perfection (the theoretical state mentioned above) will surely become "perfect pains" for many others.

Marianne and I consider a perfect spouse to be the one whose shortcomings are tolerable and sufficiently different from your own that together you both will be happier and more productive than either would be separately. The many short and unhappy romances of famous people suggest that a relationship cannot prosper and endure unless we value each other on more than "good looks" or "looking good on paper".

For all people are annoying and unreasonable at times—yet the rich or famous or self-intoxicated or drunk, generally

feel they don't have to put up with annoying and unreasonable. But being annoying and unreasonable often represents an emotion-driven declaration of what one party in a relationship currently understands or will tolerate.

In other words, staying in love requires two people who both like and enjoy each other sufficiently to make huge ongoing efforts and sacrifices for one another. Temporary fun is sometimes had for free, but ongoing fun usually requires good relationships, patience, tolerance, careful organization and shared tastes so that those involved will want to repeat the experience.

Many cannot understand why exciting love and fun just show up, then too soon fade away in the absence of a major ongoing effort. As a result, even with conditions otherwise adequate, countless adults settle for just one or two of the Big Three, plus a dog or cat—and thereby lead less fulfilling lives.

In addition, those physicians who, for whatever reason, come to depend entirely upon their medical work for gratification, may become increasingly unhappy and greedy as they seek to offset their ongoing lack of love and fun with a yearly increase in income and net worth.

"What do you do?" ranks high amongst questions asked of strangers. As a surgeon, traveling alone and hoping to read or write, I often answered "meat cutter" or "garbage collector" (either was more or less true), thereby avoiding tedious conversations about headaches, hemorrhoids and hospitals. For most air travelers cannot relate to a meat cutter or garbage man (though one militant conversationalist kept trying to discuss relative merits of different cuts of beef).

As mentioned, much of human happiness or unhappiness arises from the presence or absence of "meaningful work" which usually involves sharing, learning and teaching—in other words, social intercourse among equals. Yet great wealth tends to isolate a person from ordinary human contact. For

wealthy people generally feel entitled rather than equal.

So despite their own obvious faults, they demand 100% effort and perfection from others. Most persons with whom the rich relate, simply fake perfection for as long as is tolerable or necessary. Because few meet their standards for long, the rich are chronically disappointed and dissatisfied. They want more, and worry constantly that they are being cheated, overtaxed, or even slighted by those not currently seeking money from them. Quite often they don't sleep well either.

Rich folk are makers—breakers—shakers—above the rules. They avoid or sacrifice privacy and communication at home by hiring others to cook, clean, shop, serve and bring up the children. They compete on appearances and become paranoid about relationships. They feel unfulfilled and unappreciated at home, but extramarital solace rarely satisfies for long either.

Early on, Marianne and I independently chose to have just one home and just one love, and to otherwise keep our lives as uncomplicated as possible. Even so, I have been impressed by how easily the care and maintenance of ordinary possessions can take over one's free time. Hence we get rid of possessions that take more than they give us through use or pleasure. Donating items to a charity or young friends is usually simpler and more satisfying than selling them.

One might think that a physician has the perfect job. After all, she or he gets paid for helping others who remain grateful forever. Right? But sometimes the patient's needs or demands seem endless and unreasonable, or they cannot be met, or the doctor never gets to enjoy a quiet evening at home with the family. And since a doctor's own family disputes or problems often seem less urgent than patient care, family problems frequently end up "on hold" (without the annoying music) for another day.

Unfulfilled physicians seek solace in wealth, or in

frequent changes of spouse or partner, or through domination of patients, or by ruling over others as program directors or administrators (a small alumni survey recently found that 30% of middle-aged physician respondents were considering a career in Medical Administration).

Academic physicians frequently become absorbed in medical politics. Too often, doctors lose touch with their increasingly dissatisfied inner self, or try to subdue it with alcohol or drugs. Generosity suffers and fees rise when physicians see their own lives passing without pleasure while their families may increasingly be taken for granted.

In this and many other respects, Marianne and I were lucky. We usually made enough money to be comfortable but not enough to require significant attention. And as our children matured and developed insight into family finances, they naturally sought rewarding careers of their own rather than waiting to inherit wealth that wasn't there.

As the only, hence unquestionably the best heart surgeon in Alaska (at least until I advertised for competitors), I had just myself to compete with, so I set the standards. At the time, Medicare, Medicaid and insurance rules let physicians charge whatever they wanted upon entering practice— but thereafter disallowed most fee increases. Consequently, heart surgeons entering practice after me apparently charged *two to ten times more than I did for the same services*. But as far as I know, those differences never altered patient referrals in any way.

On the downside, I had not planned to retire at age 51, and had no retirement plan nor savings of note, when I suddenly had to stop work. However, our home was paid off and we owned a small unprofitable (I had no time to manage it) farm where our sons worked part-time in summer.

Only because Sarwar generously bought my practice, was I able to pay my remaining taxes and quit. Eventually the farm sold and became a popular tourist attraction—the Musk Ox

Farm of Palmer, Alaska.

An article, “Does money buy happiness?” (The Atlantic Monthly, Jan/Feb. 2003, pp42-3) offered an interesting summary of recent studies on happiness, including surveys of happiness in 54 countries. Overall, “political freedom, physical safety and a belief in God were strongly associated with happiness. Societal corruption and militancy appear to diminish happiness greatly. Education seems to have practically no effect . . . the only unhappy (countries) . . . are in the old Eastern bloc.”

Three conclusions were particularly relevant to our topic. People in poor nations become happier as average incomes rise—until average incomes reach $20,000—beyond which higher incomes don’t improve happiness. Social ties are often strongest were money is scarce. Apparently, somewhere above $20,000, gains in material comfort no longer outweigh losses in social connectedness.

People who value money highly tend to be less happy than those who value love. It usually takes a life-long self-loving effort to become very wealthy. And few may even notice that indeterminate goal as they rush past. Furthermore, the Weak Golden Rule—“He who has the gold, makes the rules”—frosts both sides of every transaction.

Similarly, it usually takes a life-long self-serving effort to create and sustain a happy family, but caring spreads as the Strong Golden Rule - “Treat others as you would be treated” thaws both sides of every transaction. Yet there is no way to guarantee performance or success in either effort.

The overall amount of *normal* currency in circulation must be limited, or it loses value. So if you take more, others have less. In contrast, see "Complementary Currencies" below. Of course, love shared expands without limit and increases in value. Choose one!

Americans are increasingly materialistic, but not happier.

The Western notion of progress was shaped during a century-long period when rising wealth almost certainly bought rising happiness. Only recently have we left that era behind—and our society has not yet adjusted. Conditioned to value financial achievement, we may cling to materialism even as it makes the contentment we seek elude us.

Complementary currencies bring prosperity and happiness

Where there are people who want to work and jobs that need doing, but no money to pay anyone, it makes sense to create local money. As Bernard Lietaer points out in "The Future of Money - Creating New Wealth, Work, and a Wiser World" (pub. 2001), money is an agreement within a community to use something as a means of payment.

Conventional money is created as debt to a bank. It is limited in supply and bears interest, so people must save, compete and work harder to avoid ever-deeper debt.

In contrast, negative interest money, being freely created, encourages cooperation and reciprocity, Lietaer writes, *and "functions more like gift exchanges in traditional societies".*

Having money that is local, even if it doesn't bear negative interest, can help build and protect communities. Our most famous example is the "Ithaca Hours" currency, designed to encourage community building in the town of Ithaca in upstate New York (discussed below).

Local currencies won't change the world on their own. But with several different types of money working in parallel, including negative interest money to deal with international trade, money would take us naturally where we want to go" says Lietaer. "If you need regulations and coercion to get what you want, the system has a design flaw" (quoted in part from New Scientist, 27 April, 2002).

Problem One: Our Nation's jobless future

Sixty years ago, pundits predicted that robots, automation and unlimited atomic energy would soon make all nations wealthy, eliminate tedious grunt work and provide life's necessities at negligible cost. As far as the average worker was concerned, that future couldn't arrive soon enough.

But at the time, John Maynard Keynes predicted that "no people... can look forward to the age of leisure and abundance without dread. It is a fearful problem for the average person with no special talents to occupy himself, especially if he no longer has roots to the soil or in custom or in the beloved conventions of a traditional society."

And Norbert Weiner warned "The automatic machine is the precise equivalent of slave labor. Any labor that competes with slave labor must accept economic conditions of slave labor... this will produce an unemployment condition in comparison with which ... even the depression of the thirties will seem a pleasant joke."

In "The Future of Money" (on which this review is largely based), Bernard Lietaer discusses the Nature, Purpose and Distribution of Money. *Lietaer (who helped to design the Euro and was* ***the world's "top money-making currency trader"*** *for four years)* claims that *as we lose employment possibilities, our sense of self and individual purpose will be at stake.*

Population facts:

For countless millenia, probably fewer than 400 million humans lived on Earth.

At some point between 1800-1850, Earth's population reached 1 billion.

Then in 1925 it reached 2 billion.

In 1962, 3 billion.

In 1975, 4 billion.

In 1986, 5 billion.

In 1999, 6 billion.
By 2012, 7 billion humans.
By 2030, one of every four persons in developed economies will be over 65.
By 2050, expect 10-12 billion humans, many of them elderly.

Productivity facts:
Since 1800, the substitution of fossil fuel power for people and animal power has allowed individual humans in developed lands to multiply their productivity 20 times.
In 1800, 80% of U.S. citizens lived on farms.
In 1900, 48% of Americans were farmers.
In 2000, just 2.9% of our population produced far more food than Americans could eat. That food - and surplus European food - was dumped overseas, bankrupting farmers around the world.

By 2030, an International Metalworkers Forecast predicts that 2% of the current world labor force will be able to produce all goods needed to meet total demand.
So what will the other 98% do?

Problem Two: The current jobless recovery

Though America has more millionaires and billionaires than ever before, we now face a national post-recession jobless recovery with millions of good jobs gone permanently. Some of those jobs vanished due to increased productivity, others went overseas and will not return.

Consequently, through no fault of their own, a lot of decent, hard-working folks have already lost their jobs and health insurance, gone bankrupt and even become homeless. Many unemployed workers no longer even look for work - others slave under ceaseless pressure and become workaholics.

Some claim that globalization means everyone applying

their talents, energies and resources to enrich us all. Others view globalization as a beggar-thy-neighbor race to the bottom. *Both descriptions are apt.*

At a time when developed nations face $35 trillion in unfunded pensions, and a similar shortfall for health care, Business Week (3/22/04 p37) wonders what "Next Big Thing" might restore job growth.

Robert Kuttner (American Prospect, 4/2/04 p3) worries that the long anticipated jobless future is upon us, in which case, we will need thousands and millions of "next small things" to help local citizens participate in their communities productively.

If we rephrase Kuttner's problem as a question, a solution may become more obvious: ***Must we always compete with one another for money, just so a connected few can dominate the poor majority? Or is there some way we can modify money so that it promotes local jobs and businesses and brings our communities back together?***

Countless Americans have relocated in search of a decent job. An obvious downside of recurrent labor mobility is losing the social safety net of family and long-time friends. Since families are more likely to prosper as an integrated part of a stable community, we need to dissect the nature and role of money in sustaining a local economy.

In "The Natural Economic Order" (4th ed. 1918), Silvio Gesell - a successful businessman in Europe and Argentina before World War I - pointed out that ordinary money can be saved intact and reinvested whenever and wherever an opportunity arises to earn interest.

This gives money a huge advantage over other goods and services - for potatoes or empty rentals or unused idle hours of unemployed workers are strictly declining assets. As a result, during every recession, money is simply withdrawn from the market as elective expenditures stop in anticipation of hard

times or bargains ahead, while unemployed workers go broke and unsold potatoes are dumped.

To remedy this negotiating imbalance, Gesell advocated that all holders of currency pay negative interest - like the demurrage charges assessed against users while a railroad car remains idle on a siding. With such regularly incurred charges, money would naturally remain in circulation through good times and bad, rather than being withdrawn and hoarded, and thereby worsening each recession.

The Industrial Revolution required interest-earning currency so that innovative individuals could make the necessary huge investments. But negative interest currency has great advantages under the present circumstances since it is better suited to stabilizing the economy, the environment and the community.

And when it is used to supplement a national currency, negative interest money has no obvious downside since - unlike ordinary interest-earning currency, which worsens boom and bust cycles - negative-interest complementary currency tends to increase or decrease in a way that evens out business cycles without altering inflation.

Hence Gesell proposed that a distressed community or region could put the unemployed back to work - and restore local productivity and liquidity - by issuing monetary coupons that declined in value like other assets.

As mentioned, this local coupon money would lack the unique power of ordinary interest-earning money to cause the usual boom-and-bust cycles that occur when people save or spend in anticipation, or in response to, the postulated or actual dealings of others.

For while each coupon could be used to pay for a variety of goods and services (potatoes, rent, transportation, school crossing guards, neighborhood patrols, home or car repair, pedestrian overpasses, road/bike/walkway maintenance and

so on), a weekly or monthly ***tax stamp*** (its proceeds dedicated to homeless shelters, soup kitchens, food banks and child care) would have to be purchased at City Hall and pasted upon each coupon to restore its face value before it could be spent. So to avoid buying tax stamps, coupon recipients would spend them as soon as possible.

So how did Gesell's idea work out? Well, in 1932, during the Great Depression, the Austrian town of Worgl "had thousands out of work and little money in the municipal coffers. So Mayor Michael Unterguggenberger, printed his own.

The value of the Worgl 'stamp script' was set to automatically depreciate: that is, it earned negative interest. Once a month, its holders had to pay a stamp fee of 1% of the face value of the note. The mayor had thus created money that could only be spent locally, and which grew less in value the longer you held it."

"The result was that everyone spent the new money in the town as fast as possible. The streets were repaved, the water system rebuilt, new houses appeared, then a ski jump, a new bridge... Even the French Prime Minister came to visit 'the miracle of Worgl.'

Then some 200 other Austrian towns came up with plans to copy it, the Austrian Central Bank panicked, and it became a criminal offense to issue currency. Unemployment returned to where it was before, thereby restarting the countdown to World War II.

"Where there are people who want to work, jobs that need doing, but no money to pay anyone, it makes sense to create local money." As Lietaer points out, "money is an agreement, within a community, to use something as a means of payment."

To repeat, conventional money is created as debt to a bank. It is limited in supply and bears interest, so people must

save, compete and work harder to avoid ever-increasing debt. Negative interest money, freely created, encourages cooperation and reciprocity, Lietaer writes, and functions more like gift exchanges in traditional societies."

"Having money that is local, even if it doesn't bear negative interest, can help build and protect communities. As mentioned above, the most famous example is the 'Ithaca Hours' currency, designed to support community building in the town of Ithaca in upstate New York. It is credited with having maintained a true town center and building many small businesses.

Variants of these schemes have spread throughout the world and there are now thousands of them. The World's oldest surviving scheme, the Swiss Wir, was founded in 1934 by 16 people... The money is now used in transactions worth over $2 billion a year."

"Local currencies won't change the world on their own. But with several different types of money working in parallel, including negative interest money to deal with international trade, money would take us naturally where we want to go" says Lietaer.

“If you need regulations and coercion to get what you want, the system has a design flaw"(quoted from New Scientist, 27 April, 2002). As Lao-Tsu said, the best leadership is when at the end the people claim that they did it themselves.

Complementary currencies stimulate and sustain communities

Since the Great Depression in the 1930s, Americans have experienced about half a dozen recessions. These events never made sense to me (AvH), nor did I gain useful information from reading equation-packed tomes written by experts. For with plenty of people willing to work, and plenty of work to be done, the mysteriously intractable problem was a scarcity of circulating money.

Anyone in Alaska during our 1985-6 recession probably recalls how *a synchronized reduction in oil field workers, and in the compensation of those still working, by Big Oil,* initiated a cycle of bankruptcies that overwhelmed local citizens, investors, businesses and banks. At the time, that recession was seen as just another inevitable result of far-off decisions and events over which we had no control.

So once again I sought information on how communities might respond constructively to recessions. Luckily, our daughter quickly located Gesell's and Lietaer's books detailing solutions devised long ago. Indeed, Lietaer reported that by the Millennium, over 2500 Complementary Community Currencies introduced around the World had helped local economies through difficult times.

These local currencies were designed to supplement rather than replace National currencies, and in the past two decades they have drawn world-wide Governmental attention and support. With careful planning and persistent follow-up, any community can now devise a complementary currency that will stimulate the local economy and sustain participant cooperation.

By supporting the production and exchange of additional goods and services, ***these complementary currencies can increase local business volumes by 30% or more****,* thereby counteracting the adverse local impacts of a recession.

All sorts of currencies have been effective - paper money, sequentially transferrable checks, bus tokens, frequent flyer miles, and other loyalty coupons or awards. Of course, these currencies - like all national currencies - represent IOUs. And they too encourage exchanges of goods and services as long as potential recipients also believe in that money.

Incidentally, simply keeping an accurate computer tally of mutual credit association member credits/debits per transaction seems to work as well as issuing an actual

currency. But regardless of whether the currency is virtual or real, such mutual credit currencies are created and destroyed as every agreed/completed transaction creates/consumes IOUs. **This ensures that there will always be just enough money in circulation to support every "agreed upon" transaction.**

In addition, members can check their own debit/credit balance and that of other association members with whom they might do business. To stimulate the local economy and deter scams, mutual credit associations often limit how much credit or debit members may carry before requiring offset by consumption or production.

Successful programs often expand beyond their original location. In Japan, volunteer-hour certificates earned for elder care have become a nationally popular complementary currency that will soon fund a third to a half of the nation's elder-home-care. In addition to offering convenience, improved care and huge savings for individuals in need of home care, these elder-care hours are routinely issued by, accepted by, and transferred between more than 100 Japanese non-profit organizations.

Thus even part-time workers (who are often students) can easily earn and donate care hours for far-away friends and relatives. As part of a voluntary off-budget system, elder-care hours greatly reduced nationwide yen currency expenditures for old folk's care at home.

One big advantage for expressing complementary currencies in fractions or multiples of "hours" is that hours need no revaluations as national currencies rise or fall. Thus New York City's Elder-Plan issues bankable time dollars for home visits and minor repairs.

The IRS currently considers complementary currency earned for non-professional services exempt from income tax. Most likely that tax-free status would only change if such

complementary currency transactions became noticeably profitable, at which point paying taxes would not deter further use of such currencies. Those who also pay some expenses outside of a complementary currency zone, simply negotiate combinations of local and national currencies for their goods and services.

Problem Three:
Interest-earning currencies drive competition, concentrate wealth, encourage conservatism and force growth.

Discounting future earnings by interest income makes sustainability appear less important than short-term profits. When we utilize the positive impacts of complementary currencies and avoid negative impacts of national currencies, we improve our local economy and even influence far-off decisions in a helpful way.

Thereby we also restore feelings of community, mutual responsibility and traditional gift-based values in areas with too few jobs - where the young are bored and alienated - where alcohol and other drugs promote family dysfunction - and where school roofs leak and collapse because there is no money for maintenance. Please bear with me as I set a gloomy stage for the cheerful climax.

Our first example dates from the British Colonization of Africa. Here the major corporate business goal was to make those new colonies dependent upon British manufactures. But traditional gift-based native societies had no useful currency, nor any great need for English cloth, cutlery or machinery.

So the British instituted and enforced a hut tax, whereupon previously stable African societies disintegrated as natives abandoned centuries-old trading practices of previously self-sufficient local economies in their desperate scramble for money to pay the hut tax. Because there never was sufficient money in circulation for all to succeed, anyone

helping her neighbor thereby hurt her own chances.

In this way, Western money repeatedly disrupted long-established mutual-assistance subsistence economies of traditional societies around the world. Of course, epidemic European diseases such as measles, and the rinderpest brought in by cattle during an Italian invasion of Africa, also extinguished uncounted millions of Africans along with their cattle and civilizations - just as smallpox and other diseases had decimated Native American cultures (see "Guns, Germs and Steel" by Jared Diamond).

So now most of the major problems stressing Earth's finite resources are money-related. These include global warming, endangered species, extinctions and human overpopulation. Some claim money is the root of all evil. Others see a lack of money as the root of all evil. But careful readers of the Hebrew Bible, the New Testament or the Koran could conclude that **usury** (charging interest on loans) brought these evils upon us, and surprisingly enough, they would be right!

First of all, ***long-term compounded interest is a lie!*** For had Joseph celebrated the birth of Jesus by investing a penny's worth of gold at 5% compound interest, by 1990 that initially tiny investment would have grown in value so its gold equivalent would be ***134 billion Earth-sized balls of gold.*** **Yet *most adults still view usury's "wooden merry-go-round-pony" as an actual war-horse.***

Secondly, ***Usury diminishes our concern for the future,*** whether we fish for tuna or preside over a huge publicly held Corporation. After all, *when you discount future earnings based upon present-day interest rates, you illogically reach anti-social conclusions that favor short-term financial gain over long-term sustainability.* ***But without sustainability, humanity's future can only be short and bleak!***

Nonetheless, those discounted figures makes it "obvious" that you will maximize your personal future wealth by killing

and selling every possible scarce and desirable fish this year and investing the proceeds at interest - rather than tediously negotiating with equally greedy and unreasonable folks in order to develop and protect a sustainable fishery. ***So when there are no more fish, the poor can eat jellyfish while the rich may eat as much money as they can hold!***

Using those same false ideas about compound interest, every Corporate CEO should discount the uncertain value of that Corporation's future production by current net interest on assets. The resulting figures clearly require Mr. or Ms. CEO to ignore research and development, and devote her/his energies and funds to exceeding the next Quarter's expected results in order to benefit shareholders and CEO stock options. And don't forget to send all your lobbyists and lawyers to Washington to gain tax rebates and subsidies for your failing products.

Naturally, all CEOs want their employees to be happy despite low wages, *so they set up* ***generous but unfunded*** *employee health and retirement plans.* Then as soon as "their" Corporation goes bankrupt, the CEOs retire on interest from outlandish stock options and ridiculous salary. **The interest-driven greed that underlies lack-of-concern for employees or for research, development and product quality,** partially explains why so many of America's increasingly outsourced manufactured-products are ever less competitive world-wide.

The Hebrew Bible (in essence, The Old Testament) prohibited charging interest ("Usury") on loans by Jews to other Jews. Early Christians and Muslims declared a blanket religious prohibition on the charging of interest too. Catholics condemned and punished usury into the 19th century. But well over a century ago, they too began to charge interest "unofficially" while still awaiting and awaiting a promised Church response to parishioner requests for "clarification".

Devout Muslims still honor that religious commandment by charging a variety of fees or else partnering in an enterprise,

rather than demanding interest on a loan. *In more recent years* ***"Usury" has been redefined*** *to mean charging* ***excessive*** *interest.* ***But while modern credit card interest rates and fees are no longer usurious, they remain excessive and corrupt.***

When Henry VIII took over the English Church in pre-Victorian times, he became the first Christian ruler to legalize usury. Surprisingly, this may have made the Industrial Revolution possible for - as those who wrote the Hebrew Bible understood - **charging interest on money loans has major social consequences.**

These consequences include ***making money scarce*** *(which incites competition),* ***concentrating wealth*** *in the hands of a few (which encourages major investments),* ***and creating an incessant demand for economic growth*** *to sustain liquidity based upon ever more debt - while standards-of-living stagnate and* ***the environment gets trashed.***

A reminder: Every new bank loan puts its exact "loan amount" of new money into circulation. And every paid-off bank loan removes exactly that amount of money from circulation. In addition, until Nixon finally took us off the gold standard in 1971, our nation's respected dollars were IOUs that could still in theory be redeemed for a standard amount of gold, just as the bearer of a pound sterling was once entitled to exchange that pound note for a pound of silver.

Furthermore, interest-charging national monetary systems are always associated with scarce money, *since additional new money is not created* (beyond the exact loan amount that borrowers obtained initially) *with which to make interest payments!*

Hence money becomes ever more scarce as individuals, businesses and governments compete to make interest payments upon their loans. So not only does a scarcity of interest-earning money underlie our competition for money, but the money with which you pay interest is actually principal

from a loan made to someone else who, through misfortune or lack of effort, later went bankrupt.

Our society rewards and empowers individuals who accumulate money. It demeans and punishes those that don't. The obvious lesson appears to be "Slave for money or suffer the consequences". Yet the financial field on which we all compete is so severely tilted that on average, the hard-working lowest 80% of income earners in our population, including our middle class, pay more of their income as interest to investors in the top 10% (whose inherited assets now earn lightly taxed "interest income") than they pay in taxes to the Government.

So it is hardly surprising that wealthier Americans increasing live within more than 80,000 gated communities - where the homeless - and the angry poor and middle class paying all that interest - will never be encountered.

Similarly, the poorest African and Latin-American nations pay far more in interest on old loans made by foreign bankers (mostly for corrupt or misguided projects) than they receive through all their various aid programs. *And our* ***American Corporations, which are largely owned by the wealthy, receive far more money as Governmental subsidies and rebates than poor Americans get through all of their welfare programs and earned income rebates!***

Problem Four: Corporations rule!

An objective observer could easily conclude that just as British Corporate interests formerly parasitized British African and Indian Colonies, the entire World is now being parasitized by Corporations that increasingly profit by detaching themselves from people and places (while human and Corporate interests diverge, and even Corporate insiders learn that they are expendable).

Someone recently said, "15% of workers now fear that

their jobs will be outsourced, while 85% are in denial." That decline in available work leads to underemployment, social unrest, citizen frustration, impotence and depression - which causes further unemployment and spreading poverty as investment flees the growing violence and extremism.

Meanwhile, a demand to restore law and order leads to the scapegoating and persecution of minorities and the homeless. Historically, the same course of events followed wherever governmental mismanagement and unwillingness to let localities develop their own fiscal solutions led to fascist governments as the desperately poor and unemployed flocked to any economic savior who promised to "Do Something!"

During the Great Depression, Austria, The United States under Franklin Delano Roosevelt and other nations forbade local communities from developing local solutions to local fiscal problems. For bureaucrats greatly prefer to control and take credit for standard centralized solutions paid for by taxes and administered by bureaucrats (and politicians).

Of course, Austria's centralized solutions didn't work so the desperate and unemployed Austrians became increasingly embittered and susceptible to Hitler (**and World War II followed World War I, *just as Gesell had predicted would happen if new monetary solutions were suppressed).***

Since Roosevelt prohibited local fiscal options that might have allowed parts of the United States to become truly prosperous, the Great Depression persisted throughout the U.S. despite his highly touted New Deal (a national "make-work" program) until preparations for WWII resurrected America's economy.

Being independent of tax dollars and bureaucrats makes *complementary currency solutions freely available to supplement employment and help communities cope with recessions or jobless growth.*

Lietaer designed a (theoretical) stable global reference

TERRA currency that is inflation-proofed by basing it upon a standard basket of commodities. During deflations he expects companies to cash-in commodities for TERRA and thereby increase their own liquidity, while in boom times companies would naturally buy back materials they need for making products, leaving fewer TERRA in circulation to push inflation.

An additional advantage of TERRA currency - which supports itself through a 3-4% annual demurrage charge that covers commodity storage costs - is that in addition to reducing worries about currency fluctuations or inflation, the TERRA counters the usual business cycle.

For *demurrage charges give future TERRA greater value than TERRA in hand - thereby shifting the individual's interests from short-term money acquisition toward long-term sustainability.*

"Sustainability" means not using renewable resources faster than they are renewed - and not using non-renewable resources faster than the rate at which sustainable substitutes become available - and not emitting more pollutants than environments can deal with on a steady-state basis.

The Latinate Bible quotes God as saying "Fiat Lux!" (Let there be light!). Similarly, governments issue fiat currencies (Let there be value!) by decree, even without precious metals to back them up. Fiat money persists because it is useful in trade as long as it remains scarce enough to retain value.

However, that normal scarcity of money still causes competition where cooperation would be more appropriate. So not surprisingly, ***experience suggests that utilizing only national fiat currencies may constrict economic activity by 30% or more, compared to the economic expansion that occurs when using both fiat and complementary currencies.***

Of course, complementary currencies may be anything from fiat currencies as in Ithaca, N.Y. - to local exchange trading systems or LETS - to community service dollars - to elder care

hours - to mutual credit currencies (where an equal credit and debit are created at every voluntary cooperative interaction).

Negative interest complementary currencies are an easy way to encourage and formalize "helping each other" as in traditional societies. And such currencies apparently do a great deal to restore community spirit - since offering goods and services to the neighbors easily expands into sharing - with entire neighborhoods getting increasingly used to watching out for and helping one another.

In contrast, positive interest money inevitably leads to a concentration of assets, bankruptcy, poverty, crime and self-centered conservatism. Arnold Toynbee's study of 21 great civilizations revealed that each died with an extreme concentration of wealth and apparent inflexibility in the face of changing conditions.

Summary: The scarcity of money and the resulting competition "to get more than your share" causes our economy to cycle repeatedly between boom times when everyone wants to buy, borrow and invest before prices rise - hence money flows freely and work is readily available - and recessions when many willing workers cannot find employment at any wage, while those who have money stop elective spending in anticipation of hard times or bargains ahead.

In contrast, *ancient Egypt's economy and non-interest-bearing wheat-based currency remained stable, productive and inflation-free for over a thousand years.*

Note: The above information was derived in part from Gesell's book which is freely available in English translation on the web. As mentioned, some of the material comes from New Scientist and much is derived from The Future of Money.

My view (AvH): After considerable time and discussion - though I have not seen community currencies in action - I am convinced that complementary currencies could enrich local economies. For example, a friend who traveled through

Argentina during one of its recent recessions said that the overall Argentine economy was largely unaffected because so many impacted communities developed their own currencies.

Building Social Capital with Complementary Currencies

Curitiba, Brazil seems to have made one of the most resourceful experiments with complementary currencies. Here the Mayor in a provincial capital of 2.3 million inhabitants in Brazil used complementary currencies over the past 25 years to foster an economic growth rate 40% higher than any other city in the country. He managed to finance a series of social, cultural and ecological programs, which brought his city the award of "the most ecological city in the world" by the United Nations in 1992. All this was accomplished while keeping his municipal tax rate at the same level as the rest of the country.

Curitiba: the Brazilian City that left the Third World

In 1971, Jaime Lerner became Mayor of Curitiba, the capital of the southeastern state of Paraná, Brazil. He was by profession an architect. Quite typical for the region, the urban population had mushroomed from 120,000 people in 1942 to over a million when Jaime became Mayor. By 1997, the population had reached 2.3 million. Again, quite typically, the majority of these people lived in "favelas," the shanty-towns made out of cardboard and corrugated metal.

One of Jaime Lerner's first big headaches was garbage. The town garbage collection trucks could not even get into the favelas because there were no streets suitable for them. As a consequence, the garbage just piled up, rodents got into it and all kinds of diseases broke out. A mountain-sized mess!

Because they did not have the money to apply "normal" solutions, such as bulldozing the area to build streets, Lerner's team invented another way. Large metallic bins were placed on the streets at the edge of the favelas. The bins had big labels on

them, which said: glass, paper, plastics, biodegradable material and so on. They were also color coded for those who couldn't read. Anyone who brought down a garbage bag full of presorted garbage was given a bus token. For biodegradable materials they were also given a plastic chit exchangeable for a food parcel of seasonal fresh fruit and vegetables.

A school-based garbage collection program supplied the poorer students with notebooks. Soon the neighborhoods were picked clean by tens of thousands of kids, who learned quickly to distinguish even different types of plastic. Their parents used the tokens to take the bus downtown, where the jobs are.

What Jaime Lerner did, from our perspective, is invent Curitiba money. His bus tokens and food chits are a form of complementary currency. His program "Garbage which is Not Garbage" could just as well have been baptized "Garbage which is Your Money."

Today, seventy percent of all Curitiba households participate in this process. The sixty-two poorer neighborhoods alone exchanged 11,000 tons of garbage for nearly a million bus tokens and 1,200 tons of food. In the past three years, more than 100 schools have traded 200 tons of garbage for 1.9 million notebooks. The paper-recycling component alone saves the equivalent of 1,200 trees each day.

Let it be clear that Lerner's team did not start off with the idea to "create a complementary currency." *What happened instead is that* ***they used an integrated systems analysis*** *for all the major issues at hand, and spontaneously ended up with a complementary currency way to solve those issues.*

Nor is the garbage cycle the only form of local money in Curitiba that has resulted from this approach. For instance, another system has been designed specifically to finance the restoration of historical buildings, create green areas and social housing in a way that would not financially burden the municipality. It is called "sol criado" (literally, "created

surface") and works as follows:

Like most cities, Curitiba has a detailed zoning plan which specifies the number of floors that can be built in each zone. In Curitiba however, there are two standards: the normal allowable standard and the maximum level. For instance, a hotel with a ground plan of 10,000 square meters is being built in an area where the normal allowable level is 10 floors and the maximum 15.

If the hotel owner wants to build 15 floors he has to "buy 50,000 square meters (5x 10,000 sq. Meters) in the 'sol criado' market." The city itself only plays the role of an intermediary matching demand with supply in that market.

But where is the supply for these sol criado surfaces generated? One source is historical buildings. For instance the "Club Italiano" owns a beautiful historic landmark building called "Garibaldi House." The property has a total ground surface of 25,000 square meters, but the place needed a serious restoration job. The Club did not have the money to restore the building. But because it is located in an area where up to two floors of new construction could theoretically be built, it sold 50,000 square meters (2 floors x 25,000 square meters) to the highest bidder, for instance, the hotel owner mentioned above.

The proceeds belong to the Club to administer, but have to be used to restore the property. Therefore the hotel owner ends up paying for restoring the historic edifice in order to obtain the right to build the extra floors of the hotel, without any financial intervention from the city.

Other sources of supply for such "created surfaces" are green areas where trees are protected, and the construction of social housing in other parts of the town. Several of the more recent of sixteen extensive nature parks open to the public, have been completely financed in this way.

The owner of a large plot of land obtained the right to

develop one side of the street on the condition that the other side becomes a public park. The new housing has an extra value because it is located at walking distance from the park; thus the people of Curitiba have another park for their week-end strolls; and the township does not have to go into debt or raise taxes to obtain all of that. Everybody wins.

What is most interesting from our perspective is that this market for "created surfaces" is another type of specialized complementary currency, which enables Curitiba to obtain public goods for which other cities have to obtain traditional financing.

What began as a-garbage-and-public-health problem, has become a way to solve public transportation and unemployment difficulties in a uniquely innovative way. By creating the "sol criado" market system, significant public advantages are obtained at no cost to the city itself. The secret is not that this city or population has something unique, but that an integrated systems approach has created new ways to tackle the problems at hand. The net result is a city where many things run against conventional wisdom.

Curitiba: Another Development Strategy

Public transportation is encouraged over individual car usage. This is accomplished by making the public transport better and more convenient than the private variety. For example, it is speedier because of an original speed-loading process: the bus tokens enable the users to enter into specially designed raised-tube bus stops; when the bus arrives, entire sections of both the bus and the unit open so that people can move in and out in large groups in a few seconds.

No time is lost collecting money or tokens. Similarly, the special express lanes for public transport have made bus use the fastest and most convenient way to move around anywhere. A single fare of .65 R$ (about 50 US cents,) enables

someone to move over the entire system, independently of distance covered. This includes any connections to feeder and inter-district public transport systems,.

The real test is that this public transport system has become the preferred way. One out of four people using public transportation own cars, but prefer not to use them to get around town. Because of the efficiency of the public transport system, it has been possible to create several downtown pedestrian streets, including the Main Boulevard.

These pedestrian streets are now used for local music, popular theater performances, and children's art festivals. There are also arcades of shops and restaurants that stay open 24 hours per day and maintain the vitality of the downtown area, instead of the ghost-towns that characterize most city centers.

Conventional city planning claims that any city with more than 1 million inhabitants must have a subway system to avoid traffic congestion. Similarly, cities that generate more than 1,000 tons of solid waste per day need expensive mechanical garbage-separation plants. Curitiba has neither. And the investment needed for their public transport system costs only 5% of an equivalent underground system. The savings has allowed Curitiba to keep its fleet of buses among the newest in the world.

There is a Free University for the Environment offering practical short courses at no cost for homemakers, building superintendents, shopkeepers and taxi-drivers. They are taught the environmental implications of their daily activities. It is a breathtaking architectural building made mostly out of recycled telephone poles, in what is now an idyllic setting near a lake. The location used to be an abandoned industrial stone mine.

Curitiba is the only town in Brazil that now has a significantly lower pollution level than in the 1950's; it has also

a lower crime rate and a higher educational level than comparable Brazilian cities. It is the only city in Brazil that has actually turned down grants from the federal government, because they have solutions that involve less red tape.

A botanical garden has been planted on what was once the inner city dump, which now serves as a recreation and research center. In addition, there are currently 16 different nature parks around the city, based on different themes. As a consequence, Curitiba has 52 square meters of nature per inhabitant.

The UN ideal standard is 48 square meters of green surface per city inhabitant, a level rarely, if ever, reached by cities in either the developed First or the Third World. Furthermore, all these nature parks are easily accessible from the transportation network, so that the ordinary people can - and do - fully take advantage of them.

Curitiba was recognized in 1992 by the United Nations as the model ecological town in the world. And Jaime Lerner has received international recognition for his initiatives. Some other cities have started to take notice.

About 20 cities in Brazil have started to implement the integrated public transport system. Cape Town has copied several features of it. City planners from Buenos Aires, Santiago de Chile, Montreal, Paris, Prague, Mexico and Lagos have been impressed by what they saw.

Perhaps the clearest political signal that all this works is the fact that every time Jaime Lerner presented himself for election, he was reelected by a landslide! Some years ago, he was elected Governor of the State of Paraná. A movement has started to draft him as next President of Brazil. The Curitiba story demonstrates that there are political careers to be made in relation to complementary currency. Finally, the impact of the complementary systems is identifiable in economic terms.

The average Curitibano makes about 3.3 times the

country's minimum salary, but his real total income is at least 30% higher than that (i.e. about 5 times the minimum salary). This 30% difference is income directly derived in non-traditional monetary forms, such as the food for garbage systems. Another indication is that Curitiba has by far the most developed social support system in Brazil, and one of its most vibrant cultural and educational programs, and still doesn't have a higher tax rate than the rest of the country.

Even at the traditional macro-economic statistical level there are clear indications that something unusual is going on in Curitiba. The Domestic Product of Curitiba increased between 1975 and 1995 by some 75% more than the entire State of Paraná, and 48% more than Brazil as a whole. Such difference in growth rate has remained valid in the recent past: between 1993 and 1995, Curitiba's Domestic Product grew 41% faster than the State of Paraná and 70% faster than Brazil's.

Curitiba's success has attracted an internal immigration, so that the Curitibano population grew faster than the State of Paraná or the country as a whole. On a per capita basis the difference is therefore slightly less impressive, but still quite significant. Between 1980 and 1995, Curitiba's Domestic Product per capita grew 45% faster than the State of Paraná or Brazil as a whole.

Curitiba is a practical case study where 25 years of experience show that a whole-system approach using both the traditional national currency and well-designed complementary currencies is beneficial to everybody, including people who are focused exclusively on the traditional economy denominated in national currencies. It enabled one Third World city to join First World living standards in one generation's time.

EPILOGUE
Other Things To Consider

Durable organizations need roles and goals. Old Corporations rarely die but often smell that way. Those who love sausage and respect the law should not watch either being created. A hundred possible steps toward better health care and lower health care costs (and you can easily think of many more). Ideas are just hot air until they make a difference. Good health begins with reliable information. Nations gain respect when they help others prosper.

President Bush's "No child left behind program" was just another unfunded Federal mandate that interfered with teaching and set impossible performance standards. *The religious right's openly desired outcome was public school failure so students with Government vouchers, riding Government buses, could attend religious schools at public expense, which would also eliminate the teaching of detested topics such as Evolution and Sex Education.*

However, one reason we all pay taxes more or less willingly is to ensure that every child and adolescent can attend Public School while one or both parents work. In addition to keeping kids off the street and out of trouble, our public schools are supposed to produce literate, numerate, rational, healthy citizens with sufficient social skills to settle disagreements non-violently.

Public Schools serve many other important social and public health functions including detection of disabilities or child abuse, teaching about and supplying adequate nutrition, offering information on human health and sexually transmitted diseases, minimizing teen pregnancies through sex education, and controlling epidemic diseases by mandatory immunization programs.

With so many goals, there will always be great room for improvement in Public Schools. And while inadequately funded school programs may fall back on campus sales of soda pop and other unhealthy food choices to make ends meet, Public Schools still have a hugely important role in health care. *Most citizens support free public education because an educated public is essential to our national economy.* ***So how can they not support free basic healthcare services for all children?***

Durable Organizations need Roles and Goals

Historical beginnings tend to be poorly defined, but health care's current problems probably date back to *when various factions of the early medical-industrial complex first recognized that their prospects would be grim if* ***better health care at lower cost*** *for the foreseeable future actually prevailed.*

Even non-profit organizations felt threatened. I still recall participating in animated discussions about what new role and goal the respected National multimillion-dollar March of Dimes fundraising organization (initiated by President Franklin Delano Roosevelt, a polio victim himself, whose image is on the dime) might find for itself when polio, the sole purpose of its Corporate existence, was finally eradicated. Or should they just throw a huge cross-country party and "shut her down?"

As it turned out, the March of Dimes "loyally" (against its own ongoing interests) fought polio to a standstill. Thereafter, this enduring entity rapidly rebuilt itself as a very different institution—dedicated to funding education and research on a previously neglected group—those with birth defects who, importantly, were at no apparent risk of cure.

Even the new March of Dimes' mission statement carefully steered clear of achievable goals. Note also how carefully the March of Dimes avoided turf battles with other major non-profit organizations like the American Lung Association (originally an anti-tuberculosis group), or the

American Heart Association, which began as a group of New York doctors whose first two research topics were “Could patients with heart disease return to work?” and “Rheumatic Fever.” And as better remedies for heart disease developed, the American Heart Association wisely expanded its brand to include strokes.

Our oldest major health-related “non-profit” Corporation is the American Red Cross, which currently procures and sells much of the nation’s donated blood. However, in recent years, the Red Cross has repeatedly been fined many millions of dollars for the poor quality controls and inadequate record keeping that put America's blood supplies at risk. And while Red Cross staff still show up at disaster scenes and make themselves available to the media, it is often unclear whether they are there to serve others or just defending their own turf.

The International Red Cross began in 1864 as a neutral wartime Swiss Christian relief organization—hence its Greek Orthodox Cross. Though it welcomes Muslim affiliates under their Red Crescent religious symbol, this International Relief Organization still won’t admit Israel under its six-pointed Star of David “Because then we might have to admit some other nation under a Swastika!”

So even after the Holocaust, this wealthy conservative Christian organization still denies Jews unless they accept the Cross. And like the Catholic Church, they never release a real financial statement—nor have I heard of them being audited.

The annual American Red Cross budget in early 2000 was $1.9 billion. But its handling of disaster relief funds has often been inept—ranging from unjustified "show" projects after the 1938 Hurricane (e.g., donating new boats to someone who never owned nor lost any), through quickly foiled efforts to charge our poorly paid draftee soldiers and sailors for the hot coffee served at USO’s during World War II, to its thwarted plan to keep funds given for September 11th victims’ families.

Even among non-profits, only the fittest, most adaptable Corporations can survive and prosper in our rapidly changing environment. But every frantic search for plausible new fund-raising goals increases the likelihood that a non-profit's staff will come to view their fund-raising Corporation as a sinecure: "A position or job that provides a regular income for little or no work". Hence I was not astounded that a common complaint among nonprofit employees deployed to aid citizens of Third World countries, was "How hard it is to find good servants."

Old Corporations rarely die but often smell that way

Early American leaders allowed legal incorporation so wealthy individuals would invest more freely in new business ventures. The idea was to generate jobs and grow national wealth by limiting monetary risk to the amount invested.

But the Founding Fathers surely never meant to create permanent (hence irresistible) wealthy organizations that would increasingly dominate our political process and oppress ordinary citizens. Unfortunately, that is what happened.

For legal ***Incorporation*** combined unlimited longevity with faceless (hence reduced) individual responsibility, thereby opening the way for greedy, ambitious outsiders to eventually "invade, milk and sell" or "downsize and off-shore" workplaces long created and sustained by local efforts and pride. That sudden removal of long-time-local Corporate funds devastated many communities.

And with the cooperation of our formerly respected Supreme Court, Corporate misleaders even demanded and got ***the same Constitutional Rights guaranteed to all human citizens*** *for those faceless, baseless, immortal, legal inventions known as Corporations.*

So now these greed-driven people demand "Freedom of Corporate speech" including the legal right to lie about conditions under which something (e.g., a Nike product) is

made - or a legal right not to reveal whether a drug is toxic or ineffective for the purposes advertised (as that is a **trade secret!**), or a legal right to spend other people's money without their permission in order to subvert ***Government policies and elections and even buy judges***

"Those who love sausage and respect the Law should not watch either being created" (Bismarck?)

More than fifty years ago, first-shift employees at one Boston sausage factory were told to delay turning on meat grinding machines whenever a food inspector was near enough to hear death squeals of rats feeding inside. Similarly, an insider's view of Legislative Committee Caucuses - where complex and emotion-laden issues are actually negotiated with lobbyists - would drive the average citizen to despair.

Except for extreme conservatives, most people agree that tax dollars should be spent for purposes like public defense, education, airports, roads and bridges, as well as to subsidize food, shelter and medical care for the poor. Reasonable people often disagree on when, where, how or how much to spend, but rarely question whether such causes warrant public support.

In contrast, politically powerful Corporations routinely *lobby and bribe* our elected representatives to reduce Corporate obligations to the public or blatantly convert Public assets into Corporate assets. Because any informed citizen would readily recognize these arrangements as "Not in the Public interest," such Corporate raids are generally carried out in secret, or through distraction (as by declaring a war), or by deception (with outright denial and other lies).

Furthermore, countless anonymous Corporate employees, shielded from public view and recognition by their Corporate umbrella, have routinely achieved small savings for their Corporations through costly acts of environmental vandalism that were detected, understood and dealt with many

years later, long after time for criminal prosecution has passed.

Thus nameless scoundrels at General Electric persistently pumped dangerous, long-lasting PCB chemical wastes into the Hudson River. And rogue industrial farmers spread hog farm and feedlot pollution and hazardous pesticides/herbicides widely over public air, lands and waters. Meanwhile, conniving Mining and Logging Corporations laid waste to pristine lands and waters, then sometimes even disbanded before starting anew elsewhere under another name to avoid responsibility for environmental disasters left behind.

Self-serving profiteers in the automobile, oil and lead industries long prospered by making inefficient polluting engines that burned toxic **leaded** gas, or by promoting **lead-based paints** for decades after these products were proven harmful to children (in the 1930s)— see Lancet, May 17, 2003 p1753—Science, 25 Oct, 2002 p732— Science, 7 Feb. 2003 p795 or www.cincinnatichildrens.org/ leadadvertising/

Similarly, countless irresponsible villains dumped, burned or buried poisonous pollutants on land or sea. And huge numbers of our citizens were injured or killed by covert or overt criminal activities of those peddling tobacco (for example, see "Public misled over fire-safe cigarettes", New Scientist, 21-28 Dec. 2002, pp6-7; or "Tobacco's longtime adversary" in Lancet, July 7, 2001 p44), or similar discussions of alcohol and other addictive drugs, as well as by Adulterated Foods, Toxic Patent Medicines and Poisonous Pesticides and Herbicides.

It seems that to prosper under the nearly hallucinatory, internal risk/reward structures of an established Corporation, Religion, Dictatorship, Gang or other non-democratic group, one must set aside personal qualms to promote the antisocial special interests in that enduring body over many essential public interests of less organized ordinary citizens outside.

The power inherent in long-lasting Corporations assures

us that many of these increasingly dominant old dogs will become ever more self-serving and unwilling to learn new tricks. *Will we finally get "liberty and justice for all" only when every Corporate charter - new and old - is legally amended to include an "absolute expiration date" at which all debts must be paid, all promises met, all profits distributed, all assets sold at public auction to more dynamic users, and all business arrangements wrapped up?*

In order to deconstruct the current rule of America by Corporate Interests, we must first end those immense ongoing Corporate Welfare Payments known as Government $ubsidies or Rebate$ to Big $ugar, Coal, Corn, Cotton, Car$, Airplane$, unhealthy manufactured Fa$t Food$, Mine$, Oil production or extraction, etc.

To combat Corporate anti-environmental practices and to reverse declining productivity in various Government-aided industries (which, as in Russia, China and Japan, comes from insulating increasingly out-of-date Corporations from free market competition), we should *enforce a 35 to 40 years limit on any Corporation's existence—with Corporate taxes rising stepwise to 100% over the final five years.* In the meanwhile, we must finally insist by laws that "Hereafter, every subsidy or rebate from our local or National Governments to Corporations is immediately converted into ***public ownership interests!"***

And now that Corporations have been recognized as "People", there should be legal limits on every Corporation's life span that roughly equals the productive years of WORKING PEOPLE, who nowadays are too commonly cheated of rights and retirements by Corporate shenanigans. Were such a Corporate entity still needed thereafter, it could begin anew, unfettered by ongoing corrupt relationships, irrelevant arrangements or regulations, and an unproductive baseless lifestyle dependent upon enduring subsidies and rebates.

Certainly, programmed death is Nature's way of

keeping life strong and adaptable. For if old bears could live and function indefinitely, the growing population of old males would consume all cubs until bears became extinct.

Similarly, Big Pharma, Big Oil, Big Bank$, WalMart$ and other major multinational Corporations routinely buy or crush innovative young businesses and bankrupt local and even national economies in their short-sighted quest for a few extra dollars to boost quarterly profits and Executive Bonuses.

Is it mere coincidence that so many million good-paying, productive American jobs disappeared or were exported, and that our Treasury now needs Chinese loans, and that our $tock market increasingly requires life-support - at just the time that "Eternal" Corporations loyal only to quarterly profits took over our Nation's policies from "We The (formerly only) People?" ***Or are unconstrained Corporations just like those hungry old male bears?***

100 possible ways to improve health care while reducing costs
(and you can easily think of many more)

Design a Nationwide Single Payer (SP) Health Care System: Get advice from anyone interested. Investigate recommended options on organizing, controlling, financing, directing and reviewing. Set up the Single Payer so it can easily be revised.

SP will audit all Health Insurance Corporations and take over every policyholder's health-care-obligated assets.

SP will negotiate to take over Workman's Comp liabilities in exchange for Employer optimization of Job Safety plus offsets like better wages, *fully funded* retirement plans, and child-care.

SP overhead will be limited by law. Would 3% of total funds disbursed—plus 1% or so to support ongoing studies (see below) be initially appropriate?

SP overhead can only be revised by Congress after Public input.

SP shall meet certain efficiency and transparency standards or undergo reorganization.

SP will negotiate major discounts nationally and internationally on drugs and medical equipment.

SP's purchasing monopoly on Health Care Items allows it to Audit Manufacturer's Costs and Negotiate Fair Discounts.

SP shall publish Big Pharma Drug Cost-and-Efficacy comparisons as well as discounts received by all Nations.

SP may not withhold positive or adverse data on the safety or efficacy of Drugs or Medical Devices.

New drugs partially or totally discovered with tax dollars, shall be opened to generic competitors for an appropriate fee.
The basic idea would be fairness for patent holder and public.

To minimize profiteering, fully patent-based monopolies where no public funding or support was provided shall be regulated as Public Services to minimize profiteering.

SP must publicize Administrative costs for every hospital.

SP must publicize standards clarifying which overhead costs are reimbursable, and when.

SP may subsidize education and basic living costs for nursing students, medical students, interns, medical/surgical residents and certain other health care workers (e.g., mental and dental)

and also help qualified health care workers train or retrain when desired and needed.

Subsidized trainees would agree to an "initial" two-year service requirement in an underserved area.

Students paying their own education costs but planning to work for SP could only select their service location and duty from published available slots.

SP could revise total number of subsidy-eligible specialty training positions annually, according to projected needs in USA (and overseas, if applicable).

Subsidies for student-trainees in programs whose graduates perform poorly may be reduced or eliminated with notice.

SP would regularly negotiate a fair maximum medical income. The same upper income limit will apply to all physicians and top health care earners from SP (including SP Administrators).

SP may publicly renegotiate compensation for all medical tests and surgical procedures annually to rectify overpayment or underpayment and regulate total supply of health care.

SP could reset hourly rates of non-procedural (medical office or administrative) charges according to training, experience, success rates and cost of living.

SP may develop appropriate public methods for calculating and compensating overhead costs of physicians and institutions.

SP could conduct (or outsource) studies that analyze/compare patient outcomes, to assess provider competence, assess

medical techniques and pharmaceuticals, assess any benefits claimed for second opinions, assess Continuing Medical Education (CME), assess Board Recertification, and determine which "Actually benefit patient care" and should continue.

SP would generally not subsidize activities, training programs, procedures or drugs that can provide **no evidence** for efficacy, except as part of a study. CME-dependent or Recertification-dependent industries might be disallowed as “costly and unproven, hence not eligible for recognition or reimbursement” (in contrast to standard office costs).

SP should maintain an ongoing current computerized Survey of Outcomes to detect individual or unit outliers with poor results for private counseling, retraining or discharge.

SP would routinely audit practices that use many expensive tests, or perform more procedures, or serve many more (or far fewer) patients than comparable practices.

SP could use outcomes analyses and other studies to determine which practitioners overuse specific procedures -
e.g., coronary angioplasty and carotid endarterectomy.

SP could use outcomes analysis to identify possibly valuable off-label uses for drugs that might be worthy of investigation.

SP should not publicize physician performance reviews as this might result in some physicians avoiding sicker patients.

SP could investigate claims and compensate medically-harmed patients with standard *Federal Adverse Events Compensation* to replace malpractice insurance
(see also The Swedish Patient Compensation System. A viable

alternative to the U.S. tort system? Bulletin of the American College of Surgeons, Jan 2004 pp25- 30).

SP should publicly evaluate timely arbitration for all complaints against providers or by providers or employees or patients against SP, and set up a timely and appropriate appeals processes. Timely arbitration could also be requested by physicians and other workers who are consistent outliers (e.g., those with allegedly inadequate indications for procedures, or with consistently poor results, or who disagree with private counseling or were billed to return excessive charges under "egregious circumstances", or who were unwilling to accept retraining or discharge).

SP physicians could choose where to live but their pay might vary by a negotiated percentage according to area-wide needs as well as practice outcomes.

SP will establish a hot line for immediate reports on new medicines or procedures or technologies that are costly or dangerous or apparently don't work (e.g., gastric freezing or laser holes in left ventricle to bring new circulation).

SP will not support expensive or non-standard treatments unless such treatments appear to be useful and cost-effective in comparison with standard care.

SP will have qualified advisors without conflicts of interest determine if double-blind drug comparisons used *fair timing of appropriate dosages in every clinical trial comparing generic medication to patent-protected medication to determine which drug is more cost and/or risk effective*.

SP (or CDC, FDA or other qualified federal health care entity)

should study, confirm and promote inexpensive new definitive treatments (such as antibiotics for Helicobacter Pylori in Ulcer Patients) in a timely fashion.

SP should study the individual impacts of slow weight loss and adequate doses of tart cherries, turnips and tetracycline, on inflammatory diseases in general (including strokes and heart disease) and autoimmune problems in particular, and publicize indications for use (if any) as well as overall results of each.

SP could evaluate sugars and similar anti-bacterial adhesive compounds (e.g., in milk, cranberries, apples and potatoes) that seem to protect from bacterial infection, and study the impact of xylitol chewing gum on caries and ear infections.

SP could evaluate tansy tea and other herbs for **patient-initiated** safe and effective abortions, also turnips and tart cherries for gout, and magnesium supplements for asthma, cardiac arrhythmias, epilepsy, muscle cramps, migraine headache (prevention or reduction), eclampsia, etc..

SP will develop (or contract for) computerized answers to common patient questions wherever such could assist patients or save SP money.

SP to develop a fair, inexpensive way to identify “responsible patient-care coordinator” in "team care" cases so hospitalized patients or their relatives know who is in charge.

SP could develop and update web-based information on "Indications and Risks" for common elective procedures.

SP must evaluate and publicly critique **or ridicule** dietary advice from other Agencies (such as the Department of

Agriculture) if their dietary recommendations could increase obesity, diabetes or other illnesses that add to SP costs.

SP shall study and report to Congress on how best to reduce health care costs caused by "diet" drinks and other soft drinks, artificial food sweeteners, tobacco, alcohol, and drugs, as well as regulate or eliminate advertising that affects children.

SP to support International research into reducing traffic accidents, which regularly consume 1-3% of a country's GNP (see Lancet, Oct. 4, 2003 p1125)

SP to encourage International research into how to improve the health, safety and efficiency of shift workers (see Nature, 30 Oct. 2003 p885 on "Morning persons and night owls", also Lancet, Oct. 4, 2003 on "Drug treatment to promote wakefulness").

SP should regularly revise protocols for "urgent morbidity-reducing treatments" by ambulance personnel and hospital emergency rooms (e.g., early use of tissue plasminogen activator for strokes—see Science, 19 Sept. 2003 p1677).

SP would subsidize research, and advise Congress on the impact of patents and copyrights (which raise costs and undermine competition) on health care costs see New Yorker, July 14-21, 2003 p36 and Technology Review Sept. 2003, p82).

SP could develop information on how illegal drug use affects health care costs, and compare that with societal costs for the War on Drugs in a Public Report to Congress.

SP can sue to recover costs for patient care made necessary by unproven remedies delivered under egregious circumstances.

SP need not pay for any medicines or treatments not generally recognized as safe or effective for their stated purpose.

Corporate lobbyist costs should never be "tax deductible" *as pleas for special treatment thereby become a public burden.*

Under all circumstances it should be illegal for a Corporation that has received governmental subsidies or rebates to lobby for more public money.

Big Pharma *to stop advertising prescription drugs to public.*

It should be illegal for any Corporation to bribe/pay/reward doctors who recommend a treatment, equipment or drugs.

Prohibit clinical trials of drugs now available or to be sold in USA except on fully informed, adequately paid volunteers with guaranteed free follow-up care for any negative outcomes.

Whenever Big Pharma interferes with legal generic drug production, SP may sue for full costs plus penalties.

Generic medications shall be used whenever comparable.

Investigate feedlot-health benefits of antibiotic supplements.

SP should develop and support a public computerized data base of traditional medications, and evaluate possibly useful remedies such as cobalt salts for scrapie, bee stings for autoimmune disease, antibiotic treatment for peptic ulcers, pentosan polysulphate for variant Creutzfeldt-Jakob disease (see Lancet, Oct. 4, 2003 p1130), erythropoietin in heart attack (see Journal of Clinical Investigation 2003; 112, 999-1007), etc.

SP should look for digestive problems due to inappropriately prepared soybeans, and investigate/report on estrogen or other problematic soy ingredients in manufactured foods, and publish guidelines for soy use.

SP should publicize mercury levels and other dangerous contaminants in fish and their impact on public health.

SP should evaluate and recommend how best to prepare fruits and vegetables treated with herbicides/pesticides.

SP to compare costs, safety and results of electrocoagulation versus excision of skin cancers.

SP to compare the careful, even, intra-peritoneal distribution of radioactive gold at surgery for early ovarian cancer, with other possibly effective "immediate-at-first-operation" treatments.

SP should consult with FDA on how some entity might regulate the safety and purity of herbal materials, and also provide on-line educational material about specific herbal remedies.

SP could assist Poison Control centers by posting frequently requested information on line (“what to do if ”) as well as by publicizing availability of discussion or action groups, funding appropriate topical videos, and making information easily available on all health issues.

No time limits should apply on criminal or civil prosecutions for "major acts of environmental vandalism" (and define such).

No time limits should apply on criminal or civil prosecutions for *knowingly distributing toxic drugs or other toxic materials*

without informing all who might encounter or ingest them

.

Privatization rarely provides the greatest good to the greatest number. In particular, the privatization of "essentials" like medical care and water resources and electricity offers too much temptation to overcharge and no protection for the rights and needs of those with little income.

All humans have a right to education and a right to health care and a right to clean drinking water, and so on. These services should therefore be publicly available to all in reasonable amount for appropriate purposes (with subsidies for basic amounts where rates are unaffordable for the poor).

SP could study and publicize the impact of high credit card interest rates on the poor and their lenders.

SP could study Veterinary Medical Care to see why and how their charges for procedures have remained so low.

SP could evaluate/regulate and demand reimbursement for egregiously unnecessary and costly hospitalizations (e.g., hospitalizing a child one month for $25,000—the current Medicaid limit) simply to adjust a drug dosage—something that a private pediatrician does routinely in the office for less than $200 (see also Business Week, Oct. 13, 2003 p13 for comments on criminal investigations into the bankrupt hospital chain HealthSouth for alleged accounting and rehab abuses).

Should SP pay full costs or just a token percentage of dollars spent for health care by wealthy folks who can obviously afford to pay for their own entire health care?

Should SP provide the same pay for all physicians and all kinds of care—regardless of whether these are in-hospital or office-based?

A standard definition of “full-time practice hours” might increase provider stress and burnout so perhaps it should not apply equally to all specialties.

SP might evaluate the ventilation of sealed climate-controlled hospitals and medical office buildings where illnesses might spread easily through ventilation systems, and compare these buildings to large hotels to see if having windows that open would reduce discomfort and illnesses due to recycled air and "sick building" syndrome.

SP could investigate the health of travelers in commercial airliners, and the health benefits of adjustable fresh air vents for each passenger and "fully fresh" airflows versus current passenger airplane designs that recycle foul, depleted, or engine-fume-contaminated air.

Boeing has considered a further reduction from 50/ 50 to 25% fresh air and 75% recycled cabin air (see Thieves in high places by Jim Hightower—2003 p36). So anticipate more “Any doctor in the plane?” calls for passengers with heart attacks or strokes

Ideas are just hot air until they make a difference

It is fun to contemplate what a Single Payer might achieve. Yet any politically wired person might say, “Nice try, but it’ll never fly!” For every idea that helps or empowers ordinary citizens simultaneously threatens the political clout and income of wealthy Corporations: Which explains why Corporations routinely outbid humans for the many politicians we may naively think we support with a good salary, until they

retire as multimillionaires after "Many lucky investments".

So an important idea like a Single Payer is guaranteed a slow death by innumerable well-timed, seemingly innocent cuts, amendments, rescheduled meetings and add-ons during legislative hearings, caucuses or sessions—until the majority finally declares it "impractical"—meaning good for most voters but unacceptable to the Corporations that actually rule.

Undoubtedly, our complaints and suggestions will continue to vanish without a trace unless folks all over the country organize and exert pressure at the local level to bring about changes in their health care system.

But believe it or not, the time is ripe, the cause is just, the people are fed up, and big changes are already beginning. The opening skirmish came between Bush II (in Big Pharma's corner) and various states ordering discount drugs from Canada for the elderly, the poor and the unemployed.

As we have seen, the Medicare bill that passed the Republican Congress in November, 2003 specifically prohibited Medicare—our nation's largest purchaser of medicines—from negotiating any discounts with Big Pharma—our most profitable industry.

President Bush consistently exerted the powers of The President's Office on behalf of the tax-hating, politically-connected wealthy class that financed his costly campaigns for office. By serving the rich, Bush-II oppressed the "poor and disconnected" (those who actually perform society's most disagreeable, difficult, dirty, dangerous jobs, yet cannot afford acceptable housing, education, health care or child care).

So why does the current advantage and momentum lie so much with greedy insiders when what they do is so obviously wrong for the Public at large? Was it the irrational exuberance of the recent stock market bubble (when anyone might make millions, fairness was forgotten, and empathy seemed an irrational weakness) that cleared the way for the Republican

Party's unending campaign to further enrich the wealthy?

Yet the truth is out there and voters are increasingly angry at being misled and abused. As one upset elderly lady recently spluttered, “Health care is obscene! It allows the rich to keep ordinary Americans from getting adequate health care at a fair affordable price.”

In his 1961 inaugural address, President Kennedy reaffirmed our nation’s basic principles “And so my fellow Americans, ask not what your Country can do for you—ask what you can do for your Country. My fellow citizens of the World, ask not what America will do for you, but together what we can do for the freedom of man.”

Good Health Care Begins With Reliable Information

To obtain adequate health care, one must comprehend what medical care can or cannot achieve—and also have easy access to relevant information that the patient or her/his family can understand. For when basic medical information is readily available and understood by all, this greatly alters the balance of power in every health-care transaction.

Throughout human history, men have stolen, fought over and traded for limited supplies of valuable goods, metals, women and land. This was a zero-sum game. One man’s gain was another man’s loss. Only when trading items of equal value at the site of exchange, might all parties—each satisfying a personal shortage or perceived need—come out ahead.

A traveling merchant who was prepared to carry and defend portable items like gold, slaves and other valuables could then go to distant markets where those items would fetch a far higher price. Of course, all possible information was tightly controlled so the wealthy could continue to take advantage of the poor and uninformed.

In some situations, a poor person who seemed dangerously well informed—even able to read—was likely to

be killed by the Church, or by the State, or by the Plantation Slave-Owner. And based on an 1884 address by Oliver Wendell Holmes, Jr. in New Hampshire, it appears that the Catholic Inquisition developed the same isolation/eradication techniques to fight heresy that we now use to fight diseases like SARS (see New Scientist, 16 Aug. 2003 pp32-3).

But this is the Information Age. Information is the modern world's primary currency. And surprisingly enough, our human rights—including our right to privacy, personal wealth and freedom—ultimately depend upon immediate open access to all information about our society.

We especially depend upon unrestricted journalists to monitor corporate and government activities and decisions. Yet the fight for a free press is never finally won. For to empower and enrich themselves, media barons and politicians groom each other incessantly.

Major corporate owners of multiple newspapers and radio/TV stations routinely subvert or redirect aggressive press investigations to support or discredit their political benefactors or opponents. Greedy media manipulate public perceptions of politicians; greedy politicians manipulate media regulations so supportive media barons can monopolize markets and control public assets such as broadcast frequencies.

Four hundred years ago, Sir Edward Coke complained that companies "cannot commit treason, nor be outlawed or excommunicated, for they have no souls." Two hundred years ago, the Lord Chancellor, Edward Thurlow, echoed his words, "Corporations have neither bodies to be punished nor souls to be condemned, they therefore do as they like" (see "The Company, A short history of a revolutionary idea", by John Micklethwait and Adrian Wooldridge).

Fifty years ago, George Orwell remarked that what undermines the integrity of journalism is not so much the bad

behavior of individuals who lie or plagiarize when they know they shouldn't, but the potential for corruption implicit in the way the media is concentrated into the hands of fewer and fewer proprietors.

John Cornwell, author of Hitler's Scientists, quotes Orwell, and sums it up similarly for science: "The circumstances that erode the integrity of well-ordered science and that work to undermine freedom, pluralism and the serendipity of discovery are not so much the bad actions of individuals as the stranglehold of the proprietorship of science itself.

This was all too obvious under Hitler, when the regime intervened to control funding and appointments on the basis of their usefulness to the aims of National Socialism. But the same tendency has been evident under our more or less democratic systems throughout the 20th century and into the 21st".

"Scientists are increasingly dependent on their paymasters for opportunities and appointments, and to be published. What is more, the proprietors of Science—Governments, Health Authorities, commercial interests and the military—end up owning the knowledge they acquire through intellectual property rights and patenting.

"The ownership principle is the most insidious feature of the corruption of Science, and has been increasingly dominating Science since the end of the Second World War." "We saw it during the cold war in the form of the Military-Industrial complex.

"But there was no let-up after the fall of the Berlin Wall, and there has been a huge boost in the privatization of knowledge in the 1990's, especially in biology. Following 9/11, things threatened to become far worse, as Science in the US comes to be measured according to whether it is for or against the security of the American Homeland in the War on Terrorism . . . The silence and indifference of scientists have enabled their paymasters to undermine the integrity of science

with impunity" (New Scientist, 27 Sept. 2003 p25).

Like essential blood coursing through the aging human circulation, the world's information flows around many obstructions and via many alternate channels to reach those that need it. Useful information that is shared, modified and enhanced, increases in quantity and value without limit, enriching information donors and recipients alike.

But if the free flow of information ever stops, freedom dies and the body politic soon rots. When gold is shared, it enriches the recipients but reduces the wealth of the donor by an equal amount. In other words, gold is a classic zero-sum possession, as well as difficult and dangerous for a person to carry (something the soldiers with Cortez soon learned).

But except for criminal or military secrets, it is rarely burdensome or dangerous to bear lots of useful—hence valuable—information in one's mind. Open access to information—and a proper education that enables information utilization and improvement—has finally empowered the ordinary people who previously were always used, cheated, abused and discarded by powerful and secretive rulers of various States and religions.

The former Soviet Union found it could not compete without open access to information. Subsequently it learned that it could not survive with open access to information. So the Soviet Union fell apart because it lost legitimacy and authority over citizens who finally understood that a better life required an open system.

Currently China, Iran, Saudi Arabia, the Roman Catholic Church and North Korea are in varying stages of denial as they face organization-wide problems brought on by the modern world's inescapable openness to information about freedom, corruption and abuse.

For corruption requires ignorance and promotes generalized poverty, while information paves the way toward

general prosperity, happiness and freedom. So when you notice an increase in corruption and governmental abuse (as in this country under Bush-I and Bush-II), and if you see a general decline in prosperity, happiness and freedom (as in this country at present - except among a few “lucky” folks), you can assume that the fix is in, and that you are being fed biased, incomplete and untrue information.

In many ways, the Founding Fathers invented, developed and popularized the whole concept of Freedom of the Press and Freedom of Speech. The initial ten amendments to the Constitution of the United States of America—ratified in 1791, are known as the “Bill of Rights.”

The First Amendment in that Bill of Rights declares that Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble, and to petition the government for a redress of grievances. Yet all of these rights are now endangered.

While Bush II "served", Christian Fundamentalist dogma prevailed in high Government circles as Governmental corruption and the Patriot Act threatened our other freedoms and rights. “What’s more, the media industry now operates like a cartel . . . big media players control both programming and distribution. Five companies own all the broadcast networks, four of the major movie studios, and ninety percent of the top fifty cable channels.”

“Deregulation is leading to fewer choices, not more . . . The media giants’ incestuous relationships bring to mind the economy of South Korea, which was dominated by giant conglomerates until the late nineteen nineties when it had a meltdown . . . Their sheer size and their connections to the government (and to each other) insulated them from competition” (James Surowieki, New Yorker, June 16, 2003).

These criticisms apply equally to our nation's newspapers and magazines, which have largely been acquired, bled and tamed by large Corporations. As a result, the information most important to our freedom often appears only in major foreign publications or alternative American papers and magazines.

For the reporters in mainstream Republican-owned and directed newspapers and magazines are on a short leash when it comes to rooting out corruption, harassing the rich or representing the poor and downtrodden.

That is why we were saturated with information about Monica Lewinski, yet uninformed about secret proprietary software that controlled touch-screen voting machines. That is why technologically stolen elections—a huge and growing threat to democracy worldwide—have had no exposure in the remaining major American newspapers.

And why we see countless references to the "hanging chads" that excused Bush-II's thuggish election victory in 2000. For those chads are supposed to remind us of how great life will be when every voting place is filled with efficient no-recount Republican-owned touch-screen voting machines that only elect compassionate conservatives.

Information makes the difference between satisfaction and death in the Australian Outback or the Kalahari Desert. And the simple radios in Somaliland, or the basic cell phones of rural Latin America and Africa, have finally provided essential equal access to uncensored market information that can do such wonders for a local economy.

Information's critical importance explains why public education is such a bargain for all, whether they are parents or not. For when children become highly educated and increasingly productive, we all become richer through new insights, new businesses, new products, and less damaging ways to relate to each other and to the environment upon which all life depends.

That is why we need to invest public money in all young adults who seriously seek a college education, as well as in all older folks who can still benefit by retraining. Between excesses on the right and left, our great nation passes repeatedly through the happier middle ground.

Currently, we are only beginning another major swing in which populist leaders with few conflicts of interest increasingly resonate with the public's revulsion for conservative greed, and will guide our nation back toward the trust and concern for each other that underlie a decent society and can renew our national self-respect.

Nations gain respect when they guide others to prosperity

At this critically important juncture in human history, we—the most fortunate people on Earth—urgently need to restore our nation's positive international influence. To best support the battle for human freedom, health and prosperity around the world, we should subsidize world-wide access to education, disseminate only objective, useful information and avoid spreading disinformation for short-term gain, since misleading others inevitably weakens our main message.

Truly caring for and helping the needy (in contrast to claiming compassion while stealing for the greedy as Bush-II did) delivers humanity's most positive message. And the powerful impact of that message on all recipients is its own greatest reward. This means we should do all we can for the other inhabitants of this shrinking world—even if an easily affordable part of that assistance must come from our own pockets.

Greed, good deeds and terrorism are all equally infectious. Sufficient exposure to any of the above can trigger an epidemic. And once a person reaps attractive rewards by being seriously greedy (like Bush-I and Bush-II and their Republican minions), or becomes respected by peers for doing

good (like Gandhi, or Mother Theresa), or through acts of terrorism (Arafat), he or she develops increasing immunity to those other infections.

In both World Wars of the twentieth century, American power rescued the entire world—at a great cost in American lives. Even after the U.S. and its allies successfully defended freedom during World War II, America continued to support World-Wide economic and social recovery under President Truman, while also maintaining a fearful balance of military and thermonuclear power throughout the Cold War.

Those too young to remember need to hear that an abject response of many on our far left to Russian Communist military expansion was "Better Red than dead!" Luckily, that preference for surrender proved misguided on all counts. And just as American intervention saved the world from both Hitler and Stalin, we must now mobilize our courage and assets to undertake the next great effort for the sake of all our children, and their children and children's children.

And the outcome of this renewed worldwide battle between evidence-based education and militant religious fundamentalism, whether it is a home-grown fanaticism or one originating outside our Nation's borders, may turn out to be as important as any previous battle against inquisitorial thought.

For our information-rich civilization can only lead humanity toward new openness, freedom and prosperity if it sustains the critical separation between parochial religious interests and State power. But as Karl Popper pointed out (see Conjectures and Refutations—The Growth of Scientific Knowledge), an Open Society that encourages the continuous investigation and assessment of Nature and social relations has many enemies.

Most humans prefer certainty and order. *Innovations and change threaten that orderliness. As we have seen throughout this book—even in Health Care! - thought systems tend to close*

down, solidify and put up increasing barriers to possibly subversive or dangerous new ideas. The Glass Bathyscaphe by Macfarlane and Martin offers an insightful exploration of how the science and technology of glass provided a new way of seeing that led to The Renaissance.

As Voltaire said, "Doubt is uncomfortable and certainty is ridiculous!" And if by our actions or inactions, we again cede our Government to ignorant and corrupt crusaders and hucksters—while similar minds abroad in Saudi Arabia, Iran, and other Islamic nations subsidize terrorist attacks on our modern civilization—then soon enough those who prefer certainty will rally to restore the dark and bloody times when anachronistic interpretations of some Holy Book were imposed by the sword and the stake.

Most of us are so deeply immersed in our daily trials, tribulations and triumphs that we cannot pay adequate attention to politics or to Big Corporations or to the welfare of those in need. Yet, as I have tried to show, these are the basic elements of our current health care crisis.

Like many books of our information age, this book offers a different viewpoint buttressed by useful bits of information acquired over a long lifetime. The appropriate use of that information has helped others. May it serve you as well.

In his Dedication of the National Cemetery at Gettysburg, Abraham Lincoln spoke of “the great task remaining before us... that we here highly resolve that the dead shall not have died in vain, that this Nation, under God, shall have a new birth of freedom; and that Government of the People, by the People, and for the People, shall not perish from the earth.”

The Bush Administration was obviously not a government of the people, by the people or for the people. Rather it was a government of, by and for wealthy

Corporations. Although Obama has tried hard to be fair and become useful over his first term in office - for the good of this Nation and the World - "**We the People" must now regain control of our local, State and National Governments *by eliminating all Corporation dollars from politics* through a Constitutional Amendment.**

AFTERWORD

The Big Health Picture as the 21st Century began

How the Supreme Court, Republican Politicians and the Medical-Industrial Complex ***swindled*** *U.S. Health Care*

Americans favor the Golden Rule but seem overly tolerant of greed. Did President Bush and the Republican Congress even try to solve America's health care problems? Should we trust our leaders so much? No true patriot would harm America and the World Economy this way.

Strongly held religious views notoriously equate with illiberal certainty. Corporations lose their edge when they loot. Elections rarely resolve health care issues. Corporate lobbyists "adjust" wages and taxes. Looting by Corporations may double health-care costs! Palliation is profitable and ongoing, while a cure harms everyone but the patient.

Things rarely turn out as expected. Health insurance is not a simple matter. Big Pharma favors Prescription-and-Health Insurance. Are excessive payments to the Medical-Industrial Complex or Socialized Medicine our only options?

When the widely anticipated benefits of penicillin and polio vaccines were finally realized, most observers assumed that similar publicly funded investigations would soon deliver inexpensive cures for a host of other common disorders. *In fact, pundits predicted better health care at lower costs for the foreseeable future!*

Readers who track quarterly profits of multinational pharmaceutical corporations ("Big Pharma") - or those who cannot afford health insurance and are truly offended by multimillion-dollar compensation packages for health-care-related Corporate CEO's - may be astonished to learn that no

one sought or reaped great wealth through the development or marketing of penicillin or of polio vaccines.

Nor were either of these life-saving products expensive. For scientists on ordinary government and academic salaries did the research and development, and oversaw initial production, while major drug manufacturers remained aloof and uninvolved. Moreover, penicillin—and then polio vaccines—were immediately "sought after" worldwide *without any need for advertising.* Naturally, those responsible gained great international esteem.

Winston Churchill was among the first to receive penicillin when he came down with life-threatening pneumonia in 1943 on his return from Algiers. Adolph Hitler, too, was treated with penicillin produced by the Allies (perhaps acquired via diplomatic pouch from Spain), after a July 1944 assassination attempt by time-bomb left him with severely infected wounds.

Eventually penicillin saved uncounted millions of lives, probably including Churchill's. But by keeping Hitler alive until late April 1945 when he shot himself as Russian soldiers neared German Headquarters in Berlin, penicillin also facilitated misery and death for many millions more (New Scientist, 16 Sept, 2003).

In any case, unprecedented progress in medical science and technology over the last fifty years did enable most Americans to live longer, healthier lives. And rising personal incomes, along with a growing public demand for clean air, wholesome unadulterated food and better housing, enhanced that beneficial trend.

For example, less crowded housing, better nutrition, pasteurization of milk, and mundane advances in personal and public hygiene—including "No expectorating!" signs in all subways—helped to reduce the spread of tuberculosis.

Similarly, food inspections and sewage treatment (or at least its diversion from public water supplies and beaches) conquered cholera, while new vaccines increasingly undercut epidemic diseases of childhood. So why was another book on problems in health care needed now?

This Afterword reviews the reasons why those initial, significant, easily afforded improvements in public health and life expectancy could not deter a relentless escalation of health care costs. And why an average uninsured worker, hospitalized for a week or two with a serious illness or injury, may be wheeled out with dozens of "Get Well!" cards in one hand and over $200,000 in medical and hospital bills in the other.

Those huge bills expose a particularly egregious aspect of being uninsured (and nearly a third of all Americans under 65 years old were uninsured for all or part of 2001 and 2002); namely, that ***uninsured patients are likely to be charged three to ten times more for hospital services than the discounted prices large health maintenance organizations (HMOs) negotiate for those same services.***

And according to The Wall Street Journal, while doctors can only collect negotiated fees from the Government and other large insurers, they are "free to charge the uninsured two or three times more for the same services." One can only hope that this freedom is rarely exercised, for uninsured medical debts regularly force sick citizens - some still in hospital - into the clutches of Collection Agencies or paying unbelievable Credit-Card rates until bankrupt and homeless.

An August, 2003, Associated Press report on the twelve months ending June 30, said personal bankruptcy filings reached a new all-time high of 1,613,097—up 10% from the previous year. Meanwhile business bankruptcies were down 5% to 37,182—according to the American Bankruptcy Institute of Alexandria, Virginia.

Americans favor the Golden Rule but are overly tolerant of greed

Almost a decade ago, a tiny nonprofit group—the Council of United Latinos in East Los Angeles—publicly chastised Tenet Healthcare Corp (the second largest US hospital chain) and Nashville-based HCA Inc. (the nation's largest hospital chain) for "gouging" uninsured patients.

In response, Tenet said it would start giving uninsured patients similar discounts to those demanded by managed-care companies. Tenet even promised to stop placing liens on or seizing people's homes for non-payment of hospital bills.

Then in August of 2003, Tenet agreed to refund $54 million it received from Medicare for *unnecessary diagnostic procedures and heart operations* performed on hundreds of healthy patients at a Tenet hospital in Redding, California. Attorneys for two Redding heart specialists pointed out that while others might disagree with their clinical decisions, *they did nothing illegal.*

In contrast, HCA—founded by the father of former Senate Republican Majority Leader Bill Frist, controlled by the Frist family, and run by the Senator's brother Thomas—merely offered a sliding scale of discounts based upon income. That offer was denounced as "meaningless fluff" by K.B. Forbes of United Latinos, who stated that HCA was still gouging uninsured patients in order to raise the $1.7 Billion it had agreed to pay to settle Medicare-Fraud allegations.

Did President Bush and the Republican Congress even want to solve America's health care problems?

Senator Bill Frist, M.D. took a lead role in President Bush's effort to overhaul Medicare. Yet Dr. Frist's own family (and his huge personal blind trust) pulled off the largest Medicare fraud ever detected. Not surprisingly, therefore, the Medicare bill finally signed with great fanfare by President Bush, was a classic "bait-and-switch" operation cleverly crafted to entice

seniors out of Medicare permanently by offering confusingly complex drug benefits through temporarily subsidized HMOs.

To reward Big Pharma Corporations for their political contributions—and minimize Medicare's options during his drive to privatize elder health care—Bush prohibited Medicare from negotiating drug discounts such as those routinely demanded by all other health-care organizations including Frist's HCA.

Comparable gifts went to Health Care Insurance Corporations and other members of the Medical-Industrial complex. Bush's Medicare bill even subsidized employers "to help them maintain prescription drug coverage for their retirees." Yet (as pointed out by the Wall Street Journal) it still allowed employers to severely reduce their coverage for retirees without losing that $86 Billion subsidy.

Of course, had Bush been serious about helping retirees cover drug costs, he would have subsidized their costs directly. Comparably conflicted Republicans have taken charge of our nation's other henhouses. So our environmental and air pollution regulations—as well as our Wilderness and National Parks rules—have been rigged to favor *extractive industries* (e.g., Bush's "Healthy Forests" plan) *and other polluters* (Bush's "Clear Skies" initiative), thereby degrading the health, welfare and environment previously enjoyed by ordinary Americans.

And rather than defend our Constitutionally guaranteed individual rights, as he was sworn to do, Attorney General Ashcroft promoted unprecedented Governmental intrusions through Patriot Acts I and II. Yet in deference to the NRA, Ashcroft wouldn't allow the FBI to end terrorist purchases of firearms in America (see The Week, Dec. 19, 2003 p14).

But Ashcroft was relentless in pursuing his own religious goals. For example, in early 2004, "Ayatollah" Ashcroft and his religious police (doing business as the U.S. Department of

Justice), issued subpoenas to at least six hospitals for the medical records of patients who had undergone abortions. The Department claimed it needed those records to enforce the Federal Partial Birth Abortion Ban Act.

When some hospitals resisted on grounds of patient privacy, *the Justice Department wrote "No Federal Common Law" protects the confidentiality of the patient-doctor relationship, and patients "no longer possess a reasonable expectation that their histories will remain completely confidential"* (see Lancet, Feb 21, 2004 p626).

Should We Trust Our Leaders So Much?

In a L A Times article (Anchorage Daily News, Jan. 16, 2004) titled Bush Dynasty's Mideast Links Warp U.S. Policies, Kevin Phillips details "how four generations of (The George W. Bush) family have embroiled the United States in the Middle East through CIA connections, arms shipments, rogue banks, inherited war policies and personal financial links" including arms-sales-scandals known as "Iran-contra" and "Iraq-gate"—the latter being when our government provided Saddam Hussein nuclear know-how, bacterial warfare cultures and conventional weapons for use against Iran.

Phillips points out how former-President George H. W. Bush (Bush-I) and all of his sons prospered through long-term fiscal relationships with Kuwaitis, Bahrainis, Saudis (including the bin Laden family and Saudi Royalty), Iranians and Iraqis. And how, after all of his oil ventures had failed (see Audit This, New Republic, July 22, 2002, p46), George W. Bush (Bush-II) still made a fine profit selling his moribund oil business to Harken Energy, which had close relations with Abu-Dhabi-based BCCI, nicknamed "Bank of Crooks and Criminals, International."

So what did Bush-I do as America's CIA Director, Vice-President and then President, to earn that remarkable foreign

bailout for Bush-II? Indeed, how could Bush-I and Bush-II possibly have repaid all the foreign fiscal favors that rained down upon the entire Bush family? Or did 9/11 victims and the US Military eventually pay in blood for the Bush family's foreign financial machinations?

Phillips closes pointedly, "the Bush dynasty's many decades of entanglement and money hunting in the Middle East have created a major conflict of interest that deserves to be part of the 2004 political debate (it wasn't). No previous presidency has had anything remotely similar. Not one." (see also Phillips' American Dynasty: Aristocracy, Fortune, and the Politics of Deceit in the House of Bush).

Like other long-time Bush family friends, Dick Cheney benefited handsomely, even when performing his sworn duties for the United States. In fact, *while he was our Vice President,* Cheney received a sudden $40 million payment for "**previously performed services"** as CEO of Halliburton—with more money reportedly on the way—just before Cheney awarded multi-billion dollar noncompetitive contracts to Halliburton for work in Iraq.

In early 2004, a persistent French investigation finally forced Ashcroft's Justice Dept. and the SEC to open an official inquiry into Cheney's possible violation of the Foreign Corrupt Practices Act. For while Cheney was Halliburton's CEO, its Kellogg, Brown and Root subsidiary allegedly paid Nigerian officials $180 million for the right to participate in a lucrative $4 billion Nigerian natural gas project.

Saudi Arabian kings and princes take many wives and beget lots of sons. In recent years, thousands of greedy Saudi princes have impoverished Saudi businesses and decimated the Saudi Arabian middle class through extortion and other corrupt practices. A few of these princes also directly or indirectly helped finance the September 11th attack on the World Trade Center, in which 15 of the 19 terrorists were

Saudis. On the other hand, Saudis gave generously to Bush-I's Presidential Library—and they granted lucrative contracts to Halliburton while Cheney ran that company.

Interestingly, the main legal firm that defended Saudis against families of September 11 victims was Baker Botts—run by James Baker who was Bush-I's Secretary of State and also *"the tactician behind Bush-II's extra-legal victory in Florida"* that made Bush-II President (see Audit This—New Republic, July 22, 2002, p46, and Bush's Saudi Connections—The American Prospect, Oct. 2003 pp 15-17).

And right after 9/11, President Bush-II allowed the entire bin Laden clan to flee the US before they could be interrogated by the FBI. Then in late 2003, with sudden pre-election urgency, our Government made large payments to the 98% of 9/11 victim's families who agreed not to sue the US airlines ***or others involved!***

When Congress agreed to his long-planned go-it-alone imperialistic takeover of Iraq, Bush-II mentioned a personal motive for invading Iraq—that Saddam had threatened his father (Bush-I). He also revealed a religious motive—calling America's military involvement in the Mid-East a "Crusade" (defined as a Christian, religiously motivated, war or campaign, especially one to retake the Holy Land from Muslims).

However, Bush-II never publicly admitted that he was invading Iraq because its huge oil reserves seemed up for grabs. But he did propose (contrary to all intelligence—see Jan/Feb 2004 Atlantic Magazine) to finance his war in Iraq by selling Iraqi oil. *And he predicted that Iraqi oil sales would repay American Corporations for rebuilding Iraq.*

It now appears that Cheney's Energy Task Force reviewed "operational policies toward rogue states" as well as "actions regarding the capture of new and existing oil and gas fields" in February of 2001, well before the 9/11/01 terrorist attacks. Not surprisingly, Cheney has refused to release any

information on these private task force meetings—since they were supposed to be about domestic energy policy.

"But if this little group was discussing geo-strategic plans for oil, it puts the issue of (the Iraq) war in the context of the captains of the oil industry sitting down with Cheney and laying grand global plans." In any case, Bush-II's Iraqi venture placed much of our active Army in harm's way as an occupying force.

That war also damaged our international credibility and proved very costly. As a result, not long after Bush-II declared the European Union and United Nations "irrelevant" (for not supporting his war), he had to ask the EU and UN for help in coping with the war's aftermath. And it turned out that Halliburton's initial small contract "to put out Iraqi oil well fires" (though no Intelligence Agency anticipated many fires) included a classified provision to restore "the entire oil infrastructure in Iraq."

Soon the Coalition Provisional Authority under L. Paul Bremer requested additional US funds to build a new Iraqi oil refinery and drill new wells. As US Congressman Henry Waxman then asked, with Halliburton getting paid to improve Iraqi oil facilities, who will own these upgrades after the US Government has finished paying to build them? "Who knows? Nobody is saying." (New Yorker, Feb. 16/23 2004 pp80-91).

During the first three years of his quest to reduce taxes on Big Corporations and wealthy Republicans, Bush-II converted an estimated ten-year budget surplus of $5.6 trillion into an estimated ten-year budget deficit of $2 trillion to $6.7 trillion. During the same period, the U.S. Government's annual expenditures rose to $400 billion over earnings.

Congressional Budget Office figures expected 2004's budget deficit to exceed $520 billion. At that point, America's trade deficit (the dollar value of what we sell to other lands minus what we buy from them) would have exceeded 5% of

our gross domestic product. And we already owed the rest of the world $4 trillion, which was "something totally unprecedented."

Indeed, early in 2004, *the IMF warned* that US budget and trade deficits threatened the entire global economy. For as world financial markets lose confidence in the dollar, they will quit financing our trade and budget deficits. This happened to Argentina, Brazil and Indonesia, and their economies crashed. When the US dollar goes into free fall, our interest rates must zoom to attract loan money, collapsing the US economy too.

Indeed, by early 2004, most foreign investors had stopped lending money to the USA. But to keep their own economies growing, China and Japan lent America still more dollars so we would pay for their goods. After all, the USA is the world's biggest market, so when we crash, they crash. Think of it as global extortion, or an international game of "chicken" (see New Yorker, Dec. 15, 2003 pp41-2, also Business Week, Dec. 29, 2003 p32 and Jan. 19, 2004 p20).

Bush-II's budgetary and trade deficits—***and his strong support for outsourcing American jobs overseas to enhance Corporate profits***—undermined our military capabilities and weakened the US economy. During Bush-II's Presidency, several million jobs disappeared—many overseas. Most of our states also faced major cuts in social services and education (see The Bush tax cuts are sapping America's strength, Business Week, Aug. 11, 2003, p22).

A commentary in Business Week claimed that *Bush-II intentionally "exposed the nation to a long-term fiscal crisis . . . (in order to force) a big reduction in Government spending on social programs"* (see Bush's Borrowing is Sapping Our Strength, Business Week, Jan. 19, 2004 p24).

No true patriot would do this to America and the World economy

Consider the following analysis: “The reigning ideologues (then) in Washington—not only in the Bush-II White House but also in the Republican Congressional leadership, in the dominant faction at the Supreme Court, and in the conservative press and “Think Tanks”—believe in free markets, individual initiative, and private schools and private charity as substitutes for public provision . . .

They do not . . . believe that society, through mechanisms of democratic government, has a moral obligation to provide care for the sick, food for the hungry, shelter for the homeless, and education for all . . . They believe . . . that taxes are a species of theft.”(New Yorker, June 9, 2003 pp 39-40).

This philosophy became dominant during the same recent decades that upward income mobility (which had made America “the land of opportunity”) also declined markedly. Indeed, Federal Reserve studies indicated in 2001, that the richest 1% of families held 34% of America’s net worth, and the top 10% of families held over 70% of all assets, while the poorer 50% of all families owned less than 3% of America’s wealth.

(And) that recent “sharp growth in income and wealth inequality . . . is likely to worsen, particularly if the estate tax is eliminated . . . (and) may yet become a contentious political issue”—a*nd could lead to social unrest or even class warfare* (Business Week, June 30, 2003 p28).

Political conservatism has been the subject of many psychological studies. One overview of studies from around the world, titled Political Conservatism as Motivated Social Cognition by Jost, Glaser, Kruglanski and Sulloway, appeared in Psychological Bulletin (Vol. 129 No. 3, 2003 pp339-375).

Their conclusions, in part, are as follows: “Variables significantly associated with conservatism . . . include fear and aggression . . . dogmatism and intolerance of ambiguity . . . uncertainty avoidance . . . need for cognitive closure . . .

personal need for structure, terror management . . . group based dominance . . . and system justification . . . these psychological factors are capable of contributing to the adoption of conservative ideological contents."

"The avoidance of uncertainty (and striving for certainty) may be particularly tied to one core dimension of conservative thought, *resistance to change* . . . Similarly, concerns with fear and threat may be linked to the second core dimension of conservatism, *endorsement of inequality*."

So again we ask, why would sensible persons who are already comfortably well-to-do, risk socially destructive outcomes to save a few tax dollars? Well, why not? After all, religions are widespread. And religions generally prosper by valuing their own theories above the survival of others. During the past century, Marxism and Fascism joined that terrible trend.

But surely, the greediest rich person alive cannot possibly crave the measly 3% of national wealth remaining in worn pockets of the poorest half of American families? Well, David Kay Johnston's book, Perfectly Legal—the covert campaign to rig our tax system to benefit the super rich—and cheat everyone else (reviewed in Business Week, Jan. 19, 2004 p 20), points out how American Corporations routinely save billions by fleeing the US for the Caribbean.

*And how **the alternative minimum tax** was set up to wipe out Bush tax cuts for tens of millions in the middle class* who—along with the poor—increasingly pay our costs of government.

Strong religious views notoriously equate with illiberal certainty

Might such views also underlie various risky and aggressive actions taken with great certainty by Ronald Reagan (who believed "End Times" were near), Bush-II (who is born-again), Ashcroft (who conducted intense daily prayer groups in

our Halls of Justice) and many others who occupied high executive, legislative and judicial offices at that time?

Christian fundamentalists pray fervently that Jesus will soon return. The millennia that ended at 1000 CE and 2000 CE, rather than being recognized as *ordinary odometer events*, were celebrated with great religious expectations. Thus 2000 to 2001 generated a wave of religiosity that has yet to abate.

Many religious folk view wealth as a sign of God's favor. Might this view encourage an attitude of "the more the better" even beyond ordinary avarice? And if the uncontrolled avarice of a few caused many others to become poor, might that improve the rich man's odds of Recognition and *Rapture*?

More importantly, if "Extremism in the service of the Lord is no sin," how could our American Fundamentalist Christian President Bush-II (by definition, a true believer eagerly awaiting Armageddon) resist the temptation to build enough nuclear weapons to incinerate the world without caring about the security or disposal of existing foreign nuclear weapons.

And how could he resist waging Holy War on those who "worship Idols"—or resist stirring up famine and social unrest—in hopes of thereby persuading Jesus to come back sooner? And finally, were those Fundamentalist leaders trying to convert America into the most powerful military theocracy the world has ever known? *Was that why the religious-right judges of our Supreme Court rushed to appoint Bush-II President, despite admitting they had no legal precedent or Constitutional justification for that precipitous decision?*

In turn, Bush-II insisted upon appointing openly religious judges who strongly opposed the Constitutional separation of Church and State. Was this simply to rally Evangelical Republicans? Or might Bush-II really have been trying to convert the United States into a Theocracy?

It seems appropriate to recall the years when John F. Kennedy sought the US Presidency. In those less "politically

correct" times, there was openly expressed nationwide concern that Kennedy—if he became our first Catholic President—might do the Pope's bidding rather than pursue our Nation's best interests. As it turned out, Kennedy only became our 35th President after vowing to promote his country's best interests even if that meant ignoring or disagreeing with the Pope.

In contrast, Bush and his highly religious supporters apparently saw no difference between their own fiscal or religious goals and the nation's best interests. So to boost corporate incomes and free more soldiers for fighting Bush's wars, the US military supply system was privatized.

But after the Iraq war, "some contractors refused assignments to dangerous parts of that country. Which left American troops sitting in the mud, and without hot food . . . (And when) two South Korean subcontractors who had been repairing the Iraqi power grid were killed . . . sixty of their colleagues just up and quit" (see Army, Inc, New Yorker, Jan. 12, 2004 p27).

Obviously, when private contractors refuse to enter especially dangerous areas, this deprives and endangers our troops. Indeed, some US soldiers in Iraq allegedly died of thirst and hyperthermia while on an inadequate water ration from a private contractor.

Furthermore, it is irrational to anticipate savings through outsourcing under cost-plus contracts—since the higher those costs, the greater a contractor's profit. But "The ultimate fear . . is that contractors under extreme duress will flee en masse, exposing U.S. soldiers to catastrophic risk" (Business Week, Sept 15, 2003 p78).

According to The Week (Sept. 26, 2003 p18), by late 2003, an estimated 10,000-20,000 (quite possibly many more) contract employees were working—and sometimes fighting

and dying—in Iraq, though their occasional anonymous deaths, like those of Iraqi civilians, were rarely noted officially.

As of Feb. 2004, Halliburton alone had 7,000 employees on the ground in Iraq. And by offering annual salaries of $80,000-$100,000 “in a US economy that isn’t producing many new jobs,” Halliburton was easily recruiting 500 unemployed or underemployed blue-collar workers per week to Houston for interviews. Those who passed the physical and background checks were issued military IDs and dispatched directly “without a trip home for a final goodbye” (see Anchorage Daily News, Feb 6, 2004 ppD1 and D4).

In addition to enriching Halliburton, Bechtel, Fluor and other huge corporations through cost-plus contracts (since contract workers earn four to five times more than the combat salary of a fully trained soldier), civilian workers are not our government’s responsibility. Thus privatization minimized official US casualties.

More importantly, privatization made it "too easy to go to war . . . When you can hire people to go to war, there is none of the grumbling and political friction.” Especially when scut work being contracted out to firms like Halliburton would usually be “performed by reserve soldiers, who often complain the loudest.” (New Yorker, Feb 16, 2004 p87).

Cost-plus contractors in Iraq generally provided their own security, so they frequently bid against each other for experienced former commandos—often paying $1,000 and up to $2,000/day. Local Iraqi workers generally got $200/month—though some firms charged their cost-plus accounts “ten times that” for each worker (see Washington Post National Weekly Edition, March 1-7, 2004 p18).

During the initial invasion of Iraq, our soldiers were often ill equipped. Many bought their own Kevlar vests and other necessities including mosquito netting, gloves and undershirts. Their Vietnam era M16 rifles were notoriously unreliable and

easily jammed. And instead of requiring manufacturers to install aircraft survivability packages in all combat helicopters, a Pentagon spokesperson said it was up to unit commanders to install anti-missile equipment (if they could find any).

Military hospitals in Iraq were chronically under-equipped, lacking essential supplies that staff could only purchase using personal credit cards. And after flying to Iraq to serve a beautiful photo-op turkey to our troops *(which they never got), Bush-II tried to reduce soldier death payments* below $6,000 (but Congress raised them to $12,000).

Bush also threatened to veto a bill if it included important veteran's health benefits for service-related disabilities. And he refused to let terribly mistreated POWs from the 1991 Iraqi war collect settlement money they won at trial because "the U.S. now controls all Iraqi funds" (see Hightower Lowdown, Feb. 2004 and www.hightowerlowdown.com).

Of course, our business, banking, communications, energy, food and drug, and stock market regulations underwent revision by similarly sticky fingers. And we are not surprised that so many close relatives of Scalia, Rehnquist et al were given high Bush Administration posts soon after Scalia, Rehnquist et al chose Bush-II to be our next President.

Nor are we astounded that the number of top federal-wage earners more than tripled during Bush-II's first three years. In addition to an overall 5% increase in the number of federal employees (spread over most agencies), the Bush-II government *added more than a million jobs to the indirect or off-budget payroll.* As Economics Nobelist George Akerlof pointed out *"This is not normal government policy . . . What we have here is a form of looting.*"

Corporations may lose their edge when they loot

A non-profit organization called Public Campaign (publiccampaign.org) has compiled information on the

enormous financial benefits regularly elicited through comparatively small campaign contributions. For example, *top Corporations that paid no taxes from 1996-8* included AT&T, Bristol-Meyers Squibb (Big Pharma), Chase Manhattan Bank, Enron, Exxon Mobil - in 2003, the world's biggest, most profitable Oil Company (clearing $22 billion on revenues of $247 billion), GE, Microsoft, Pfizer (Big Pharma), and Phillip Morris (Big Tobacco).

These giant corporations together gave a decisive $150 *million* to political campaigns from 1991 to 2001—which elicited $55 *billion* in tax breaks between 1996-1998—plus a gutting of corporate taxes and many billions in direct rebates (a.k.a. "corporate welfare payments"). An equally careful planting of $318 *million* in contributions helped resource-extracting industries reap $33 *billion* plus lax regulation and *permission to pollute without cleanup.*

It was once believed that quality products and happy workers enhanced a manufacturer's long-term prospects. But in these rapidly changing, hyper-competitive, globalized times, long-term prospects often arouse less concern than meeting the next quarter's expectations, as hugely overpaid CEOs make frantic efforts to boost the price of their own stock options.

Who you know (connections within corrupt local or national governments) can be far more important to a company's bottom line than what you know. But the downside of increasing dependence on governmental largesse is seen in sales lost by Detroit automakers to Toyota and Honda, and Boeing's declining ability to compete with Airbus.

For when every corporate dollar spent on campaign contributions, lobbyists, influence peddlers (often former congresspersons or their relatives, or former insiders from regulatory agencies) and lawyers, adds many hundreds more dollars to the corporate bottom-line than a corporate dollar invested in research and design or manufacturing, both

product development and labor relations are inevitably neglected (see Business Week, Dec. 29., 2003 p43).

A Washington Post article by Peter Slevin (Oct. 31, 2003)—based on findings by The Center for Public Integrity—claims that all major non-bid contracts granted to huge Corporations in post-war Afghanistan and Iraq, went to heavy Republican campaign contributors such as Halliburton and its Kellogg, Brown and Root subsidiary, Bechtel, Fluor, Washington Group International, Perini Corp and Science Applications International Corp (SAIC).

Many of those awards did not even clarify what the contracts included, or what amounts were awarded—thereby making Congressional or public oversight of performance, expenditures and profits impossible. By the way, *"patronage"* refers to appointments or privileges that politicians give to loyal supporters while *"corruption"* is the dishonest exploitation of power for personal gain.

Elections rarely resolve health care issues

To deal with the voting system failure that allowed Bush-II to become President in 2000, *the Republican Congress allocated $4 billion for the privatization of American elections* by installing new paperless touch-screen voting machines around the nation before the 2004 election.

By late 2003, over thirty-three thousand of those machines from Diebold, Inc. (whose strongly partisan CEO, Wally O'Dell, confidently predicted a 2004 Republican sweep in his home state of Ohio) were in place in 30 States despite (or because of) allegedly inadequate software and an apparent history of Republican abuse.

For example, Max Cleland suffered a surprise defeat in Georgia after Diebold made urgent pre-election software modifications (see below). And soon after Cleland's election upset, Diebold destroyed all memory cards of those voting

machines—even though paper ballots must legally be kept for 22 months.

New Scientist (Nov. 3, 2003 p5 and Jan. 24, 2004 p5) reported, “Over half the votes cast in US elections are now processed in machines designed by Diebold Electronic Systems, based in North Canton, Ohio . . . (yet) students and academics at 40 US universities . . . have posted a series of memos leaked by Diebold employees that confirm security flaws in Diebold software (and) . . . highlight a host of additional problems.”

“These include admissions from Diebold engineers that their software allows employees to fake thousands of votes, and that certain software upgrades already used in elections were never approved by the relevant testing authority.” Furthermore, it was alleged that Diebold machines can easily be manipulated by hackers. Diebold’s response has been to threaten any University posting details about their software with legal action for breach of copyright.

Observers regularly comment on *the recent polarization of the American electorate* into two extreme groups, along with the disappearance of a moderate middle. Many Democrats remain furious about Bush-II’s thuggish and well-organized theft of the Presidential election in 2000, and his subsequent shameless transfer of our national assets to the rich who supported him.

On the other hand, many “borrow-and-spend” Republicans, “tired of tax-and-spend liberal whining” said “You lost! Get over it! Clinton Democrats were way worse" (that claim is impossible!) Which makes the stunning election “upset” that unseated Democratic Senator Max Cleland especially relevant.

For Cleland was a true war hero who earned a Silver Star for rescuing injured comrades under fire. And four days later, he lost three limbs while on a combat mission. Yet even Cleland

was hammered with the usual last-minute pre-election Republican smear, including accusations that he was an unpatriotic traitor!

Coming from Bush-II, this smear seemed especially absurd. After all, Bush-I served the interests of Saudi princes so well that they referred to him as "Our" President. And Bush-II went missing for over a year from the Texas Air National Guard during the Vietnam war—having requested equivalent duty in Alabama's Air National Guard so he could help a family friend run for the Senate.

But there is no evidence that Bush-II ever reported for duty in Alabama (see L.A. Times article in Anchorage Daily News Feb 4, 2004 p A3—and The Week, Feb 6, 2004 p18). Under regular army rules, an unexcused absence of up to 31 days is considered *AWOL*—a longer absence defines the individual as ***a deserter.***

Unfortunately, even the most egregious pre-election smears can mislead some voters. *But that particularly shameful smear of Cleland may just have been a smoke-screen to obscure the key role of Diebold voting machine software in Cleland's loss.* Senator John McCain, another war hero and former POW, was similarly smeared by Bush-II backers before he lost the South Carolina Presidential primary to Bush-II ***in yet another major upset.***

Not surprisingly, McCain became one of Bush's harshest critics in the Senate. And Cleland served on the 9/11 Commission, which was formed in response to strong public insistence and chaired by former New Jersey Republican Governor Thomas Kean. The Kean Commission seemed quite intent on learning what Bush-II knew about plans for the 9/11 terrorist attacks, and why he did nothing to stop them.

But Bush-II insisted that the documents they wanted to see would compromise national security. And the White House refused to let Kean make photocopies or take notes about

relevant classified documents. Bush-II initially refused Kean a several week extension for completion of the Commission report unless that report was then withheld until after the 2004 Presidential election.

At that point, a reporter for The New York Observer asked Kean if anyone in the Bush Administration had any idea that al Qaida attacks were coming? Kean replied "The President's daily briefings are classified. If I told you what was in them, I would go to jail."

Quite reasonably, the reporter concluded that Bush was told about al Qaida threats during his briefings, "including the briefing on August 6, 2001 when he was sunning himself in Crawford, Texas." This would explain why Bush-II has been impeding the Commission at every turn as "That sort of information could send him back to Crawford for a permanent vacation" (see The Week, Feb 6, 2004, p14).

The facts were supposed to become available before the November, 2004 election (but they did not). In the meanwhile, conspiracy books about Bush's role and goal in 9/11 were selling well in France and Germany, with rumors of Bush's involvement widespread in the Muslim world.

However, Kevin Phillips considered it probable that Bush-II was simply rendered ineffective by the direct conflict between his duty to take urgent steps in defense of our Nation, and his personal obligation to the Saudi financial backers of the Bush family. In fact, right after 9/11 Bush-II displayed his ultimate loyalty to foreigners by protecting those money-men from FBI surveillance and interrogation.

By the way, ***Patriotism*** *is defined as devotion to your country.* ***Treason*** *is defined as a violation of the allegiance owed by a person to his own country. And* ***a traitor*** *is someone who behaves in a disloyal or treacherous manner.*

Mark Twain once said that fiction—unlike the truth—must always be believable. He also declared Wagner's music

"better than it sounds". In contrast, an increasing number of Americans have found the Bushes and their cohort unbelievable and far worse than they sound.

ES&S was another private vendor of voting machines that ran on secret proprietary software. This corporation's former CEO is Republican Senator Chuck Hagel. Indeed, Hagel's own winning votes—including those of the first "big upset" that initially put him in Congress—were provided by ES&S voting machines. And interestingly, given Janet Reno's "surprise" primary loss in Florida, ES&S machines unexpectedly recorded no votes in precincts where Reno was strong. And with Reno out of the way, Jeb Bush was easily reelected Governor with (by?) those same ES&S machines.

SAIC (the above-mentioned heavy Republican campaign contributor and major Pentagon contractor in Iraq) is also a technology consultant to Corporations and Governments on the use of voting machines. Yet SAIC was allegedly charged with fabricating tests, civil fraud and making false claims.

Accenture is the Bermuda-based remnant of Arthur Andersen (a huge accounting corporation that once helped Bush-II's Harken Energy figure its accounts—and later was prosecuted and went bankrupt for shredding records of its work for Enron). Accenture was yet another entrant in the privatized fields of computerized voting.

The depressing list goes on (see Hightower Lowdown, Oct. 2003 or hightowerlowdown.com)—as well as Paul Krugman's commentary – "Touch-screen voting machines leave room for error (and) fraud" (Anchorage Daily News, Jan 25, 2004, H3). With such corporations vying to certify Republican victories on proprietary voting machines, our only hope for regaining representative government is to demand voter-verifiable paper audit trails on all ballots.

Fortunately, this is not rocket science. After all, paper receipts are already a standard part of every ATM

transaction—and Diebold voting machines are very similar to Diebold ATM machines.

Specifically, Hightower proposed that for secure voting on a touch-screen system, the machine must print a paper ballot of how you voted—then you verify on the touch screen that the paper ballot is correct and turn in your anonymous print-out (on ordinary paper with non-fading ink) to election officials who place it directly in a lockbox where it is kept for at least a year in case the election must be reconstituted.

With admittedly fraudulent, easily hacked voting machines becoming an important national issue, the Republican Congress promised to provide paper receipts before 2006. In the meanwhile, as Diebold and the others did not provide paper receipts to all voters by November, 2004, the only reasonable option was to insist on plain old pencil-on-paper ballots that could be optically scanned or hand-counted (and recounted if necessary) in public by friends and neighbors of every political persuasion while they watch each other closely and record how often each machine was used so that obviously incorrect machine totals can be discarded.

For without reliable paper records, one can expect many more "machine-cooked" results like the three Republican winners in one Texas county who each won by exactly the same margin—18,181. That election used voting machines with the secret software of yet another foreign corporation—Sequoia—based in England. And never forget that a Diebold touch-screen voting machine in Precinct 216 gave Al Gore ***minus 16,022 votes*** when it was uploaded at the end of Election Day (Anchorage Daily News, Jan 25, 2004, H3).

However, to achieve the purpose of this book, we still need to demonstrate if, and how, all those recent, carefully orchestrated Republican political smears, blatant lies and election frauds may have impacted America's health care, or in any way altered how we live? In other words, with so many of

our citizens convinced that most politicians are crooks, ***does it really matter which party wins?***

Fortunately, the Associated Press studied how spending patterns changed after Republicans took over Congress in 1995. It turns out that despite their continued rant about "tax-and-spend-Democrats", the "borrow-and-spend-Republicans" quickly increased federal spending (in their own words) "like drunken sailors!"

Furthermore, they *soberly* redirected Federal funds from poorer Democratic districts to wealthier Republican ones. In particular, major Corporations—ranging from Big Pharma to huge Corporate agribusinesses and other wealthy Republican campaign contributors (including some wealthy specialist physicians) received "way beyond their wildest requests."

At the same time, direct federal spending for sick people, public housing grants and food stamps was sharply curtailed. So whereas in 1995, poorer Democratic districts averaged $35 million more in federal support than wealthier Republican districts, by 2001 GOP districts averaged $612 million more than Democratic ones.

In case that message was in any way unclear, House Majority Leader Dick Armey explained, "To the victor goes the spoils" (New Republic, Dec. 15, 2003). And after Paul O'Neill (Bush-II's first Treasury Secretary) pointed out that further tax breaks for the rich would move the country "toward a fiscal crisis," Vice President Dick Cheney spelled it out, "We won the mid-terms. This is our due." Not long thereafter, O'Neill was fired and began his autobiography (New Yorker, Jan. 26, 2004 p24).

Evidently elections matter a lot! *So did Bush, like Putin, manage, or did Bush merely "almost manage" to recreate The United States as a corrupt one-party Republican-ruled country?* ***And ought we henceforth demand that United Nations***

election monitors be stationed all around the entire USA as one way to encourage fair American Presidential elections?

How Corporation lobbyists "adjust" wages and taxes

In early 2003, the Wall Street Journal was so obsessed about only the rich paying taxes, that it even labeled the poor "lucky duckys." However, if we total all taxes including sales, excise, import, payroll and state taxes, the poorest fifth of American workers paid a cumulative rate of 18% on their average yearly income of $7946. In contrast, the richest fifth paid just 19% on their average yearly income of $116,666, and that was before recent tax cuts - while three middle-income groups paid 14, 16, and 17%.

More impressive yet, an average CEO of our top 100 Corporations earned $7,452 per hour—just $494 less than the *average yearly wage* of the poorest fifth of workers)—an American Army General got $156,000/year—and a US Army Private on the ground in Iraq received $19,600/year including his or her extra combat pay (see the Hightower Lowdown, June 2003 or hightowerlowdown.com).

And for unspecified reasons, the Bush Administration simply refused to cooperate with European Union efforts to collect taxes owed by Corporate-tax evaders (Business Week, June 23, 2003. p24). Instead, Federal prosecutors at that time pursued misdemeanants like Martha Stewart for allegedly using inside information to take a profit on stocks (though Stewart profited far less than either Bush-II or Cheney looted using inside information under Bush-I's protection while at Harken Energy and Halliburton).

New York Stock Exchange Chairman Dick Grasso (who replaced William Donaldson when Bush appointed Donaldson to the SEC that oversees the NYSE) drew $140 million in compensation from the Exchange as a lump sum payout—allegedly for "overlooking" rather than "overseeing" all the

ways Stock Exchange members cheated the investor—on his base salary of $1.4 million plus a $1 million bonus.

On the other hand, through an Administrative Rules change (after Congress turned the idea down) effective March, 2004—President Bush extended overtime pay to more than a million low-wage workers while disqualifying eight million higher-wage workers from continuing to get overtime pay by reclassifying them as management or professionals if they had any comparable training—even by service in the military!

At that time, Bush's Labor Department also posted helpful hints for employers on how to legally evade overtime payments. The actual rule change reads "Exemption (from overtime payments) is also available to employees in such professions who have substantially the same knowledge level as the degreed employees, but who obtained such knowledge through a combination of work experience, training in the armed forces, attending a technical school, attending a community college or other intellectual instruction."

As for President Bush's proposed immigration plan, which "would allow some workers in the US illegally, to qualify for guest-worker status and retain their Social Security credits when they return home"—this bill simply permitted minimum-wage Employers like Wal-Mart to hire illegal workers.

Furthermore, such "Employer-owned work permits would make those immigrant workers something close to indentured servants." For without green cards they could not legally change employers or even apply for permanent resident status (see Bush's Cynical Immigration Gambit in Business Week, Feb 9, 2004 pp20-21).

Republican looting may have doubled our Health Costs!

Health care is a hodgepodge created by innumerable individual and organizational responses to changes in medical care and its incentives. As in biological evolution, the most

adaptive responses contributed to the next status quo from which subsequent modifications underwent further selection for profitability. In 2001, American Health Care consumed $1.4 trillion or 14% of our gross national product. In 2002, that spending rose to $1.6 trillion, with prescription drugs the fastest growing item, up 15% for the year. And Health Care costs in 2003 exceeded $1.7 trillion.

Interestingly, this colossal undertaking self-assembled over five decades with no Master Plan. And since no one dreamed that Health Care would undergo such amazing growth, no one was positioned to control what lay ahead.

Perhaps no possible plan could have guided this broad-based advance more effectively than simply allowing individual participants to invest their time, effort and assets wherever need or opportunity beckoned.

But the same irrational fiscal exuberance (every man for himself—get rich quick) that currently infects so much of our society, now threatens to wreck American Health Care and also ruin what remains of our Economy. Some day, someone may produce a fascinating tome about astounding medical advances of the last 50 years, heaping well-earned praise on all who contributed.

However, I would find that task daunting, since such breakthroughs as penicillin and heart surgery resulted from huge efforts and major insights of so many people. For example, significant advances in heart surgery often originated in encouraging responses to desperate measures during last-ditch efforts on critically ill people. Ideas that then proved useful were widely shared.

But as soon as open-heart surgery procedures became regularly successful, the laborious, insight-driven sequential steps that finally made heart repairs possible, swiftly morphed into boring routines—though no step ever relinquished its catastrophic potential.

So while much of medical progress truly deserves our admiration, it is far more urgent to seek common sense, non-obvious or even counter-intuitive explanations and solutions for serious problems that currently threaten our chaotic health care system.

To that end, this book offers a long-time observer's candid views of, and experiences with, modern medicine and its deep-seated yet solvable problems. My blunt descriptions and criticisms of modern health care are made on behalf of patients and providers alike.

Palliation is profitable and ongoing:
A cure harms everyone but the patient

A few direct one-time medical interventions like penicillin for a “strep throat”—appendectomy for an inflamed appendix—or stabilization of a broken bone—are usually viewed as curative. For eliminating a nasty bacterial invader, or removing a diseased but non-essential structure, or aligning and properly supporting an important structure, all encourage early healing and full recovery.

In contrast, more costly medical interventions—such as heart surgery, long-term arthritis treatments and cancer chemotherapy are *palliative* since they typically alleviate pain and other symptoms without fully correcting the health problem. Of course, palliative treatments such as heart surgery or cancer chemotherapy can also be viewed as curative if they give relief until the patient dies of some "unrelated" condition.

But whether a proposed remedy is preventive (like polio vaccine), curative or palliative, the outcome in a specific case may be sufficiently unfavorable so that results of treatment turn out to be worse than the disease. And palliation generally implies ongoing therapeutic interventions, with each new treatment, or every trial of a different palliative therapy, adding further risk and expense.

Ordinary experience suggests that whenever an individual offers several entirely different excuses for avoiding some duty—or if a disease has several entirely different treatments—that those excuses or treatments are probably all incomplete (as in untrue, ineffective, palliative, toxic) or otherwise unsatisfactory.

Nonetheless, patented palliative therapies are generally quite expensive. Therefore, far more health-care jobs and profits are at risk if a researcher discovers a quick cure than if she merely devises another palliative treatment that requires expensive promotion to become widely known and used.

The picture built up by many such observations throughout this book, shows our entire economy being bled into anemia by an out-of-control drive for profit in certain—but not all—sectors of our health care industry. As a result, many citizens and businesses currently being squeezed dry, can only hope that our Government will soon limit profits for purveyors of goods and services in the health-care sector.

Naturally, Big Pharma and other health-care business leaders insist that it would be unfair and un-American to limit the profits of Health Care Corporations. Indeed, many true conservatives decry all Government regulations as "Work of the Devil"—or "A plot by godless communists"—or even "A serious resurgence of Socialism" (which has long been held responsible for evils best left unspoken).

However, the same Conservatives who detest all Government regulations as a matter of principle, apparently don't object to hugely profitable Big Pharma patents—nor to the legal or practical Monopolies held by other purveyors of medical goods and services—all of which depend upon, and would lose their value without, Government regulations.

There are endless explanations for the widespread failure of Governments to combine their open-ended and powerful legal incentives for inventing, discovering or developing new

ideas, services or things, with permanently effective oversight to ensure that Monopolies thereby created, treat people fairly.

Indeed, the basic concept of patents and copyrights badly needs revisiting, and relevant regulations demand radical revision. For one thing, patents now last too long. As James Surowieki points out, while patents surely "spur innovation, . . . so does their expiration." Therefore, "to lower drug prices . . . (just) shorten the length of patents, eliminate patent extensions, open the market to competitors quickly, get rid of all the regulatory provisions that lead to endless litigation, and close the loopholes that grant generic drugs brief monopolies of their own" (New Yorker, Oct. 16, 2000, p98).

Furthermore, the patent process is now been "extended" to protect "obvious" ideas like ordering on the Internet with one mouse click (Amazon.com) or leading tourists through the rain-forest canopy—or claiming the sole right to test for certain cancer-associated genes (as Myriad Genomics of Utah did after patenting BRCA1 and BRCA2 genes).

Not surprisingly, Myriad then charged three times as much per test as the Curie institute in Paris had previously charged (see Nature, 15 May, 2003 p207; New Yorker July 14, 2003 p36). But the European Union recently granted one of those patents to a British non-profit which may make that test far less costly overseas.

Huge bundles of health-care dollars are regularly diverted to defend, extend or contest patents that may earn royalties of "hundreds of millions of dollars" (see Science, 25 July, 2003 p448). While it may seem illogical and inappropriate to charge for each subsequent use of an initially obvious idea, Monsanto has gained exclusive rights to all genetically modified soy beans (Technology Review, Sept. 2003 p82)—and when DuPont bought rights to a cancer-gene-carrying-mouse from Harvard, it patented "Insertion of a cancer gene into any mammalian species" (Science, 19 July, 2002, p336).

Outlawing competition in favor of extortionate behavior impedes medical care and progress, rather than "promoting progress of the useful arts" - the original reason for encouraging patents. See Inventing a Better Patent Law (Business Week, Dec. 22, 2003 pp IM 56).

Another great spate of lawsuits is pending over who owns which right to what gene silencing or RNA interference technique. And that donnybrook will surely retard important research using this promising new tool for the investigation of gene function (Nature, 20 June, 2002 p77—see also working through the patent problem, Science, 14 Feb., 2003 p1021).

A letter from Medecins sans frontieres in Lancet, Jan. 4, 2003, pp71-2, points out that European Union and American positions on drug prices and drug patents protect only their drug industries and show no concern for the growing disease burdens that contribute enormously to social and economic problems faced by most of the world's population. The writers conclude "***The duty of medical professionals to protect the interests of public health over trade has never been clearer or more vital."***

And a Lancet commentary, "USA-Morocco deal may extend drug patents (from 20) to 30 years" (Dec.6, 2003, p1904)—discloses how countries signing free trade agreements with the US may be forced to even renounce their right to use generic drugs—which then threatens access of such poor nations to medicines. At the 2003 World Health Assembly, the US stressed "respect for strong intellectual property rights" while others pointed out that "USA has broken every promise made concerning developing countries' rights to access low-cost generic medicines" (see Lancet, May 31, 2003 p1831).

Yet these present-day problems are hardly new or unique. Rather, greed epidemics reappear regularly. A similarly egregious situation drove our famous Republican President,

Theodore Roosevelt (third face from the left on Mt. Rushmore Memorial in South Dakota), to regulate railroads and other utilities as natural monopolies when "Robber Barons" running those businesses proved so shameless and uncontrollable in their greed that it threatened social stability.

Of course, those monopolies too originated in speculative excess, widespread corruption and huge public subsidies including massive land grants, rights-of way and other protections from free and fair competition. Recent experiences with Enron and the deregulation of electricity in California amply reconfirm that without regulation, noncompetitive markets swiftly spiral out of control.

Things Rarely Turn Out As Expected

Scientific understanding begins with evidence, depends on evidence, and is refuted by evidence. Science confirms that change is inevitable. It also suggests that we may never uncover absolute or eternal truths. At present, half of all medical knowledge becomes outdated within four years—and we are often as surprised by which half is replaced as by what replaces it.

Nonetheless, the obvious acceleration of progress in every field of science or technology—and the countless ways by which science empowers and enriches our civilization—amply confirm that significant scientific discoveries offer important insights into the Universe, even if their ultimate meaning and significance only dawn upon us incrementally or incompletely.

In classical physics, the predictable outcome of any action is an equal and opposite reaction. However, Nature rarely favors an animal that cannot modify a standard response when confronted by a new situation. Which is why *"He who knows what a bear will do next, knows more than the bear."*

Those who try to guide health care programs around the world have encountered many ways in which health care resembles that bear. The following discussion of health insurance illustrates how one apparently simple idea was hijacked and modified in unpredictable ways by the adaptive responses of everyone affected.

Health Insurance Is Not A Simple Matter

Overview: As medical treatments became increasingly effective, physician incomes rose and health insurance became more important and less affordable for the working poor and middle class. Yet there was a surprisingly complex relationship between health insurance and health care costs. For example, prolonged passionate opposition by the Medical-Industrial Complex to Universal Comprehensive Government-controlled Health Services "*left the financing and organization of health care to market forces and converted health-care services into a for-profit arm of the insurance industry" (*Science, 26 Sept. 2003, p1813).

To understand how modern American health care evolved, we hark back seventy years to the Great Depression preceding World War II, when physicians had just basic diagnostic and therapeutic skills to offer—along with a dozen or so relatively safe and useful medicines that they might prescribe.

At the same time, tens of thousands of contaminated, useless, adulterated and even poisonous secret concoctions or "patent medicines" were heavily promoted throughout the land (see "Jake Leg", New Yorker, Sept 15, 2003 pp50-7. And for a comprehensive overview, see Protecting America's Health—The FDA, Business, and One Hundred Years of Regulation, by Philip J. Hilts, pub. 2003).

With unemployment rampant, few had money to pay the physician. Some brought a little garden produce, a few eggs, a

pie, a bushel of apples or potatoes, a homemade carving, or offered repairs on the doctor's roof. Under such circumstances - and presumably long before - physicians charged on a sliding scale, with richer patients paying far more for their own care so that medical services might remain available to all, but especially the rich and their employees.

When World War II ended in 1945, the economy boomed on pent-up savings and demand. Inexpensive Medical Insurance became a nice add-on to sweeten Union contracts. Some employers added frugal in-factory health services to keep employees on the job. As one might anticipate, the most obvious consequence of increasingly widespread health insurance was a more reliable (partial or full) payment of physician and hospital charges.

Yet even as such indirect or *third party payments* progressively displaced direct patient-to-doctor payments, a significant percentage of funds paid into health insurance policies were diverted to support each insurance company's aggressive sales force and growing overhead. As recently as 2002, private insurers still kept about "14% of their premiums for overhead and profit. In addition, they outsourced such tasks as utilization review and case management to other for-profit businesses that also diverted money from actual care. Compare that with the less than 3% overhead costs of Medicare." (Marcia Angell, The American Prospect, Feb. 2003 p38).

Increasing portions of each patient's health care dollar also went to cover growing medical "overhead costs" as doctors and hospitals hired extra employees to obtain, process, submit and resubmit each insurance company's uniquely confusing and intentionally inconvenient forms. Even today, for every four physicians hires, the Massachusetts General Hospital also hires one billing specialist and two "referrals and

authorization" specialists - none of whom contribute directly to patient care.

And medical productivity suffers further when qualified physicians take on administrative roles such as "compliance officer" (Nov. Bulletin, American College of Surgeons, pp25-7) for ensuring compliance with complex federal regulations about remuneration.

Once they were insured, patients naturally became less concerned about the costs of major surgery or other interventions, for we all prefer to focus on our own health problems. So patient and physician increasingly avoided discussing fees, since it might appear rude if a patient raised monetary issues, or materialistic for a physician to do so.

Home-owner, automobile and life insurance policies traditionally compensated for part or all of a loss on a predetermined basis—especially if you were fortunate enough to meet fine-print requirements of an appropriate policy issued by a legitimate and ethical insurance company whose agent was a fairly close friend.

But health insurance was often seen as a more open-ended commitment to cover whatever treatment the insured might need. Initially, any disinterest in cost by insured patients and their doctors probably didn't matter much, since little enough—beyond pain medicine, an operation and bed rest—could be done for those who were seriously ill.

However, as real medical advances became newsworthy, "possibly effective" treatments proliferated too, and often were publicized prematurely to attract research funding or stock market investors. As a result, poorly informed patients or their relatives soon concluded that seriously ill persons ought usually receive some new treatment, regardless of cost or actual likelihood of benefit.

From the days of patent medicines to now, advertisements by Big Pharma—whether directed at

physicians or the public—have routinely been biased and misleading. But eventually most medicine bottles at least had to include a true list of ingredients on the label, though few except highly educated consumers could interpret that mandated information.

More recently, Bush-II delayed and hampered the FDA's ability to stamp out deceptive drug advertisements to the point of ineffectiveness (Lancet, Dec 14, 2002 p1951). Currently, the FDA simply recommends relevant and honest advertising rather than requiring it—sort of like God scribbling a couple of suggestions about neatness on the back of an old envelope when He encountered Moses trudging across the desert.

So while health insurance gave patients and their relatives a welcome feeling of fiscal control and entitlement, it also raised the risk of malpractice claims against any physician who might appear less than eager to meet every demand made by Old McDonald's relatives. This markedly reduced the perceived benefit of a house call, or opportunities for the aged or terminally ill to die peacefully at home.

For after long ignoring their grumpy old insured, those relatives now wanted to do everything possible, no matter how useless, expensive or painful, to display caring or relieve guilt. In this way, health insurance encouraged that escalation of unnecessary tests and invasive procedures now referred to as defensive medicine.

So health insurance boosted the demand for and cost of medical care, as well as demand for and cost of medical malpractice insurance—which further raised medical overhead costs. And health insurance truly was a unique product: *For under no other circumstance could an ordinary sober person loudly declare that cost was of no concern.*

One important but hidden impact of health insurance coverage was its leveling of medical and hospital fees. Although surgical charges still varied widely between surgeons, third

party payers soon issued comparable payments for comparable services by specific surgeons, regardless of whether the insured was wealthy or poor. So it was health insurance—a product designed for the lower classes—that allowed the rich to shrug off their long-time disproportionate responsibility for overall medical costs.

Naturally, some doctors and hospitals raised their rates to compensate for loss of income from the wealthy. And the obligation to support free care for indigents quietly shifted onto all taxpayers and policyholders, many of whom could barely afford any health care for themselves and their families.

By encouraging patients to consume unnecessary health services—and by somewhat reducing the free care that most doctors and hospitals were obliged to provide—health insurance brought additional revenues to many physicians and hospitals, creating a demand for more physicians, hospital beds and services.

In the meanwhile, medical progress gave rise to new technology-driven medical specialties dedicated to specific organs such as heart, kidneys and gastrointestinal tract. As physicians became trained to provide more specialized, intensive and costly services, health insurance policies reimbursed more physicians at higher rates, making health insurance even more important and still harder for the worker to afford.

As Garrett Hardin pointed out in The Tragedy of the Commons, people naturally try to utilize or harvest more than their fair share of jointly held assets like grazing land or a public fishery. Similarly, the original idea of an insurance policy was many individuals pooling prepayments to cover anticipated health care costs of the few unfortunates who fell seriously ill.

But rather than appreciating their own good health—or being concerned that their latest prescription cost several

hundred dollars—insured patients often felt shortchanged if a costly insurance policy paid little for them while others received far more.

In 2001, 41 million Americans—or roughly one in seven—went without health insurance coverage for the entire year—while over 2 years about 80 million people lacked coverage for part of that period. Of course, *without universal health insurance coverage (hence truly widespread risk-sharing), still-healthy folks tended to believe they "deserved" a lower-cost health insurance policy, while insurance companies scrambled to avoid insuring the ill or those more-likely-than-average to become so.*

Most US hospitals are legally obliged to provide indigent care. But uninsured adults with diabetes, hypertension or heart disease are less likely to get regular follow-up—and those with acute heart problems are less likely to be evaluated or treated, and more likely to die (ref; National Academy of Sciences, Institute of Medicine, "Care without coverage: too little, too late," 2002).

Interestingly, Health Insurance Corporations—without whose cooperation the ongoing massive escalation of medical costs would have run aground far earlier—had no complaints about irrational exuberance in health care costs as long as the incoming flood of policy dollars—plus returns on their huge investments—exceeded insurance payouts and their burgeoning overheads. As one also might expect, insurance payments for less informed, less aggressive or minority patients were frequently deferred or denied on a technicality.

Big Pharma Favors "Prescription-And-Health" Insurance

During the 1950s, drug manufacturers finally began to hire qualified chemists and other specialists to replicate, modify, manufacture and test important new drug discoveries of academic and governmental researchers. Many effective,

worthless or potentially poisonous medicines were still heavily hyped and exceedingly profitable, especially as long as such drugs remained a legal monopoly of the patent-holder.

A 1958 Congressional investigation led by Senator Estes Kefauver, revealed that retail prices of some popular drugs exceeded the manufacturer's total expenses for that medicine by seven thousand percent. In fact, such "Sky is the limit" pricing policies drove average annual after-tax Corporate profits for a Big Pharma Corporation like Schering, up to a quarter or even a half of its total net worth.

Since then, Big Pharma corporations have become much bigger—in part by purchasing many smaller drug companies that had important skills or potential blockbuster products, or were more politically adept at controlling regulations through lobbyists, lawyers, Congressional Acts and Presidential payoffs.

As mentioned earlier, huge Pharmaceutical Corporations generate far greater returns from dollars spent on or donated to a political campaign than from dollars invested in the search for truly new drugs. But not surprisingly, their long-term prospects also fade as they concentrate more heavily on short-term political payoffs and legal ploys than research and development.

Their huge profits on legitimate drugs, and concerns of increasingly competent staff scientists, finally convinced major pharmaceutical corporations to stop producing untold thousands of useless and often toxic—yet still strongly promoted—patent medicines, even before the Food and Drug Administration entered another populist cycle during which it was willing and able to crack down a little bit more.

At this point, Big Pharma also realized that it would be more profitable for drug companies to discontinue over-the-counter sales of their most costly and effective drugs, since it was far easier to coax thousands of doctors to "prescribe" (order patients to take) a specific product than to market that

product effectively to many millions of citizens as had heretofore been attempted.

Evidently they chose wisely, for in 2002, Americans spent over $160 billion (or 10% of total health care costs) just to fill 1.6 billion prescriptions, which doesn't include over-the counter drug purchases. In contrast, European Government health systems spent about $77 billion, and some worried that low European drug prices made the European drugs industry less competitive (Lancet, July 26, 2003, p257).

While drug manufacturers promoted laws that made powerful, less common, or more effective remedies available only on a physician's prescription—Big Pharma insisted on retaining its traditional right to sell unregulated, impure, untested and potentially toxic herbal or natural food supplements directly. And prescription drug costs reimbursed by Insurance Companies further raised health insurance rates.

Are excessive payments to the Medical-Industrial-Complex or Socialized Medicine our only options?

This book has exposed many failures and successes of our modern health care system. Illustrations of what went wrong and what went right were taken from my personal and medical experiences over the past fifty-nine years. As the reader considers how and why we failed to control health care costs, she or he will surely think of new ways to achieve better patient outcomes at lower cost.

My true tales should have interested, amused and appalled you. For only through such forthright reports can a lay reader comprehend the countless ways in which our antiquated health-care-review-and-reward-system elicits counter-productive self-serving behaviors from competent, hard-working, well-meaning participants—and how much money is wasted on costly unproven remedies or on *inefficient ideas like individually sold health insurance.*

America's "medical-industrial complex" includes the major health insurers, Big Pharma, medical equipment manufacturers like GE, enormous HMO's and other bulk suppliers of physician's services, huge private hospital groups like Tenet and HCA, the American Medical Association (which only speaks for a minority of physicians these days), and other associations of highly paid medical specialists.

In particular, the Alliance of Specialty Medicine "composed of 13 medical specialty societies representing more than 170,000 physicians throughout the United States, has worked to raise the profile of specialty medicine in Washington, D.C. since 2001" (STS News, fall 2003 p11).

Together those Big-Money Medical-Industrial players spend billions on lobbyists, lawyers and political contributions to modify and support government programs that they favor, and to undermine ideas like Universal Health Care or a Single Payer system that could injure their bottom line. Imagine the impact if those tax-deductible expenditures had been spent "to solve our health care problems" rather than "to justify the unjustifiable".

Unwanted governmental intrusions into health care are routinely castigated as "Egad! Socialized Medicine!!!" Yet you never will hear big political donors criticizing America's finest Socialized-Medicine-and-Retirement Program—the one set up by Congress to cover all Federal Employees including Congress, the Judiciary and the Executive Branch.

Over the half century covered in this book, the wealthiest players, mainly *huge Corporations, gradually acquired enough political clout to guide American Health Care into its present unsustainable guise of a monopolistic, socially destructive, uncontrollable "chaos monster" or Behemoth.*

Throughout this book, I have considered less costly ways to provide better health care—ways that still offer legitimate and satisfying rewards to productive people who deliver

essential medical services. And quite naturally, different commentators attribute the current high cost of health care to different factors.

For example, James Surowiecki points at Baumol's cost disease (New Yorker, 7/7/03 p27). Evidently Baumol defined "cost disease" as the basic inability of chamber orchestras, educators, waiters and health care workers—those who deliver in-person services to individuals or small groups—to improve their own efficiency (e.g., play Mozart faster, teach or feed many more folks at once, or repair several hernias simultaneously).

So while gains in manufacturing productivity often allow wages to rise without increasing product prices, workers in fields afflicted by "cost disease" cannot make more money without raising the prices of their services. But in my view, the wage demands of average health care workers contribute hardly at all to outlandish health care costs that are based upon the "grasping" Medical-Industrial Complex's ability to incite and fuel foolish demands at extravagant prices.

Nor would I expect those working outside of Health Care to be aware of actual or pending inexpensive shortcuts to good health - or technological developments that increase efficiency - or new cures, or better, cheaper palliatives - or to realize how much medical productivity could be enhanced by non-fiscal incentives and the curtailment of useless or cost-ineffective diagnostic or therapeutic procedures.

The goal of this book has been to nudge our unending theoretical discussions of "Where do we go from here?" onto a firmer footing of practical experience and common sense. For objective, well-informed citizens may soon have their generation's best chance to restore the hope, charity and clarity of purpose that our brilliant but deeply flawed Health Care System lost somewhere along the way.

GLOSSARY

The meaning of terms as I use them here

Aging Academic Syndrome:

A common disorder that only becomes manifest when waning judgment allows unfounded self-esteem to fling a spectacular long-shot at the Nobel as time runs out; or

Seeking to retain authority despite having nothing useful to contribute; or

Those whose membership in a "Good Old Boy" network will "forever" position them to deliver mind-numbing speeches at public events.

Alternative care:

A wide range of hypothesis-driven treatments from chiropractic to scientology—all marketed to cure a variety of real or perceived health problems without objective evidence of delivering greater benefit than placebo treatments.

Alternative medicines: Non-pharmaceuticals - mainly biological substances, or soils, or mineral or radioactive waters - as they are ingested or applied externally to maintain health or treat various complaints (see also traditional medicines).

Alternative Press: Inexpensive subscription-supported newsletters or magazines that are not restricted to topics or views deemed acceptable by their advertisers.

Big Pharma: The major multinational pharmaceutical Corporations.

Board Recertification: Just another support system for superfluous senior specialists that has created another new-

and-useless industry—the production and marketing of Board-recommended books and other study materials. See also CME.

Continuing Medical Education (CME) Requirements: Almost all mandatory lesson hours in this category have no relevance to the medical care provided by most listeners. Talks are frequently offered by Big-Pharma-designated "Experts!"

CME hours are generally inconvenient and wasteful of physician time. Overall, CME reduces taxes collected and unnecessarily raises costs for patients and/or taxpayers who ultimately must support the entire medical enterprise.

Cost effectiveness: Usually relates to how much taxpayer or insurance money must be spent to gain a particular benefit. The options range from first-come, first-served, no-limits medical care until available money runs out, to setting health care priorities as they did in Oregon - funding only those that offer the greatest returns for available health care dollars.

But even therapies deemed “Not cost effective” can sometimes be accessed through private efforts, or by contributions to an individual’s care. See “What a father will do” in The Week, Sept. 12, 2003, pp40-1).

Crooked Election Machines: Many tens of thousands of Republican-owned-and-operated election machines with private codes and presumably dishonest, or easily hacked, functions have reliably reelected Republican candidates before, during and between the 2000 and 2004 Presidential elections by returning unbelievable counts or by just not counting any votes in Democratic Districts.

Few paper ballots were provided during these elections. For further details, see my extensive discussion of Republican electoral fraud in the Afterword, and how it has adversely impacted Health Care for the average worker.

Externship: A period of practical, outside-of-Medical-School, apprentice-type training before graduation.

Fellowship: A practical, usually individually arranged, variable duration period of postgraduate training/retraining or apprenticeship that does not qualify the trainee fellow for any particular specialty certification.

Generic Drugs: As a patent expires on a big name drug, interested manufacturers bid for an exclusive six-month right to market the drug before all other generic manufacturers can compete. Generic drugs generally cost much less than the brand name drug on which they are based. Generic drugs made up 42% of all US drug sales in the first 8 months of 2003(Business Week, Nov. 3, 2003 p94).

Harm-benefit ratio; How many people must be screened, tested, biopsied, treated or otherwise disturbed or endangered to gain a particular health benefit. One measure might be how many years of life (on average) an intervention gains. But how would one balance a 10-year gain for one of 20 persons undergoing harsh and occasionally beneficial chemotherapy against ten early treatment-associated deaths among the others? One cannot simply ask survivors if a treatment was worthwhile.

Internship: A formal year (or two) of apprenticeship training: Customarily the first postgraduate year after graduation from Medical School. Ordinarily required before one can enter any sort of medical practice.

Last-minute Republican smear: A repeatedly tested, reliably effective, pre-election smear in which The Republican

Party brings in a non-candidate (third person or group) to promote some fabricated untruth and keep hammering away at it with annoying advertisements until the public is so sick of both complainer and complainee that it either doesn't vote or simply holds the nose to vote for the uninvolved other (Republican).

Medical-Industrial Complex: A modification of President Eisenhower's famous words in his last major speech where he warned against the growing power of the "Military-Industrial Complex."

The Medical-Industrial Complex includes major health insurers, Big Pharma, giant Medical Equipment Manufacturers like GE, enormous HMO's and other bulk suppliers of physician's services, huge private hospital groups like Tenet and HCA, the American Medical Association (which now only represents a minority of conservative physicians), and various Associations of highly paid medical specialists.

Microbe: For our purposes: "Any small infectious entity, whether viral, bacterial, fungal, single cell or a multicellular parasite."

Modern Medical Care: The usual physician-marketed more-or-less evidence-compatible care provided for every health problem. These treatments - based upon personal or "expert" perceptions of "good care" - often change and sometimes even improve in effectiveness over time.

Sign; An objective indication of a disease or disorder that is detectable by others.

Symptom; A subjective experience (such as pain) that may reflect a disease or disorder.

Placebo effect: A benefit derived solely from knowledge that treatment was given.

The Religious Right; Any militant "traditionalist" (or Orthodox) group motivated by shared religious convictions.

Within the USA, most Orthodox Believers call themselves "Christian" even though that label encompasses a huge variety of totally incompatible beliefs. Elsewhere around our uncertain world, Orthodox Muslims, Hindus, Jews and true believers of countless other affiliations, hold equally certain - yet even more wildly different beliefs - over which they often fought, and sometimes still fight, local battles or even wars.

Some extremists from any of these groups perform atrocious acts (e.g., September 11th attack, or killing abortion doctors or blowing up innocent civilians) to serve their God(s) or to indicate how strongly they feel about abortion, the education of women, or other human rights—or just to take over a Government and become rich through corruption.

Sinecure: A job or position that provides a regular income but little or no work.

Subsidy: A grant or gift of money from a Government to a private company, organization or charity to help it continue to function—or a monetary gift or contribution to somebody or something, especially for expenses.

Traditional Healers: May include those who only offer specific remedies such as honeybee stings for autoimmune disorders. Healers often provide useful health services (at low cost and risk) to persons who cannot afford or won't accept modern medicines' risk/benefit or cost/benefit for their condition. Here too, investigation is warranted. Look before you leap.

Traditional Medicine: Time-tested folk medicines or treatments like acupuncture that tradition and observations suggest are sometimes helpful.

USP: This designation shows that a product meets composition and preparation standards of the United States Pharmacopoeia (an official guide for pharmacists that also describes dosages, effects and side-effects).