

BETTER
HEALTH CARE
AT HALF THE COST

BETTER
HEALTH CARE
AT HALF THE COST

*Fifty Years Of Medical Progress:
An Insider's View*

ARNDT VON HIPPEL, M. D.

Copyright © 2004 by Arndt von Hippel, M. D..

ISBN : Softcover 1-4134-5697-9

All rights reserved. Portions of this book may be reproduced or transmitted as long as source is accurately referenced.

This book was printed in the United States of America.

To order additional copies of this book, contact:

Xlibris Corporation

1-888-795-4274

www.Xlibris.com

Orders@Xlibris.com

CONTENTS

INTRODUCTION:	9
AMERICANS MAY FAVOR THE GOLDEN RULE, BUT THEY DO MUCH TO ENCOURAGE GREED	
<i>Why devote a book to problems in health care? . . . We have a remarkable tolerance for greed . . . Can President Bush and the Republican Congress solve America's health care problems? . . . Should we trust our leaders so much? . . . God is a concept by which we measure our pain (John Lennon) . . . Corporations may lose their edge when they loot . . . Why elections don't resolve health care issues . . . Wages and taxes are set by and for corporations . . . Might similar looting double health-care costs? . . . Palliation is ongoing while a cure liberates the patient . . . Things rarely turn out as expected . . . Health insurance is not a simple matter . . . Big Pharma favors prescriptions and health insurance . . . Are excessive payments to the Medical- Industrial Complex, or Socialized Medicine, our only options? . . . To devise a better future, heed lessons from the past . . . The early years</i>	
CHAPTER ONE:	51
A NOVICE MEETS MEDICAL REALITY IN TWILLINGATE	
CHAPTER TWO:	62
GOOD MEDICAL POLITICIANS ARE RARELY FINE SURGEONS	
<i>Hospitalization can be risky . . . Interns and residents learn from each other</i>	
CHAPTER THREE:	68
A RESIDENT'S "LIFE" AT THE BOSTON CITY HOSPITAL	

	<i>Some sugars prevent bacteria from settling down . . . Any action or inaction may lead to catastrophe</i>	
CHAPTER FOUR:		77
	PEPTIC ULCERS RISE AND FALL AS HEALTH CARE COSTS JUST RISE	
	<i>Gastric freezing . . . Flexible tube endoscopy quickly became popular . . . Will we know if too many procedures are being done? . . . Prevention creep . . . Assembly line surgery . . . Nor was Big Pharma left behind . . . Cheap vaccines or a quick cure harm everyone involved except the patient . . . When two Australians discovered Helicobacter pylori, nothing changed</i>	
CHAPTER FIVE:		99
	ELECTROCOAGULATION OF SKIN CANCERS IS QUICKER, SIMPLER, CHEAPER, MORE ATTRACTIVE AND MORE RELIABLE THAN ANY OTHER METHOD OF TREATMENT	
	<i>Skin cancer . . . How much surrounding tissue should one remove? . . . Bipolar electrocoagulation technique</i>	
CHAPTER SIX:		108
	PHYSICIANS FACE MANY DIFFICULTIES, NOT LEAST THEMSELVES	
	<i>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 second opinions rarely change a decision</i>	
CHAPTER SEVEN:		125
	UP THE LONG AND DUSTY TRAIL TO MARKET	
	<i>Anchorage . . . Heading for our future home . . . Assisting at surgery . . . Chief of Surgery . . . Retraining in heart surgery</i>	
CHAPTER EIGHT:		139
	WE BRING HEART SURGERY TO ALASKA	
	<i>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</i>	

CHAPTER NINE:	154
ON THE ORIGINS AND IMPORTANCE OF TEAMWORK	
<i>Teamwork in surgery</i>	
CHAPTER TEN:	165
WHY AND HOW I RETIRED	
<i>Continuing medical education (CME) makes no sense . . .</i>	
<i>Recertification is another unproven remedy (for what?) . . .</i>	
<i>Are there really 101 uses for a retired surgeon? . . . Screening</i>	
<i>tests often have more minuses than pluses</i>	
CHAPTER ELEVEN:	182
WINNERS AND LOSERS—	
BIG PHARMA VS JOE AVERAGE	
<i>The role of pharmaceutical advertising . . . Do all those</i>	
<i>costly drugs reflect good science? . . . A monopoly is “a</i>	
<i>legal right to the exclusive control of an industry or service</i>	
<i>as granted by a government” . . . Monopolies undermine</i>	
<i>decent health care</i>	
CHAPTER TWELVE:	203
MY APPROACH TO HEALTH CARE?	
WHATEVER WORKS	
<i>Self-medication allows interesting experiments . . . Simpler is</i>	
<i>often better, as well as less expensive . . . I take low dose tetracycline</i>	
<i>for coronary insufficiency . . . My medical parameters . . . What</i>	
<i>about cholesterol? . . . Heart rhythms, muscle cramps and</i>	
<i>magnesium ions . . . Gatorade and atenolol</i>	
CHAPTER THIRTEEN:	226
IS THERE ANY REAL DIFFERENCE BETWEEN FOOD AND MEDICINE?	
<i>Would we benefit from a computerized database of old wives</i>	
<i>tales? . . . Food, drink and common sense versus drugs like Viagra</i>	
CHAPTER FOURTEEN:	236
WHY DO HEALTH CARE, HEALTH INSURANCE AND PRESCRIPTION DRUGS COST SO MUCH?	
<i>Do too many internists want to become cardiologists? . . . Many</i>	
<i>medical fees are now regulated . . . So what do we need to</i>	
<i>do? . . . When it comes to health care, “better” is hard to define</i>	

CHAPTER FIFTEEN:	256
------------------------	-----

POTENTIAL BENEFITS OF A SINGLE PAYER SYSTEM

More jobs; better pensions; fewer strikes; no need for health insurance; fewer bankruptcies; less paperwork; free choice of physician; fewer and more reliable or more effective diagnostic tests and treatments; periodic retraining for health workers; better clinical trials; a single federal health-care system for all Americans including veterans, congresspersons, judiciary and the executive branch; no need for pharmaceutical management groups; only subsidize drugs of proven efficacy; support generic drugs; regulate all health care monopolies; monitor physician practice outcomes; coverage for effective mental, dental, pharmaceutical and drug or alcohol rehab programs; regularly survey all physicians and other providers for suggestions on useful and cost-effective interventions; promote healthy life styles; ensure competent education in human biology and encourage self-care . . . Convert corporate subsidies into public ownership interests

CHAPTER SIXTEEN:	276
------------------------	-----

ARE WEALTH AND HAPPINESS UNRELATED?

Enough beats "too much" . . . Might wealth and happiness even be incompatible? . . . A great medical career does not depend upon or justify a huge reward . . . Must our choice always be wealth versus happiness? . . . "Money can't buy happiness"

EPILOGUE: OTHER THINGS TO CONSIDER	291
--	-----

Durable organizations need roles and goals . . . Old corporations rarely die but often fade away . . . 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) . . . Nations gain respect when they guide others toward prosperity

GLOSSARY	315
----------------	-----

INDEX	319
-------------	-----

INTRODUCTION:

AMERICANS MAY FAVOR THE GOLDEN RULE, BUT THEY DO MUCH TO ENCOURAGE GREED

Why devote a book to problems in health care? . . . We have a remarkable tolerance for greed . . . Can President Bush and the Republican Congress solve America's health care problems? . . . Should we trust our leaders so much? . . . God is a concept by which we measure our pain (John Lennon) . . . Corporations may lose their edge when they loot . . . Why elections don't resolve health care issues . . . Wages and taxes are set by and for corporations . . . Might similar looting double health-care costs? . . . Palliation is ongoing while a cure liberates the patient . . . Things rarely turn out as expected . . . Health insurance is not a simple matter . . . Big Pharma favors prescriptions and health insurance . . . Are excessive payments to the Medical-Industrial Complex, or Socialized Medicine, our only options? . . . To devise a better future, heed lessons from the past . . . The early years

* * *

When the widely anticipated benefits of penicillin and polio vaccines were finally realized, most observers assumed that further 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 *the major multinational pharmaceutical corporations known as Big Pharma*—or those who cannot afford health insurance and are offended by multimillion dollar compensation packages for health-care-related Corporate CEO's—will be surprised to learn that no one sought or achieved great wealth through the development or sales of penicillin or of polio vaccines. Nor were either of these life-saving products very 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 welcomed worldwide without any need for costly advertising. Naturally, those responsible gained 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.

Thus 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 ongoing misery and death for additional millions (New Scientist, 16 Sept, 2003, p8).

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 subways—helped to reduce the spread of tuberculosis. Similarly, food inspections, and sewage treatment or diversion from public water supplies and swimming beaches, conquered cholera, while new vaccines undercut many epidemic diseases of childhood.

SO WHY DEVOTE A BOOK TO PROBLEMS IN HEALTH CARE?

Unfortunately, these significant and easily afforded improvements in public health and life expectancy did not deter a relentless new escalation of health care costs. Hence at present, an uninsured worker with a serious illness or injury who requires hospitalization for a week or two, may be wheeled out with dozens of “Get well!” cards in one hand and medical and hospital bills exceeding \$200,000 in the other.

Those huge bills expose a particularly mean 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 that large *health maintenance organizations* (HMOs) negotiate for those same services.

And according to The Wall Street Journal, while doctors are limited to collecting negotiated fees from the government and other large insurers, they remain “free to charge the uninsured two or three times more for the same services.” One can only hope that this freedom is rarely exercised, as uninsured medical debts already force many sick citizens—some while still hospitalized—into the clutches of collection agencies, or leave them paying loan shark credit-card interest rates until bankruptcy or 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.

WE HAVE A REMARKABLE TOLERANCE FOR GREED

Recently, 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 also 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 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*.

CAN PRESIDENT BUSH AND THE REPUBLICAN CONGRESS SOLVE AMERICA'S HEALTH CARE PROBLEMS?

Well, 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. So not surprisingly, 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 insurance companies 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 has been 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 have 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 that 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 (see Anchorage Daily News, Jan. 16, 2004) titled *Bush Dynasty's Mideast Links Warp U.S. Policies*, Kevin Phillips details *"how four generations of the current President's*

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-sale scandals known as Iran-contra and Iraqgate—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 failed (see *Audit This*, New Republic, July 22, 2002, p46), *George W. Bush (Bush-II)* still made a fine profit by 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 repay 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. 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 our Vice President, Cheney received a \$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 non-competitive 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 directly or indirectly helped to finance the September 11th attack on the World Trade Center, in which 15 of the 19 terrorists were Saudis. On the other hand, Saudis also 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 defending Saudis against families of September 11 victims is 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).

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 victims 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)*.

But Bush-II never publicly admitted that he was invading Iraq because its huge oil reserves seemed up for grabs. However, 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.

Interestingly, 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 geostrategic 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. But so far, *there has been no public discussion of when—or under what conditions—Iraqis might get their oil fields back from Halliburton et al.*

It turns 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."* And the Coalition Provisional Authority under L. Paul Bremer has requested additional US funds to build a new Iraqi oil refinery and drill new wells.

As US Congressman Henry Waxman points out, *Halliburton is now getting money to dramatically improve Iraqi oil facilities. Who is going to 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).

In the first three years of his quest to reduce taxes on Big Corporations and wealthy Republicans, Bush-II has 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 suggest 2004's *budget deficit* will exceed \$520 billion.

America's *trade deficit* (the dollar value of what we sell to other lands minus what we buy from them) now exceeds 5% of our gross domestic product. We already owe the rest of the world \$4 trillion, which is "something totally unprecedented." Such an imbalance cannot long continue. Indeed, in early 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 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, and the US economy will collapse too.

By early 2004, most foreign investors stopped lending money to the USA. But to keep their own economies growing, China and Japan lent America still more dollars so we could 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*—have already undermined our military capabilities and weakened the US economy. Under Bush-II's Presidency, several million jobs have disappeared—many overseas. And most of our states face 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). But why would any patriot want to

harm the American people and the world economy in this fashion? Consider the following analysis:

“The reigning ideologues in Washington—not only in the White House but also in the Republican congressional leadership, in the faction that dominates 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 the 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 made America “the land of opportunity”) also declined markedly. Indeed, Federal Reserve studies indicate that in 2001, 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.

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”—*meaning it could lead to social unrest or even class warfare* (Business Week, June 30, 2003 p28).

“GOD IS A CONCEPT BY WHICH WE MEASURE
OUR PAIN”

John Lennon

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*.” And 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 cannot crave the measly 3% of national wealth remaining in the 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 is 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*.

Strongly held 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 conducts intense daily prayer groups in the halls of Justice) and many others who occupy high executive, legislative and judicial offices?

Christian fundamentalists pray fervently that Jesus will soon return. The millennia that ended at 1000 CE and 2000 CE—rather than being accepted as ordinary *odometer events*—were

celebrated with great religious expectations. Indeed, 2000/2001 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 an American Fundamentalist Christian President (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). Or 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, are our Fundamentalist leaders even now trying to convert America into the most powerful militant 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?

Bush-II insists upon appointing openly religious judges who strongly oppose the Constitutional separation of Church and State. Is this simply a ploy to rally evangelical Republicans? Or might Bush-II really intend 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 see no difference between their own fiscal or religious goals and the nation's best interests.*

To boost corporate incomes and free more soldiers for fighting Bush's wars, the US military supply system is being privatized. But after the Iraq war, "some contractors refused assignments to dangerous parts of the country. That 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 (some US soldiers in Iraq allegedly died of hyperthermia and thirst 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 (or 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 minimizes official US casualties.*

More importantly, privatization "makes 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 the scut work now 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 provide their own security, so they often bid against each other for experienced former commandos—often paying \$1,000 and up to \$2,000/day. Local Iraqi workers generally get \$200/month—though some firms charge their cost-plus accounts “ten times that” for each worker (see Washington Post National Weekly Edition, March 1-7, 2004 p18).

During the recent invasion of Iraq, our soldiers were often ill-equipped. Many bought their own Kevlar vests and other equipment 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. 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)

Our business, banking, communications, energy, food and drug, and stock market regulations are undergoing revision by similarly sticky fingers. So we are not surprised that many close relatives of *Scalia*, *Rehnquist et al* received high Bush Administration jobs soon after *Scalia*, *Rehnquist et al* selected 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

One Molly Ivins column mentioned a non-profit organization called Public Campaign (publiccampaign.org) that has compiled information on the enormous financial benefits regularly elicited through comparatively small campaign contributions. *Among top corporations that paid no taxes* from 1996-8 were AT&T, Bristol-Meyers Squibb (Big Pharma), Chase Manhattan Bank, Enron, Exxon Mobil (in 2003, the world's biggest, most profitable Oil Company cleared \$22 billion on revenues of \$247 billion), GE, Microsoft, Pfiser (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 formerly felt 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 growing inability 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.

WHY ELECTIONS DON'T 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 is 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"—say "You lost! Get over it! Clinton Democrats were way worse!" Which makes the stunning election "upset" that unseated Democratic Senator Max Cleland especially relevant.

For Cleland is a true war hero who earned a Silver Star for rescuing injured comrades under fire. Just four days later, Cleland 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 shameful smear of Cleland may just have served as 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 is now one of Bush’s harshest critics in the Senate. And Cleland currently serves on the 9/11 Commission—formed in response to strong public insistence and chaired by former New Jersey Republican Governor Thomas Kean. The Kean Commission seems quite intent on learning *what Bush-II knew about plans for the 9/11 terrorist attacks, and why he did nothing to stop them*.

Bush-II insists that the documents they want to see would compromise national security. And the White House has 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).

Hopefully, the facts will be available before the November, 2004 election. In the meanwhile, conspiracy books about Bush’s role and goal in 9/11 are selling well in France and Germany, and rumors of Bush’s involvement are widespread in the Muslim world.

However, Kevin Phillips considers 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*. And *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 find the Bushes and their cohort unbelievable and worse than they sound*.

ES&S is another private vendor of voting machines that run 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—have been provided by ES&S voting machines.

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 (or 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). *And Accenture is yet another recent 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, 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 proposes 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 and easily hacked voting machines becoming an important national issue, the Republican Congress has promised to provide paper receipts **before 2006**. In the meanwhile, if Diebold and the others cannot provide *paper receipts to all voters by November, 2004, our only reasonable option is to insist on plain old pencil-on-paper ballots that can be optically scanned or*

hand-counted (and recounted if necessary) in public by our friends and neighbors of every political persuasion while they watch each other closely *and record how often each machine is used so that obviously incorrect machine totals can be discarded.*

Or else, without reliable paper records, expect 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).

But before we get upset, *we should inquire if all the recent carefully orchestrated Republican political smears, blatant lies and fraudulent elections have really affected America's health care*, or in any other way altered how we live? With so many of our citizens convinced that most politicians are crooks, does it really matter which party wins?

Fortunately, the Associated Press has studied how spending patterns have changed since Republicans took over Congress in 1995. It turns out that despite their continued rant about *tax-and-spend-Democrats*, 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 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 just two nagging questions remain:

- 1) Has Bush—like Putin*—already managed to create a corrupt one-party state?
- 2) Should we demand nationwide United Nations election monitors in order to encourage a free and fair 2004 Presidential election?

WAGES AND TAXES ARE SET BY AND FOR CORPORATIONS

In early 2003, the Wall Street Journal was so obsessed that only the rich paid taxes, it even referred to the poor as "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*—which is just \$494 less than the average *yearly wage of the poorest fifth of workers*)—an army general gets \$156,000/year—and an army private on the ground in Iraq receives \$19,600/year including his or her extra combat pay (see the Hightower Lowdown, June 2003 or hightowerlowdown.com).

For unspecified reasons, the Bush Administration simply refuses

* See *One party rule returns to Russia*, The Week, Dec. 19, 2003.

to cooperate with European Union efforts to collect taxes owed by corporate tax evaders (Business Week, June 23, 2003. p24). Yet federal prosecutors pursue misdemeanants like Martha Stewart for allegedly using inside information to take a minor profit on stocks (though Stewart cleared 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 cheat 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 the same time, Bush's Labor Department 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, currently in the US illegally, to qualify for guest-worker status and retain their Social Security credits when they return home”—*this bill simply permits 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).

MIGHT SIMILAR LOOTING DOUBLE HEALTH-CARE 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 irrational fiscal exuberance (every man for himself—get rich quick) that currently infects so much of society, now threatens to wreck American health care and ruin what remains of our economy.

Some day, somebody 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 breakthroughs like penicillin and heart surgery resulted from the major efforts and insights of so many people.

For example, significant advances in heart surgery often originated as encouraging responses to desperate measures during last-ditch efforts on critically ill people. Ideas that proved useful were widely shared. Then, as soon as open-heart surgery procedures became regularly successful, the laborious, insight-driven sequential

steps that finally made heart repair possible, swiftly morphed into boring routines—though no step ever relinquished its catastrophic potential.

Although recent 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 now threaten our chaotic health care system. Therefore, this book offers one insider's candid view and experiences of modern medicine with 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 ONGOING— A CURE LIBERATES 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 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, a palliative treatment like heart surgery or cancer chemotherapy can be viewed as curative if it affords relief until the patient dies of an apparently 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 a treatment turns out worse than the disease. Furthermore, palliation generally implies ongoing therapeutic interventions, with each 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 a

disease has several entirely different treatments—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. Thus 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 will require 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 are currently being squeezed and want our Government to place *reasonable limits on profits* for purveyors of goods and services in the health care sector.

Naturally, Big Pharma and other health-care business leaders insist that it is 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 a serious resurgence of socialism* (which has long been held responsible for evils best left unmentioned).

However, the same conservatives who detest all government regulations as a matter of principle, apparently don't object to hugely profitable Big Pharma patents—or 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 permanent effective oversight to ensure that the monopolies thereby created, treat people fairly. Indeed, the basic concept of patents and copyrights badly needs revisiting, and relevant regulations require radical revision.

For one thing, patents now last too long. As James Surowiecki 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 used to protect obvious ideas *like ordering on the Internet with one mouse click (Amazon.com) or leading tourists through the rain-forest canopy*—or to claim 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 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 potential-health-care dollars are 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 seems illogical and inappropriate to charge for each subsequent use of an initially obvious idea, Monsanto has 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).

After all, outlawing competition in favor of extortionate behavior impedes medical care and progress rather than *promoting progress of the useful arts—which was the original reason for encouraging patents*. See also *Inventing a better patent law* (Business Week, Dec. 22, 2003 pp IM 5-6).

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 tool for the investigation of gene function (Nature, 20 June, 2002 p779—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 the 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 similar, equally 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, non-competitive 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. Currently, half of all medical knowledge becomes outdated within four years—and we are as often 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 on 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 its 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 CARE INSURANCE IS NOT A SIMPLE MATTER

Overview: As medical treatments became more effective, physician incomes rose and health insurance became increasingly 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 useless, contaminated, 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 to 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, 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 expect, 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, the Massachusetts General Hospital hires one *billing specialist* and two *referrals and authorization specialists*, none of whom contribute directly to patient care. Medical productivity suffers further when qualified physicians take on administrative roles such as *compliance officer* (see Nov. Bulletin, American College of Surgeons, pp25-7) for ensuring compliance with complex federal regulations about remuneration.

Insured patients were naturally less concerned about the costs of major surgery or other interventions, for we all prefer to focus on our own health problems. So patients and physicians increasingly avoided discussing fees—since this might appear rude if raised by the patient, or materialistic if physician-initiated.

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 many who were seriously ill.

However, as real medical advances became increasingly newsworthy, *possibly effective* treatments proliferated and were often publicized prematurely to attract research funding or stock-market investors. As a result, poorly informed patients or their relatives quite reasonably concluded that seriously ill persons should 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 did include a list of ingredients on the label, though only a few highly educated consumers could interpret that mandated information.

More recently, Bush-II has 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* on the back of an old envelope when He encountered Moses trudging across the desert.

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 physicians who appeared less than eager to meet every demand made by Old McDonald's relatives. Thus it markedly reduced the likelihood of house calls or opportunities for the aged or terminally ill to die peacefully at home.

For after long ignoring that grumpy old insured, the relatives now wanted to do everything possible, no matter how useless, expensive or painful, to display their caring and relieve guilt. In this way, health insurance encouraged the escalation of unnecessary tests and invasive procedures that we now refer 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 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. As a result, 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 health insurance 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 and created 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 were 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 working man to afford.

As Garrett Hardin pointed out in *The Tragedy of the Commons*, people 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 feel shortchanged if a costly insurance policy pays little for them while others receive far more.

In 2001, 41 million Americans—or roughly one in seven—went without health 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), healthy folks tend to feel

they “deserve” low-cost health insurance while insurance companies try to avoid insuring those who are sick or likely to become ill.

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 companies—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 major investments—exceeded insurance payouts and their burgeoning overheads. As one might expect, insurance payments for less informed, less aggressive or minority patients were often deferred or denied on a technicality.

BIG PHARMA FAVORS PRESCRIPTIONS 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 heavily hyped and proved 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—and 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 contributed to a political campaign than from dollars invested in the search for truly new drugs. Not surprisingly, their long-term prospects fade as they concentrate more heavily on short-term political payoffs and legal ploys than on research and development.

Their huge profits on legitimate drugs, and the concerns of increasingly competent staff scientists, finally convinced major pharmaceutical corporations to stop producing untold thousands of useless and often toxic—but 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 many 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—and this doesn't include any of our over-the-counter drug purchases. In contrast, European Government health systems spent about \$77 billion, though some worry that low European drug prices make 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. Of course, any prescription drug costs reimbursed by insurance companies further boosted health insurance rates.

ARE EXCESSIVE PAYMENTS TO THE MEDICAL-INDUSTRIAL COMPLEX, OR SOCIALIZED MEDICINE, OUR ONLY OPTIONS?

This book exposes many failures and successes of our modern health care system. Illustrations of what went wrong and what went right are taken from my personal and surgical experiences over the past fifty 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 interest, amuse and appall. But 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 inefficient ideas like individually sold health insurance.

America's *medical-industrial complex* includes the 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 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 would likely injure their bottom line. Imagine the impact if all that mostly-tax-deductible money could be used to solve our

health care problems, rather than being spent to justify the unjustifiable.

Unwanted governmental intrusions into health care are routinely castigated as “Egad! Socialized medicine!!!” Yet these big donors to politicians never criticize 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—purchased the political power they needed to guide American health care as it evolved into an unsustainable, monopolistic, socially destructive behemoth. On the pages that follow, I evaluate many less costly ways to provide better health care—ways that still offer legitimate and satisfying rewards to productive people who deliver essential medical services.

Naturally, different commentators attribute the 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 musicians, 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 earn more money without also raising prices for their services. But in my view, *the wage demands of health care workers contribute far less to outlandish health care costs than the medical-industrial monopoly’s ability to set prices and fuel demand.*

Nor would I expect individuals who work outside of health-care to be aware of actual or pending inexpensive shortcuts to good health—technological developments that increase efficiency, or new cures, or better and cheaper palliatives—or to realize how much medical productivity might be enhanced through non-fiscal incentives and curtailment of useless or cost-ineffective diagnostic or therapeutic procedures.

The goal of this book is 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 will 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.

TO DEVISE A BETTER FUTURE, HEED LESSONS FROM THE PAST

A little background may help you assess my idiosyncratic presentation. I was born in Gottingen, Germany, in 1932. Our family emigrated to the United States in 1936. My four siblings and I grew up in Weston, Massachusetts, a small town near Boston. Our home was next to a dairy. As a small child, I occasionally herded 25 cows a half mile through woods to graze by a local reservoir.

My closest friends worked a two-horse caretaker’s subsistence farm on a nearby estate. That estate’s carriage house stored over a dozen immaculate horse-drawn carriages of every size and color. I often helped Warren, my next-door neighbor, collect household garbage and deliver it to a local pig farm in his Model-A 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—a common cause of death) just days after pricking her finger with a needle as she darned (repaired holes in) her family’s socks. And despite the fact that tuberculosis was a scourge in decline, TB hospitals and TB wings on general hospitals remained full of sick patients.

In addition, special Heart Hospitals cared for young people severely ill with rheumatic fever consequent to streptococcal infection. And entire hospital wards were cleared out 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—often donated 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. Because life-threatening infectious diseases were primarily “treated” by bed rest, we saw innumerable “Hospital Zone, Quiet” signs.

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

THE EARLY YEARS

By the early 1940’s, my father, Arthur von Hippel, was head of a major materials research laboratory at MIT. My grandfather, James Franck, a scientist at the University of Chicago, worked on 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 consistently referred 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 her yardstick. Eventually, Miss Brochie, a retired teacher, helped me discover the pleasures of efficient reading, and my school performance improved.

During tenth or eleventh grade, I noticed a repetitive pattern on the answer sheet of my preliminary college aptitude test, so I swiftly filled in the remaining answers and departed. As a result, I achieved the highest possible score without understanding many of the questions. My teachers were obviously impressed and viewed my honest explanation as false modesty.

In 1949, I entered MIT, where many classes were taught by 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 yet 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 to get a 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 primary 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, gave us an unforgettable lesson on monopoly power by annually republishing his very costly (required) Economics textbook after simply renumbering the chapter-end questions. Because our assignments referred to specific question numbers, we could neither

utilize apparently identical texts of previous years nor sell our own books after surviving his course.

Only 1% of our class was female. Many of my 900 initial 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 the professors doing those newfangled studies by becoming more radioactive over time rather than less.

An entrepreneurial classmate won the MIT contract for disposal of radioactive waste, which by his telling and photos consisted of tossing the 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 surprisingly, despite my bad attitude and miserable grades, I was accepted by many medical schools. Several puzzled MIT classmates eventually concluded that my transfer to Harvard would boost the IQ's of 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 eight 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, this 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 student 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 home perched on the hill behind the hospital. Twillingate hospital provided my first exposure to the rewards and tribulations of personally delivering medical care.

Despite having few applicable skills and little practical knowledge, I tried very hard to do everything perfectly. Needless to say, I screwed up a lot. Fortunately, the medically underserved population of this isolated area accepted treatment failure as a fact of life, and were grateful that my pre-professional efforts on their behalf so often helped. Among other duties, we occasionally examined and 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/day. 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 an unimposing weathered wooden structure located just below the pond where hospital-owned pigs took delivery of hospital garbage. This pond was also the hospital's water source, so we drank only coffee or tea.

Early on, I once quaffed a half glass of cool tap water (after the sediment had settled) and quickly developed the most amazing gastroenteritis—probably caused by Paratyphoid bacteria. Thereafter, I drank only coffee. The hospital distilled or boiled enough water for food service, patient care and surgical scrub sinks. Twillingate men usually drank tea while the women preferred coffee. Apparently, a tea salesman originated the 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 we went 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 waves that blocked our way.

These iceberg-laden North Atlantic seas were always near freezing so none of the fishermen could swim, nor do I recall seeing 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 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 ear had induced this spinning—a normal inner-ear “caloric” response—so I quickly submerged the other ear until the spinning stopped, then proceeded across, still using the 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 and often away from potential rescuers. Presumably, 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 and my legs were entirely numb from the cold. In fact, it was very difficult for me to rise and stand unaided on that rocky shore, let alone walk back around the harbor to my room.

After several hours spent shivering beneath regularly re-warmed blankets on my bed—while 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 boats driven by heavy reliable cast-

iron single-cylinder inboard engines that put-n-putted along comfortably over the waves. During one night-time 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 erratically. 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 an idle comment "They must be having a party," my gloomy guide responded that this was the "wake" for a patient I had treated some days earlier. 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 offer a tiny can of peaches or other fruit 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 meal, in or out of hospital, was dried cod, repeatedly soaked to extract most of the salt, then boiled with brues—a hard baking powder biscuit that when boiled was flavorless (so one didn't tire of it)—all topped with melted pork fat for flavor and energy.

To supplement their "fish and brues" diet, women picked and stored the luscious blueberries and cranberries that grew everywhere. For these rocky islands had long since donated their last tree to the local demand for timber and fuel. Indeed, men who didn't fish mostly worked off-island as loggers in Newfoundland's interior forests.

Blueberries could 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 those who “poached” cranberries quickly topped that illicit haul (in a big old 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 inquiring 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 persons moving elsewhere to take along their home. I never saw such a move, but apparently it involved a village-wide effort/party, with all adults hauling on ropes to ease the building across driftwood log rollers into a calm sea. As soon as the incoming tide then floated the house, it was towed by boats to the new neighborhood where the party resumed while 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 to cure common vitamin deficiencies, digitalis leaf pills or digoxin tablets to treat heart failure, injectable penicillin, 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. Then in the fall, Norwegian sailing schooners bearing replacement salt and other supplies entered Twillingate Harbor to fill their holds with best-quality fish. The rest were consumed locally.

For urgent daytime house-calls on Twillingate Island, we went by cab. Distances were not great, but the 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 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 were routinely brought in to share the known costs and possible benefits of our fifteen-minute house call. 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 had 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 provides details on over three thousand newer pharmaceuticals), I could never have made my diagnosis backwards 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 is 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 came to clinic with blood poisoning. Usually a red streak extended from an injured or infected hand up 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, since it was widely known that red streaks could be stopped by white paint. The frequent therapeutic failure of white paint was viewed as evidence of belated application.

Fortunately, these streptococcal infections were 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 applications of over-the-counter Polysporin ointment—rubbed onto any small, increasingly tender, injured or infected area before a red streak has a chance to appear—ordinarily solves the problem easily and cheaply.

Dr. Olds had come north in 1932, after completing a one-year 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 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, one truly ill two-year-old returned.

It soon became evident that he now 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 clearly 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 or 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 making decisions without understanding their limits, applicability or possible sequelae.

Olds 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 consisted of wedging the notched ends of a sturdy, flat, inches-long, live bone graft (a 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 while it harvested thousands of seals out on the sea ice. 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.

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 when asked. For example, Gertrude, a 19 year-old nurse’s aide who provided all-night care for 50-75 patients, taught me much about medications and patient care.

In particular, these hospital employees were wonderful at soothing, evaluating and quietly preparing expectant mothers for delivery. While at Twillingate, I “delivered” about 50 babies without any of the medication, commotion or complications so commonly encountered in teaching hospitals of that time. Basically, the nurses called us five minutes before a baby was due and our presence was really an unnecessary formality.

Indeed, childbirths went equally well (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, since effective cardiopulmonary resuscitation had not yet been developed.

Problems in this case included “*light*” *anesthesia*—for incomplete relaxation makes it difficult to judge abdominal tightness; *an excessively tight abdominal closure*—which gradually led to circulatory failure by compressing many venous channels through which blood normally returned to her heart; and *compacted viscera*—that prevented her diaphragm from moving adequately—so when abdominal closure was completed, she no longer could breathe effectively.

On departing, Olds ordered us to transfer her corpse from 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 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 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 no problem, 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 NF A1E 636)

CHAPTER TWO

GOOD MEDICAL POLITICIANS ARE RARELY FINE SURGEONS

*Hospitalization can be risky . . . Interns and residents
learn from each other*

* * *

An old aphorism claims “Those who can, do. Those that can’t, teach.” In surgical fields, my observations by and large support this declaration. For I have seen few *major academic surgery teaching program directors* whom I would trust to operate upon me—nor would I accept the average surgical director’s opinions on whether my skills were up-to-date, or on how I should conduct my practice.

During my medical school and residency days, Boston’s four most prestigious teaching-and-private-patient-care hospitals were the Peter Bent Brigham Hospital, The Mass General Hospital, Boston Children’s Hospital and the Beth Israel Hospital. For a part of that era, the principal Professor of Surgery in each hospital was Francis Moore (PBBH), PR (MGH), JF (BCH) and Jake Fine (BIH).

Moore wrote a best-selling, widely praised, totally incoherent and pointlessly complex textbook “The Metabolic Care of the Surgical Patient”. And whenever he lectured to medical students, he regularly stopped to declare that the most important thing a surgeon could do was THINK!—a word he would then scrawl in

huge letters across the entire blackboard, presumably because he had run out of ideas.

Soon after my graduation from medical school—while on rotation at a private hospital—I was assigned to assist Moore as he performed a breast biopsy on his secretary. The hospital's renowned senior pathologist stood by. After one negative needle biopsy, Moore said "von Hippel, you give it a try." I protested that I had no experience with needle biopsy and 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 the breast.

Clearly, this annoying complication would delay the procedure while we retrieved the needle. But Moore appeared untroubled. Saying "I am certain this is cancer," he rapidly removed her entire large breast as one definitive biopsy. Our young anesthesiologist and other physicians-in-training were impressed by this swift and decisive completion of procedure. I alone wondered, "Why the Hell did he do that?" Tedious examination by the 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 our operation in pre-mammography days. Fortunately, despite her unnecessary mastectomy, his secretary was reportedly 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 inept as surgeons and teachers so they were relegated to full-time laboratory research. One 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 grumble 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 well-

advertised incremental “firsts” in his career, we students found him boring. Churchill frequently entered the darkened observation area above the glass-ceiling 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.

HOSPITALIZATION CAN BE RISKY

But it was insightful old 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 under such circumstances, every patient wants and needs someone trustworthy to assume responsibility for his/her care (just as a good waiter accepts responsibility for delivering a decent meal).

Mr. Zackoveritch, an apparently healthy retired man in his 60’s, was admitted to our medical ward for evaluation of an abnormally high left diaphragm that moved poorly when he breathed. This interesting abnormality, 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 like cancer.

Because he had entered a teaching hospital as a puzzling diagnostic problem, many different doctors-in-training and a few erudite medical professors came by to examine him and order tests. Eventually, Mr. Zackoveritch concluded that these physicians were more interested in scoring an impressive diagnosis than in helping him.

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,

perhaps 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.

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 (too much intravenous fluid).

* * *

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 fully plugged.

Although Dave seemed unaffected by fluid from that contaminated I.V., my 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 wish I had given Mr. Zackoverich the 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 by reputation, a competent surgeon. He was a big disappointment to me, 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 next year unless he first volunteered for the military and was then deferred to complete his surgical training.

Almost everyone volunteered except me. Soon Dunphy left for a more prestigious job in San Francisco. With several medical schools and many young doctors available for draft board selection in Middlesex County, I was able to complete my remaining residency years without being drafted. During my remaining time at Boston City Hospital, we only had temporary Surgical Chiefs—first Charles Lund and then Mel Osborne.

Lund was known primarily 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. And some were more skilled than others.

Furthermore, with modern surgery still pending, remarkably little was understood about why operations sometimes succeeded and sometimes failed. But we all remained busy and learned what we could from our many surgical disasters. As decent surgical residency posts were scarce, and I was not an outstanding candidate, I had no realistic option other than to complete my general surgery training at the City.

Yet despite investing 63 months and much effort, I did not consider myself a well-trained surgeon when I left City Hospital. For while we cared for many derelicts and sometimes helped extremely ill people, the number of “big” operations was limited—with major competition over big surgical cases between and within the various services.

Fortunately, I was merely completing my general surgery residency 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 performing unwarranted procedures.

Indeed, it was there that 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).

By the end of my time at Boston City Hospital, I had benefited from two critically important (for me) rotations through the Overholt Thoracic Clinic, under the primary tutelage of Wilford Neptune. Though I learned a great deal from all five Overholt Clinic partners, Drs. Neptune and Richard Overholt were among the finest surgeons and gentlemen I ever met.

Like Dr. Franseen (see Chapter Five on electrocoagulation), these men were highly respected and very successful in private practice. Yet they responded graciously and helpfully to each resident’s questions and suggestions. And even the most important medical and surgical academic professors—who would never invite Overholt or Neptune to address their conferences—sought Overholt Clinic care for themselves and their families.

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*

* * *

From June, 1957, when I graduated from medical school—through September, 1962 when I completed general surgery training, I spent much of each year working at Boston City Hospital (day and night with very little sleep, for about 120 of the 168 hours in each week). During this time, I was 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 staff surgeons 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 the Boston City Hospital ambiance and work experience was unique. 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 improved. Needless to say, mine is a dated report, for I never went back after graduating from City Hospital's fully accredited internship/residency program.

The hospital itself was an unattractive accumulation of hulking

7-10 story gray masonry structures covered with pigeon excrement and otherwise aging disgracefully in a huge walled compound near the city dump. As one might expect, nearby overcrowded and 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 the 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 the huge cop named McSomething who always vanished when a patient became violent, to the bored intake personnel filling out forms who might not even look up while inquiring what part had been stabbed so they could call an appropriate surgical department—though one worker did scream when her client turned to reveal a knife protruding from the back of her head.

Especially in this area, we had to look out for ourselves and each other. Many a drunk remained amorous or combative after a thumping good nightstick cut to the head that necessitated scalp repair before jailing. So when my sweet little Marianne had ER duty, she always hung a slim-necked, easily hand-held, heavy glass intravenous bottle of salt water nearby, as we deemed these ideal for decking aggressive drunks.

The unexpected was usual: For example, one day the charge nurse complained that two of her orderlies were being 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 the 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 another new admission, the resident in charge yelled, "What took you so long?"

You must take for granted that we worked in a corrupt city for a corrupt hospital administration where corrupt council members and other corrupt politicians routinely filled their station wagons with turkeys, roasts and other food items 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 called 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, one 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 important politicians) simply altered any doctor's order with which he disagreed. But given the other treatments available at the time, perhaps he was right to pack sugar into infected wounds.

SOME SUGARS PREVENT BACTERIA FROM SETTLING DOWN

*In 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 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 (which contains proanthocyanidins that have similar anti-adhesion properties), they minimize bacterial adhesion within their urinary tracts (the beneficial effect begins within 2 hours and may persist for 12 hours).

Glycoproteins extracted from cow's milk seem to reduce survival of helicobacter pylori bacteria in the stomach (and see Chapter Four). Another anti-adhesion compound (polyphenol oxidase) found in plant-parts such as potatoes and apples, keeps many harmful bacteria from adhering to the intestinal lining. In some south-east Asian countries, a potato peel extract is commonly 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 a patient's heart-felt “Thank you!” was a startling and less than yearly occurrence, threats were somewhat more frequent.

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 an administrator's no-good 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 on half gallon cartons of vanilla or chocolate ice cream—and stinking elevator shafts where elevator operators routinely stopped their empty elevators between floors so they could 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, 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 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, almost spraining my wrist because my fist bent so far around while deeply indenting his belly fat.

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 would get needed exercise while seeking it.

Though all interns and residents were licensed MDs, City Hospital pay was low enough (\$100.00 a month in our first year) that many married physicians qualified for—and some went on—welfare. So at one point, we all got a \$10 a month raise, just to avoid further adverse publicity for the hospital.

The hospital administration sold us health insurance but apparently failed to pass our premiums along to Blue Cross. Consequently, Marianne and I—after 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).

Because technicians received higher pay than residents, the hospital delegated every possible routine chore 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.

Other aggravations included X-ray technicians who refused to take 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 five pm every weekday and usually 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 following among residents in various services by routinely unscrewing the heavy metal double-door’s hinges to reopen the X-ray department.

At times, groups of 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 a few residents—those who played the numbers with Pinkie—were allowed to use the City Hospital parking lot. On snowy days, tow trucks often plucked our cars from nearby streets. Retrieval of an impounded auto cost much of a month's salary, so one snowy day I chased Pinkie into his locked security hut and amputated the chain that blocked the parking lot entrance.

Over the next days, City administrators paged me repeatedly, but I failed to respond. Our “emergencies-only” hospital loudspeaker system for paging physicians was preempted several times each day 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 had been expelled from Latin, could mumble those prayers like a pro.

At the annual City Hospital dinner dance, my fellow residents twice awarded me the “Meanest Resident of the Year Prize” (in absentia). This truly was an unexpected honor—in part, because I had no inkling that such an award existed—but also because I was apparently selected by general acclaim over many hundreds of other not-so-nice residents then working at City. One year, my prize was another chain taken from Pinkie. The other year's prize was a hand-lettered scroll that I 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 food poisoning. Hospital patients and the doctor's cafeteria usually got comparable food with equally explosive outcomes.

Doctors-in-training 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, 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 self-retaining “iron intern” retractors became cheaply available, interns rarely did much else in the operating room)* while the Chief Resident explored an anesthetized patient’s distended abdomen.

I heard a muffled sound. 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 and our difficult operation 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 in place 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. When disconnected from the Foley catheter, that full bottle was placed on the bedside stand by an aide, pending its retrieval for analysis.

When the already overwhelmed nurse—who had just come on duty—learned 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 from widespread rupture of red blood cells caused by his own dilute urine.

My point? Anything you do, or fail to do—even a urinalysis—may prove fatal. More specifically, anything that can be misconnected, eventually will be misconnected, and in the worst possible way. So insist on incompatible connectors for incompatible systems and 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). This could markedly improve a patient's breathing when there was an upper airway obstruction. It also allowed frequent suction-tube-assisted removal of heavy tracheal secretions.

That little operation could be straightforward and helpful, as long as air delivered thereafter remained warm and fully humidified so secretions couldn't dry into crusts and clog the airways. However, in my experience at City Hospital, tracheotomy was invariably fatal. For it transferred airway responsibility away from the patient—who, with a tracheostomy could no longer cough usefully—to the nursing staff, *and usually there was no night nurse on duty.*

CHAPTER FOUR

PEPTIC ULCERS RISE AND FALL AS HEALTH CARE COSTS JUST RISE

*Gastric freezing . . . Flexible tube endoscopy quickly became popular . . . Will we know if too many procedures are being done? . . . Prevention creep . . . Assembly line surgery . . . Nor was Big Pharma left behind . . . Inexpensive vaccines or a quick cure harm everyone involved but the patient . . . When two Australians discovered *Helicobacter pylori*, nothing changed*

* * *

When I entered medical school, ulcers of the stomach or *duodenum* (the small intestine just beyond the stomach) were a common and often serious complaint. It was generally understood that these frequently painful erosions in the gastrointestinal lining were caused by *too much stomach acid or an inherent weakness of the stomach lining*.

Peptic ulcers sometimes eroded into bowel-wall blood vessels. The resulting blood loss could 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 adjacent tissues or release bacteria-laden stomach contents and acid digestive juices directly into the abdominal cavity.

Once in a while, a small perforation would seal spontaneously if adjacent inflamed tissues stuck together, but large perforations were usually fatal (as ongoing digestion of any nearby healing response ensured widespread peritoneal infection) unless successful surgical closure was achieved.

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, lots of cream and, of course, bed rest.

When medical treatments failed, as they often did, ulcers were attacked with various 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 or alter its pathway from the stomach.

As one might anticipate, these 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 less-than-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 lasting reputations by developing minor but widely advertised, personal variations on ulcer operations. In contrast, cancers came in unpredictable guises with unknown degrees of tumor cell dissemination, so cancer operations often had poor outcomes even in the best of hands.

Anyhow, surgical results were often unsatisfactory, and 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 and 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 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 Wangenstein's had ever been used more than once to freeze an ulcer patient's stomach.

For it rapidly became clear that a completely frozen stomach not only quit producing acid, it also disintegrated within a day or so. Since gastric freezing therefore killed the patient, those involved vowed never to do that again. Nor did we or other hospital-based groups have any desire or opportunity to publicize our single disastrous result.

So what could possibly have induced a widely respected, presumably honest surgeon like Wangenstein to promote such an obvious flop? Well, according to the grapevine among residents at surgical meetings, Wangenstein'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 the 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 their reluctance to Wangenstein, 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 as time runs out (think of krebiozen or laetrile, and all those *meaning-of-life books* by illustrious professors who have become legends in their own minds).

Peptic ulcers remained major 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/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 guild or 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 possible colon cancer. After all, you never knew what valuable information might be uncovered by inspecting life’s dark and smelly recesses with a long and usually harmless, lighted tool.

Likewise, few patients who came in complaining of heartburn received their prescription for some “billion-dollar acid-blocker drug” without first having their stomach inspected and biopsied by endoscope from above. Although abnormal findings were widely trumpeted, these routine colon or stomach evaluations ordinarily just confirmed pre-procedural presumptions such as *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 routinely 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. For example, a routine colonoscopy charge might be \$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, high surgical fees had traditionally carried surgeons of varied talents or specialties through slow times when few patients were referred.

Of course, one might equally conclude that high fees allowed more surgeons to practice in pleasant urban areas than the work available could justify. But some surgeons were nicer or 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 a district to keep a few extra general surgeons on tap.

Nevertheless, internists often felt disrespected because insurance reimbursement rates for the office hours they devoted to *medical cognition and caring* were so much lower than the effective hourly charge for *mere surgical cutting and sewing*. In addition, surgical work was usually performed in hospital facilities with hospital-supported nurses while the fees of internists or family practitioners in privately financed offices also supported 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 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 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.

But even if *per-operative-hour* payments to busy surgeons for procedures still dwarfed rewards received by office-based internists, those invasive procedure-driven internal medicine subspecialties like gastroenterology, and nephrology (with its government-subsidized dialysis facilities), and cardiology (with so much new equipment to visualize the heart, and so many different costly-and-flexible tubes to slip into various blood vessels), gradually approached and often surpassed earnings from surgical work.

In particular, over the past half century, cardiology office equipment had expanded dramatically from a nice stethoscope, blood pressure cuff, portable home-made two-step wooden stairs (for exercise tests) and a heavy electrocardiogram machine on wheels—to advanced computerized x-rays, MRI, ultrasound, and isotope-based imaging or testing technologies that might cost and net millions of dollars, though they frequently failed to provide definitive answers.

Cardiology also spun off its own subspecialties to compete or cooperate with invasive radiology and its new subspecialties, as well as with cardiac surgeons. Yet despite all that 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 the various procedures.

As consultants for all heart patients, cardiologists were able to self-refer patients for coronary artery angioplasties even while surgical bypasses still offered superior outcomes (see *Lancet*, Sept. 28, 2002,

pp965-70). Initially, the main advantage of angioplasty was less postoperative pain and shorter postoperative hospitalizations, if all went well.

Yet as angioplasty equipment, skills and outcomes improved—and procedure times declined—equipment costs and cardiology 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 if one wished to remain in a 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 resemble that of other *natural monopolies* such as ordinary electricity, gas, water and phone utilities. Of course, *local* gasoline prices also rise more rapidly and remain higher than the per-barrel price of oil would justify in the presence of free and fair competition.

And *international* oil prices are openly manipulated through public agreements between oil exporting States. So does the international fungibility (exchangeability) of oil usually keep local oil prices from becoming too outlandish? Or should local oil and health-care 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?

Well 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 seemed practical to send a planeload of patients from Europe for elective surgery by competent but far-away high-volume providers in Texas.

And 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 still wield hefty political contributions and heavy-duty lawyers to prevent Americans from gaining access to low-cost Canadian drugs.

“Canadian economist Steven Morgan points out, Canadian prices are not lower than the 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 their artificially restricted, stabilized and inflated, cartel-controlled market in diamonds. For ring-size diamonds are actually plentiful and would become inexpensive, were market forces to prevail. But then how could fair maidens measure, compare and display their suitors or landed mates?

Obviously, it is 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 a tablet, capsule or suppository that you take. It is especially ridiculous that working uninsured Americans pay the highest retail markups on essential drugs. *And despite many industry claims, those high retail (middleman) profits contribute nothing to drug research (ask your druggist).*

Pharmacists of yore had to recognize, remember, pick, dry, test, weigh, mix, grind and dispense. Modern druggists need only wash their hands, count to 100, and echo computer printouts. Freedom depends upon access to information. Open access to Canadian drug prices showed Americans that they were getting screwed.

Hence Canadians were not impressed when FDA Commissioner Mark McClellan criticized Canadian price controls on behalf of Big Pharma. For it was those 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).

Of course, since U.S. prices are not controlled, wherever price competition can be minimized, the routine markup toward a high “suggested retail price” vastly increases a pharmacist’s preference for selling the more costly 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.

Just how abusive or annoying or disruptive to the American economy must monopolistic corporate behaviors and jacked-up retail-drug-prices become before they justify careful investigation, prosecution for anti-competitive activities, and price regulation? Or is this a silly question to ask of a government so obviously in the pocket of wealthy corporations?

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 our 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 the patients entrusted to their care*. And they find 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.” Apparently, there are those who think that a careful history and physical examination have been outmoded by expensive invasive tests which *in theory* 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. Thus privately financed CAT scan facilities currently solicit 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 has 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). For example, 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 the 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 is increasing pressure on insurance companies to pay for such tests—even though there is no agreement on whether the occasional benefits are worth the cost, worry, inconvenience and risks of so many unnecessary procedures. And every such new and *possibly useful* or *maybe cost effective test 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 anti-cancer 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 pp40-5).

Apparently, instead of 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 the 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.”

At the same time, medical schools make little 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 to prevent future problems (hence a *prevention creep*

indication unsupported by evidence) or to enhance physician income.

A local cardiologist recently mentioned that one speaker at a specialty 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 “Those who have ever done unnecessary angioplasties, please raise your hands.” Allegedly, few if any hands went up—which led speaker and group to conclude they had a problem.

PREVENTION CREEP

Perhaps all physicians have encountered significant examples of prevention creep. The most impressive instance I encountered during my professional career was in the late 1960’s in Alaska when Dr. Gary Archer of Anchorage devised his highly original indications for connecting a patient to the *balloon pump*—then a relatively new and costly technology.

For Dr. Archer loudly insisted that any patient who underwent several hours on a balloon pump at Archer’s specially devised balloon pump settings, thereby gained full future protection from heart attack. Not surprisingly, Archer performed many of these special balloon pump procedures in a private Anchorage hospital.

Despite being a prominent Alaskan internist, cardiologist and businessman, and a very bright guy, Archer never took a formal internal medicine or cardiology residency. Nonetheless, he was allowed to challenge—and apparently was able to pass—the difficult Internal Medicine Board Exam, presumably (as he told me) because he referred so many Alaska Clinic patients to an prominent Board Examiner in Seattle.

Any major insurer or HMO could 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 possibly 100,000 *carotid artery endarterectomies* (surgical neck-artery cleanout procedures) of the

150,000 carotid endarterectomies performed yearly (at an average cost of \$15,000 each) were contraindicated.

If they truly were unnecessary, those angioplasties and endarterectomies alone would account for many billions of health care dollars wasted annually. And the above estimates do not include additional costs of adverse outcomes borne by patients and society at large (e.g., from heart attacks or strokes resulting in disabilities or premature deaths).

These estimates support my chronic personal reluctance to perform carotid endarterectomies. For as far as I was concerned, the immediate risk of a new stroke usually outweighed any statistical benefit in disease prevention. So the few patients that I thought might be candidates for this procedure were sent to more courageous surgeons.

ASSEMBLY LINE SURGERY

In general, each new subspecialty progressed from a few pioneer practitioners doing a few difficult and dangerous procedures to the current great variety of technologically advanced physicians regularly completing relatively routine and safe diagnostic tests or therapeutic interventions.

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

Of course, high volume or “assembly-line” surgery is hardly news. For mission-hospital ophthalmologists already performed assembly-line cataract extraction surgery 50 years ago. And Denton Cooley, a famous Texas heart surgeon and teacher, allegedly oversaw nine operating rooms simultaneously.

In this way, Cooley apparently 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 he would work to repay it all within 5 years.

NOR WAS BIG PHARMA LEFT BEHIND

Pharmaceutical manufacturers struck “pay dirt” too as mechanisms of stomach acid production became sufficiently clear so Big Pharma could patent and market many “billion dollar drugs” (as market analysts affectionately describe them) that finally suppressed stomach acid production relatively safely—though some of these drugs had side-effects such as testicle shrinkage that were not prominently mentioned.

Amazingly enough, big corporations have so much political clout that few if any governments or their agencies dare to release relevant information on minor or moderate adverse effect of new chemicals or drugs without industry permission. 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).

Lawsuits have been threatened or filed by industry against researchers or their institutions when those responsible for clinical trials try to report unfavorable outcomes with patented drugs or vaccines (Lancet, Nov.11, 2000, p1659). On the other hand, no manufacturer can simply produce and declare a new “billion dollar drug”—especially one that hardly differs from other medicines already being peddled.

In an average year, only about three truly innovative new drugs reach the market. The others are mostly slightly different *me-too* drugs developed to ensure each Big Pharma company a drug presence in every hot-selling category. After all, additional drugs add little to marketing overhead since every Big Pharma firm must make major efforts to convince as many physicians as possible that its drugs have advantages over similar but less costly medicines already available.

Surprisingly, achieving and sustaining a major change in physician

prescription habits may neither be difficult to achieve nor particularly price-sensitive. For *good medical care* is a moving target, and all physicians hope to remain (*or at least appear*) up-to-date. And while doctors receive drug company blandishments, their patients must pay for medicines prescribed.

Furthermore, both doctors and patients may *incorrectly* assume that more expensive drugs like Vioxx or Celebrex—which can cost an arthritis patient thousands of dollars per year—have been proven safer and more effective than motrin or advil, or aspirin or even black cherry concentrate (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 encounter manufacturers' representatives—formerly known as *detail men* (or women)—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 that 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 the physician for easy but pointless literature surveys, or a few hundred dollars for an unnecessary consultation, or other indirect rebates—and plenty of free samples of costly new drugs—since doctors and their patients both appreciate a costly freebie, especially one that reduces the apparent cost of an office visit) to hook the doctor into prescribing the new and more expensive product.

In addition, manufacturers' reps traditionally supply exhibits and provide generous financial support for local and national medical meetings, along with costly meals, promotional pens, knives, other giveaways, prizes and so on. Over time, many reps become appreciated, trusted and supportive friends as well as good golf or fishing buddies for many doctors. Not surprisingly, the

largest and most profitable pharmaceutical corporations maintain a worldwide workforce of over 100,000 people.

Although 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. And 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 financial companies average through their 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 enormous fines into ordinary business expenses, since they apparently did not alter Abbott's behavior.

CHEAP VACCINES OR A QUICK CURE HARM EVERYONE INVOLVED EXCEPT 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 present decade, mergers of drug companies are 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 those mergers to result in cheaper drugs. For in their push for growth and profitability, the more likely scenario is that 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). From a drug company's perspective, vaccines and antibiotics have one huge disadvantage—they prevent disease or cure people *within a few days*.

Mega-Pharma would far prefer to 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 are hyped for lifelong use* (see *Antibiotic development pipeline runs dry*, Lancet, Nov. 22, 2003 pp 1726-7).

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 ever less essential but more profitable drugs* until finally they totally merge and 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 prestige and credibility to overtly-political, monopolistic Big Pharma firms—even though the over-promotion of dubious copycat drugs helps to 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.

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 earn renewed respect for drug development and manufacture.

The discovery, investigation and manufacture of penicillin offers 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 our exciting new medicines.

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

Surowiecki visualizes *Big Pharma’s future* as “marketing, distributing and perhaps even underwriting the costs of smaller producers.” However, my own guess is that when a reasonably effective single payer entity 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).

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 who help us 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 for a couple of remote Australian physicians (medical outsiders who deserve but will never see a Nobel prize) to discover that gastroduodenal ulcer is usually associated with an invasion of the stomach or duodenal lining by *Helicobacter pylori* bacteria—and to demonstrate that swallowing a fresh sample of *Helicobacter pylori* (just recovered from an ulcer

patient's inflamed stomach) induces similar chronic inflammation in the volunteer researcher's own stomach—and to show that antibiotics can eliminate this *gastritis* condition (which is often associated with ulcer and even stomach cancer) by clearing the stomach and duodenum of these bacteria (see Lancet, March 3, 2001 p694).

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 cynic might reiterate that **a cheap definitive treatment harms everyone but the patient.**

Accordingly, one might also expect that curative treatments would sometimes be delayed until a patient undergoing symptomatic treatment ran out of money and insurance coverage. My long-ago observations certainly support that thesis. For becoming destitute quite regularly preceded patient referral from Osteopathic hospitals in other Iowa towns for definitive care at the State University of Iowa Hospitals.

As for the modern treatment of peptic ulcers, it was the U.S. Center for Disease Control or CDC—rather than academia—that finally had to publicize and promote the generally curative and far less costly antibiotic treatment for peptic ulcers to practicing physicians, and (even!) to consulting gastroenterologists—many of whom had continued to prescribe their friendly manufacturer's rep's "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.

Now that medically treatable bacterial infections have been publicly identified as the primary cause of peptic ulcers, persistently symptomatic stomach or duodenal ulcers are increasingly rare. Indeed, stomach surgery for 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 they are mostly prescribed

as treatment for acid reflux with *hiatus hernia*—a common condition that develops in the elderly as tissues that normally hold 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 is included—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 the expensive and rather risky NSAIDs like Vioxx or 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 should 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 since 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 the general population may respond differently than (selected) patients in carefully controlled clinical trials” (Business Week, Feb 9, 2004 pp84-5).

CHAPTER FIVE

ELECTROCOAGULATION OF SKIN CANCERS IS QUICKER, SIMPLER, CHEAPER, MORE ATTRACTIVE AND MORE RELIABLE THAN ANY OTHER METHOD OF TREATMENT*

*Skin cancer . . . How much surrounding tissue should one
remove? . . . Bipolar electrocoagulation technique*

* * *

Clifford Franseen was a highly respected general surgeon who devised many innovations in patient care. He avoided medical school or hospital politics and wrote few articles, so his teaching efforts mainly affected those 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

* This chapter provides enough details on an under-utilized technique so surgeons can easily determine its relevance to their work. Others might just skim through to learn what electrocoagulation is, and why it is so effective.

also held conversation to a minimum during sterile operations, and asked 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 a rewarding apprenticeship on his service.

Because or in spite of such quirks, his operations proceeded smoothly and his patients did remarkably well. But Franseen’s lasting legacy was the regular demonstration that *skin cancers—other than melanoma—could be easily and permanently eliminated from their site of origin by electrocoagulation.*

SKIN CANCER

The three major types of skin cancer are *melanoma, squamous cell skin cancer, and basal cell skin tumor or cancer.* Skin cancers tend to arise on skin surfaces that have been overexposed to strong sunlight. Arsenic, coal tars and chemicals in cigarettes can 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 non-pigmented surfaces beneath a fingernail.* Because melanoma poses a great risk of early spread and ultimate fatality, Franseen favored the standard *wide sharp-surgical removal of apparently localized melanoma.*

Indeed, Franseen strongly advised against electrocoagulation of melanoma. Perhaps his unexplained recommendation stemmed from bad experience. Or maybe he just worried that locally generated heat and steam might spread loose melanoma cells as metastases through blood or lymph channels.

On the other hand, Franseen demonstrated on a daily basis that his unique bipolar electrocoagulation procedure offered *a simple reliable cure for squamous cell skin cancers* (which are far less likely than melanoma to seed distant body sites) *and 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 standard “complete sharp excision” (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—all in one chunk—followed by suture closure. Given that definition, one can easily see how several related problems might increase the risk 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 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 a lot of normal tissue would be unacceptable or impossible (see 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, “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? And so on.

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

And once a site of sharp skin-cancer removal has been sutured shut, one can never be positive that the closed wound contains no residual tumor cells that might invade deeply or spread widely before attracting further attention. In contrast, 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 used a Bovie radiofrequency unit, and a large grounding electrode coated with conductive jelly to allow free current flow and prevent exit burns at the grounding site. Of course, without grounding, one merely has a monopolar arrangement which can only create superficial burns. Monopolar *fulguration* is sometimes used by dermatologists to treat warts, skin tags and other benign, superficial skin conditions.

To perform an electrocoagulation, the surgeon should bring along a selection of appropriately bent, flat head nails whose shafts slip-fit securely into the Bovie electrode handle. The smooth round flat steel surface of the nail head 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 containing local anesthetic with a fine-tip hypodermic needle, and a small scalpel (for biopsy and scraping). Franseen used epinephrine-

containing local anesthetic to prolong local anesthesia and minimize bleeding.

And following coagulation of large or deep tumors—*for control of any delayed bleeding*—he occasionally left the syringe so someone could inject more epinephrine-containing anesthetic solution (as a convenient alternative to local finger pressure). I never encountered or 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 coagulation (associated with a “splut” sound) within 1-2 seconds.

This initial limited *electrocoagulation turns a nail-head-sized patch of living tumor into loose mush that resembles toothpaste* (soft and easily scraped from the burned cavity with the round edge of a small scalpel blade). That mush reveals the true power of Franseen’s method—which depends upon the fact that skin cancers grow more by expansion than by infiltration.

For *skin cancers cannot produce collagen fibers, nor can they incorporate many such fibers by infiltration*. And that allows electrocoagulation (a discrete localized burn) to quickly convert a nail-head-size patch of cancer cells into a soft pale mush that is easily seen and scraped aside to be wiped away with a sponge. In contrast, the surrounding leathery scrape-resistant margin of burnt normal (hence collagen-containing) tissue resembles hard black charred meat.

With Franseen’s method, every extension of toothpaste-like coagulated tumor becomes visually obvious and is easily followed for further coagulation and scraping—until all remaining

electrocoagulated surfaces are obviously normal tissues sealed under a thin charred layer.

This is quite unlike ordinary sharp excision where bleeding from many little blood vessels—and various efforts made to control that bleeding—may obscure or distort critically important extensions of a malignancy. In other words, electrocoagulation *amplifies the visual and the tactile contrast between normal tissue and epithelial cancer* so one can quickly see, follow, coagulate and remove all tumor from any margin.

As an additional bonus, the final burned (hence dehydrated) surface will be *smaller* in diameter than the initial tumor since, as mentioned, these expansile tumors mostly displace tissues rather than infiltrating nearby normal tissues that would therefore also need to be destroyed.

Because it sacrifices only a thin margin of healthy normal tissue, electrocoagulation significantly improves the final appearance after healing. More importantly, *by avoiding surgical skin closure, and especially, by not swinging flaps (as plastic surgeons so often do to enhance early postoperative appearance), only electrocoagulation reliably prevents inadvertent burial and retention of living tumor cells.*

As mentioned, any malignant cells that remain after sharp excision may grow undetected until they become obvious as a significant deep recurrence involving important underlying tissues or structures. In contrast, following electrocoagulation, any residual tumor (that was not already a discontinuous metastatic seed before the coagulation began) can only recur at the surface where it is easily recognized and recoagulated.

Such a local recurrence would represent tumor that was missed during the first electrocoagulation. However, a quick final inspection and coagulation of the entire tumor-free burned site essentially guarantees “No local recurrence!” In fact, I never saw or heard of a local recurrence after a Franseen-type electrocoagulation.

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, these Franseen-method burns reliably filled within weeks to become hardly noticeable dimples. Of course, much of that filling-in reflected a return to normal position of adjacent tumor-displaced tissues.

One woman I treated had a heaped-up 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 just electrocoagulated her cancer, alternately coagulating tumor and scraping aside 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-possible sharp removal of this tumor would have taken half the tongue, leaving him unable to speak clearly or chew and eat easily. Yet even such an extensive, bloody and disfiguring procedure could not have cured his cancer.

But with electrocoagulation, I was able to identify and destroy a 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 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 the tongue's two 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 all been

taught. As a result, forty years after I first learned Franseen's electrocoagulation technique, sharp excision is still the "gold standard" of care for skin cancer.

Franseen had few 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 *chest or thoracic and cardiovascular* (heart, lung and blood vessel) *surgery* as a junior surgical staff member, I also took my turn at staff night call—overseeing general surgery and orthopedic residents. At that time, major surgical cases were routinely sent in by general practitioners 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 Boston's self-image as Medical Center to the World—many academic surgeons in Iowa City were far more experienced and capable than their underutilized Boston-area University-based academic peers.

My teaching position with general-surgery residents led me to propose that they switch to Franseen's technique rather than continue using *sharp removal and closure* for skin cancers. Staff general surgeons were initially unreceptive but finally they offered to send me three lip-cancer patients, on condition that I present all three with photo follow-ups when fully healed.

Though lower-lip cancers were common among Iowa's sun-exposed farmers, patient referrals came slowly. Finally, a year later, I had electrocoagulated and cured three *very extensive* lip cancers.

So at our regular surgery meeting, I presented biopsy reports plus before-and-after photographs of my three cases—all 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!”

A final comment on electrocoagulation: I tried to promote this technique to Alaskan physicians soon after arriving in Alaska, but there was no interest. Consequently, no one in Alaska did routine electrocoagulation when my own first basal cell cancer appeared—so it was removed by sharp excision.

After my retirement, without easy access to a Bovie unit, I simply sizzled (without scraping) two or three other small superficial 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 considers it “gross”—and I urge others not to attempt this branding-iron approach unless they have had considerable experience burning off skin lesions. And while old folks tend to feel less pain, I didn’t particularly enjoy it either.

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 second opinions
rarely change a decision*

* * *

Bill S. excelled in ROTC, he knew every rule, he loved to march, and he couldn't wait to enter the military. Unfortunately, by the end of his chest surgery residency, Dr. Bill also knew every surgical rule and was totally set in his ways. Indeed, he was unteachable by anyone but the program director. And Bill never understood that—as with any apprenticeship—the completion of *formal medical training merely initiated a lifetime of 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 active surgeon-in-charge despite increasingly out-of-date skills (rather than accepting a purely administrative post)—eventually led to a humiliating public 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 all sorts of good or bad reasons. My own interest in chest dynamics began during childhood as I watched my mother, a severe asthmatic, struggle for breath.

Although I was unusually aggressive and unreasonable as a teenager, I was also very observant and helpful to people in distress. Consequently, my father decided I should 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.

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 the 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, modern 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-graduate “internship” year of training so they could 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 that the state license covered, he/she could do in an office practice, with or without any additional post-internship training.

However, large public (non-profit, non-physician-owned) hospitals normally would not list anyone as a specialist unless he/she took additional formal training after internship. More recently, the practices of staff physicians in public hospitals have increasingly been restricted to specialty areas covered by accredited training programs that they have successfully completed. Such programs also made them *eligible for examination and certification* by that specialty's Board of Examiners.

Simply becoming eligible to sit for a specialty exam usually qualifies a physician to start practicing that specialty in a hospital. But larger hospitals generally expect entering physicians (those who have not demonstrated proficiency by practicing a specialty locally for enough years to be grandfathered-in) to challenge and pass an appropriate specialty exam and thereby become Board Certified within several 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, commonly known as *chest surgery*. The latter more limited term was descriptive of pre-1960s practices in our specialty—before heart and large blood-vessel repairs became routine—when chest tumors, infections and injuries predominated. In 1965, Board Certification had no practical significance in Alaska anyhow.

Similarly, Marianne completed her training and became Board Certified in Pediatrics. During her subsequent years in a general pediatrics clinic, Marianne gradually focused on behavioral problems. Eventually she took additional training at L.A. Children's Hospital before opening her practice in Behavioral Pediatrics.

In recent years, her specialty—now known as Developmental Pediatrics—has evolved its own formal training requirements and Board-Certification. But since Marianne was a behavioral pediatrician before Developmental Pediatrics became a recognized subspecialty, she—like other practitioners of the time—including early teachers of that new subspecialty—was grandfathered—or grandmothered-in.

Younger physicians occasionally leap directly from Board-

Eligible in some specialty to grandfathered-in. Usually this is necessitated by their inability to pass the relevant Board Examination, despite which their peers may conclude that they are good (or nice) enough to remain in practice. It wouldn't surprise me to learn that some specialties raise or lower the bar for certification in accordance with their perceived need for new recruits.

In fact, after flipping through my credentials, the only question my GP interlocutor asked before granting an Iowa license was whether I intended to practice in Iowa after training—which I wisely promised not to do. Board Recertification is a separate issue discussed later.

At present, hospital rules and regulations—or malpractice insurance carrier requirements—or medical society guidelines—or State Medical Board regulations—set only vague limits on specialty practices. Other than those restrictions, and barring formal patient complaints or malpractice lawsuits (which formerly were mostly ignored by “the authorities” anyhow), all physicians are free to offer any lawful services within their own offices.

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 electrocoagulated skin cancers, Deepak Chopra pursues his own personal or religious theories of treatment, and others perform acupuncture, or prescribe herbal remedies or promote costly but apparently unfounded treatments like chelation or scientology.

But only in a rural or medically remote area like Twillingate, Newfoundland (in the fifties) or Anchorage, Alaska (in the sixties), could a physician with just an internship year of post-medical-school training, expect to regularly perform major elective operations.

CHOOSING A MEDICAL CAREER

During senior year in medical school, we students all applied to a nationwide matching program that somehow correlated our preferences in postgraduate training programs with how much those

programs wanted us. At the time, more hospitals offered low-wage internship positions than there were physician applicants to take them.

Consequently, we all matched to an appropriate general or specialty internship somewhere. Foreign medical graduates filled many of the openings that remained. And most of our class followed that internship with several more years of resident-level training in some specialty at a hospital or medical center.

At least in part, I pursued those 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 I had found the other major specialties interesting, none attracted me as a lifetime occupation. So surgery seemed my best option until I rotated through general surgery and found this 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, with little agreement on important principles of physiology. Yet chest dynamics seemed very straightforward—a matter of pumps and pipes, pressures and flows—as later described in my *Manual of Thoracic Surgery*, 2nd ed (still available through Amazon.com).

Furthermore, incremental adjustments that barely improved each cycle of the blood or air pump, often had dramatic cumulative impacts that saved many lives. In addition, chest operations made sense and bad results usually had preventable causes that could be identified and then avoided. Intuitively, I already understood a lot about breathing from having watched my mother struggle with asthma. Hence I felt I could contribute.

On entering medical school, my goal was to become a “simple

country doctor.” I enjoyed rural life and helping people—making their lives better. Surgical skills were obviously important for a physician intending to work in a remote location like Twillingate. 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 endless tests might suggest that nothing was wrong. And I found no validation in making obscure diagnoses of conditions that, unfortunately, we could not treat.

Nonetheless, during those long miserable years of training in 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” for—as those who ran the Vietnam War would attest—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 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 “You will never again be as up-to-date as you were on the day you completed your residency.” And every medical

* *Important recent advances in psychology are clearly explained in Human Givens: A new approach to emotional health and clear thinking; by Joe Griffin and Ivan Tyrrell—pub. 2003 (currently available only in England through either Amazon.co.uk or www.humangivens.com).*

hatchling who emerges stuffed with theory soon discovers an unspoken corollary “You will never again make as many mistakes as you did while learning if, when and how that information could or should be applied.”

Obviously, this statement and corollary are only relevant as long as physicians still try to remain current and well-informed. Nevertheless, looking back on the evidence-based, hence scientific (because falsifiable) classroom-type lessons to which I was exposed during 20 years of high school, college, medical school and surgical residency, it seems clear that *nothing taught then would be considered useful or 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 is always warranted). Nor do I suggest that a good education in science simply represents another ticket to a high-paying job that any intelligent high school graduate might learn to do as well—though that too is often the case.

For while those high school and college science courses crammed my aching head with random and soon-forgotten-or-outmoded information, they also offered a variety of options for constructing an expandable framework of knowledge that created innumerable collages, message boards, files, hangers, shelves and other sites where additional incoming information might fit and contribute to understanding.

Eventually, 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 productive comparisons, connections, disassembly, revision and retrieval until finally discarded or lost.

Finally, the above italicized remark 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 exposed. Has anyone ever determined how well these bounders served their patients? Should we be upset if an imposter 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. And few could 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.

We often 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 end up as outstanding corporate CEOs. And undoubtedly, a few top level managers end their careers in the stock room.

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 complete college*.

Our national goal of a classless society was best 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.”

And now that both China and India are 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 that 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.

Would our nation’s health care benefit or suffer if those who finished medical school could not automatically expect life-long top billing and top salaries regardless of whether they kept up-to-date or how well they performed? Universities occasionally offer

outstanding individuals professorships even though they may not have earned any postgraduate degree. 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 into an internship or residency if they successfully challenged appropriate examinations? On the other hand, if a physician fails a practice outcomes audit repeatedly, should that lead to a reduced level of patient-care responsibility and compensation—or even a job in the stock room? Apparently, some foreign physicians take better-paying jobs as a nurse in America before going back home to open their own practice.

The point being made here is *that science is an ongoing process rather than a result*. And as medicine becomes increasingly scientific, it outdates ever more swiftly. By 1980, an estimated 600,000 biomedical articles were published each year, and the half-life of medical knowledge was about seven years. Today, with many more journals and articles, a 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 conclusion that *a formal education succeeds only insofar as it encourages a lifetime of learning and frequent reexamination of strongly held ideas*.

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 a huge effort and expense,

so one might reasonably expect those who finally achieve high specialty status to resist, or at least seem disinterested in, advances that might 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—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 but 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.

One can see that even the most well-intentioned physician might feel a twinge of empathy for 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 expect 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 frequently 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 visits made to a family doctor, or 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. And 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.

Naturally, some advice that patients get will be good and some bad, whether Doc's opinions come from medical school, life experience or watching football games or soap operas on TV—or if he or she is just winging it, as the Oracle of Delphi used to do when staggering out of her inner sanctum after sniffing near-fatal doses of volcanic gases that seeped 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).

Nowadays such visits by the worried-well are often criticized as the medicalization of modern society. And hormone replacement therapy for the menopause is certainly a good example of how a treatment devised and enthusiastically supported by interested persons and drug companies for widespread use in normal aging can have dangerous consequences, such as an increased risk of thromboembolism and breast cancer. These risks—already known in the 1970's—typically became buried beneath heated arguments over whose regimen was better.

Yet 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).

Furthermore, a great many Internet sites compete to provide information, misinformation and disinformation that may address many of these questions or needs. Of course, Internet sites don't necessarily respect privacy, so you might soon be deluged 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 might appear. Thus pre-adolescent males and their parents are sometimes mightily concerned to feel a soft moveable bit of breast tissue under one or both nipples. But this usually becomes a non-issue when they understand 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 from bladder to umbilicus. Once that minor bladder leak was surgically closed, 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 further evaluation would be warranted.

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 but 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. So perhaps, a cheap, friendly, accessible and easily updated personal medical robot or pocket computer will one day provide much of your advice and routine care.

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.

A relevant point was made by my father-in-law (a psychoanalyst), namely 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, as a practical matter, doctors and patients both need regular reminders that even the finest medical schools only produce fallible, well-intentioned humans with special skills. And that all doctors require frequent updates to remain current in their chosen medical field.

That is just another reason why a truly informed consent 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—once they have decided to place their lives in that surgeon’s 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 might encourage an ambitious plumber or roofer to visualize an expensive rebuild where a simple patch might otherwise suffice. Similarly, some surgeons may perform procedures that are profitable even when they personally would not select such an inexperienced surgeon or such a dangerous or costly procedure for themselves.

The solution to this problem might seem a straightforward 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 operation repeatedly, another might not.

A pre-technology joke insisted that an orthopedic surgeon should be “Strong as an ox and twice as smart.” In any case, 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 2/3 of persons who have 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 be sitting upright too long at the computer.

In one study, backache patients were randomly assigned to either a 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 patient back-pain 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 people with backache. Yet no one has shown any treatment to be better than *no treatment* for the vast majority of backache patients.

Hence an ongoing *randomized trial has been 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 usually occurs with arthritis and aging) or degenerated spondylolithesis (a slipped vertebra). Some providers allegedly fear that those 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 faced with a problem beyond his/her 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 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 a patient asks their old *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 usually 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 the 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 a permission rather than endanger a dying patient with further delay.

Once I even operated despite an adult patient’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 sac that surrounds 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. And as he regained health, he became friends with all the female nurses.

UNSOLICITED SECOND OPINIONS RARELY CHANGE A 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 the patient's 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 until 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. They say “Free advice is worth what you pay for it.” In my experience, unsolicited second opinions rarely change anything.

CHAPTER SEVEN

UP THE LONG AND DUSTY TRAIL TO MARKET

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

* * *

In the summer of 1965, we drove from Iowa to Alaska in our 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 Y., an Iowa surgical tech, drove up independently to become my trusted surgical 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 two summers (1954, 1955) for the US Fish and Wildlife Service out of a remote shack we built on Prince William Sound. As a weir attendant (GS-3), I earned seventeen dollars per day (salary plus per diem). 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 began to pack. It turned out that few Alaskan physicians foresaw any need for an up-to-date board-certified chest surgeon. Most spoke glowingly of their “very good relationship with Virginia Mason Clinic in Seattle—only three hours away by jet.” Some were too busy to see me at all. But by then I felt confident of my surgical skills, and certain 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 no matter what debacle preceded a referral, Virginia Mason doctors always complimented the work of Alaskan physicians who sent them cases.

On the other hand, the less “Alaskan-dollar-dependent” University of Washington Hospital residents often asked incoming patients “Who the Hell did THAT to you?!!” Of course, there was much to question in those days. For Board Certification was irrelevant and many older doctors were alcohol-dependent.

Indeed, more than one patient informed me that Dr. X was a better surgeon 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 almost a cult-like following among close to a thousand Anchorage women.

For HR literally 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 uncounted divorces, he allegedly helped to support his known descendents, 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 politically correct days, he would surely lose his medical license.

Alaska's few board-certified surgeons worked with and got referrals from the local general practitioners—many of whom had their own surgical practices in local hospitals. Anyone could list himself or herself as a specialist, and many did. I was especially intrigued when an older general practitioner listed himself on a local clinic's specialist roster under *Orthopedics* one year and *Urology* the next.

These libertarian circumstances left surgeons free to devise innovative solutions for common problems. For example, GH, Alaska's first Board Certified general surgeon (who also did general practice), apparently cured one patient of ovarian carcinoma. At least she was well and appeared tumor-free ten years later, despite the fact that her cancer had breached the ovary's peritoneal surface.

GH presumably achieved 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 instilling radioactive gold before early postoperative healing and scar formation could commence, GH maximized the potential impact of that treatment. For once various internal surfaces start to heal and adhere, they can easily shelter a few residual ovarian cancer cells from subsequent intra-abdominal or intravenous chemotherapy.

Those internal *adhesions* also hide tiny tumor implants from detection if a patient undergoes the low-yield, “second look” re-exploration. In this respect, modern chemotherapy for ovarian cancer—which is costly, dangerous and consistently non-curative when begun after surgery—looks a lot 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 tiny particles bearing

radioactive gold were likely to drain through the same nearby lymph channels and lymph glands that might harbor bits of tumor.

But while the routine utilization 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 it would not be needed very often. Hence no one except the patient could benefit by promoting it.

In addition—like the 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 like to show 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 the 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 meticulous surgeon who could take hours to get everything exactly right before closing. So he had arranged to have a radioactive gold solution available for this case. And he waited patiently in the operating room while the solution was prepared and its radioactivity measured.

As already mentioned (see Mr. Zackoverich earlier), when responsibility for a patient is shared (say between a gynecologist and an oncologist), no one *may feel in charge or actually have final authority over other consultants*. So it is worth repeating—*every hospitalized patient needs one physician-in-charge who can intervene and modify or veto consultant proposals*.

HEADING FOR OUR FUTURE HOME

The Alaska Highway was a scenic 1200-mile dust bath. Our only adventures occurred as visibility fell to zero behind each passing

truck. But I was certain 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 and Marge, both of whom had pushed ahead rapidly. On our arrival, there still was no interest in or work for me. However, Marianne soon became gainfully employed at the Air Force Base pediatric clinic. She continued to work there part-time until our children were older.

Thus sixteen years after entering MIT, I finally opened my chest surgery practice in Anchorage—one year after North America's largest recorded earthquake, and the subsequent tidal wave, had damaged many towns in Southcentral Alaska—a huge area with just a few roads—inhabited by less than 100,000 people. We chose Anchorage because it was Alaska's largest town, though its population then was rather small for my sort of work.

But Anchorage was the largest town I was willing to live in, and the smallest city Marianne was willing to consider—especially after living for 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 in the moonlight.

Anchorage had four hospitals including Providence (a new 90-120 bed Catholic Hospital), a similar-size private (doctor-owned, formerly Presbyterian) hospital downtown and an Air Force Base Hospital where Marianne worked. In addition, the rambling older Alaska Native Hospital near the Alaska Railroad terminal—operated by the US Public Health Service—provided care for Alaska's Eskimos, Indians and Aleuts. None of these Hospitals 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, write a couple

of favorably reviewed books on chest surgery, ski, sail and fly for many years after our arrival. Hence I could easily have offered electrocoagulation services or competed for general surgery patients. But I preferred to become known as a thoracic and cardiovascular surgeon.

My initially meager income remained at least a thousand dollars below our basic office overhead for the first five months. Thereafter, I was often asked to assist other surgeons at operations in a wide variety of different fields. Assisting at surgery provided some income, broadened my experience and helped maintain my skills. And an occasional patient was referred to me for diagnostic procedures or major surgery.

I also handled a wide variety of hospital emergency room cases—ranging from one child with intractable epilepsy (that finally responded to my open-drop ether anesthesia; another outmoded technique that worked well) to many consultations on patients with severe injuries. For referring doctors increasingly interpreted “cardiovascular surgery” broadly as including surgery on anyone who was “bleedin’ bad.”

While sick patients usually appreciated my blunt assessment and rapid diagnosis or correction of their problems, a few lesser talents among referring doctors did not. One internist/chest-medicine physician greatly preferred to have others operate upon his lung patients as they then required many days of his costly intensive care and weeks in hospital—while my patients often went home to convalesce after two or three days.

When I assisted a less experienced surgeon in another specialty, the lack of progress sometimes made it evident that I would have to complete this operation. Although Dr. C (a urologist) seemed happy for such skilled support—and even woke me one midnight to tow his broken-down car home—he billed so strategically that my assistant’s fee often remained unpaid (as part of the deductible).

Occasionally, other surgeons called me in 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 asked 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 merely raise awkward questions.

Similar calls came from all over. One gray Sunday, a practitioner in a small town four hours away by car, phoned me at the hospital for advice when, soon after he inserted a chest tube, his patient's blood pressure disappeared. I rushed to my little 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 (a friend with whom I had worked in earlier days) began pumping blood.

That unnecessary chest tube—inserted incompetently for a “bruised chest”—had torn the internal mammary artery inside her chest wall. The still-bleeding vessel was quickly secured before our 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 let 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 his thanks and said he would send me a large king salmon (he never did). A couple of years later, this attractive young couple dropped by my office to express their appreciation, having by then figured out what had happened. For personal reasons, they chose not to sue their doctor.

On another day I was called into two different operating rooms to help surgeons who had encountered uncontrollable intra-abdominal bleeding. By coincidence, each patient had a torn and bleeding kidney that required removal. Luckily both had another healthy kidney. Nonetheless, our urologists were enraged at my double invasion of their turf. And Hell hath no fury like urologists pissed.

Most surgeons took emergency night and weekend calls for one or more hospitals. Initially, these night calls included severe toothaches, as Alaska's few dentists had prospered despite having unlisted phone numbers and no interest in hospital work. But as hospital-based dental specialties developed—and a less obstructive dental exam allowed more dentists to practice in Alaska—we finally were freed from toothache call.

In those days, most insurance companies paid the assistant surgeon 25% of the surgeon's fee. Few uninsured patients could afford to pay, so I regularly wrote off such debts. For 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.

However, federal guidelines eventually insisted that no government insurance program could be billed more than the lowest fee a physician ever charged for that service. Thus anyone who treated a friend or colleague for "insurance only", or worse yet, provided medical care to a poor person for free, thereafter committed "fraud" whenever he/she charged a 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 for debt collection—and that was 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 caused us to do a lot of work when I wasn't feeling 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. Several years after charges were dropped, he divorced her. And I never got paid.

ASSISTING AT SURGERY

During my first year in practice, I mostly assisted Bill Mills, a busy orthopedic surgeon and world-renowned frost-bite expert.* When Mills went off to provide orthopedic care during another (this time, the Vietnam) War, I stayed home and split firewood for the Mills family. Mills eventually returned to private practice and retired from the Navy as an Admiral with many medals for bravery. Over the next five years, I mostly assisted in gynecology, general surgery and neurosurgery.

One day I was even introduced as “the world’s best assistant vaginal surgeon”—another unsought honor. But while many of

* *Mills initially had doubts about my Boston-based education. For several years earlier, an Alaskan physician friend had asked Mills to help a proper Bostonian, Bradford Washburn, prepare a small article on frostbite for the Appalachian Mountain Club Journal.*

Because Mills was too busy to answer his endless questions, Washburn borrowed a lengthy frostbite article Mills was preparing. When next seen, that article—Bill Mills’ life work on frostbite, illustrated with a great many of Mills’ clinical photographs—was the lead article in the New England Journal of Medicine under Washburn’s name.

*Although Washburn wasn’t even a physician, “his” article on the **Medical Treatment of Frostbite** became an immediate classic. Over the following forty years, despite repeated requests by myself and others, NEJM refused to apologize for or to correct that plagiarism.*

*Recent NEJM editors seemed to admit it was all Mills’ work. But Alaska was far away. And Washburn insisted that he had Mills’ permission. Amusingly, NEJM still claims that the “authors” of any article submitted **must actually have done the work** reported.*

In fact, NEJM’s 1960’s editor dismissed repeated complaints from Mills’ annoyed friends by declaring that “no gentleman from a good Boston family would ever take credit for another man’s work.” A recent article in the Washington Post aired new accusations of plagiarism against Washburn. His more recent defense was that being 90 years old made him forgetful.

the hysterectomies we performed seemed unnecessary, at least Alaskan gynecologists were skilled at rebuilding a functional vagina, whereas the few Boston specialists I had assisted on vaginal repairs often left just a non-functional indentation.

CHIEF OF SURGERY

In 1971, I was suddenly appointed Chief of Surgery at Providence Hospital when the previous Chief resigned after a doctor—whose surgical privileges were being curtailed—threatened to kill him. It wasn't really an honor, for no one else would take the job. More threats flew as I suspended various or all operating privileges of seven other physicians "for cause" before my term as Chief expired at the end of 1972.

Something of which I gradually became aware during my stint as Chief of Surgery was that wielding the power to decide who should or should not work in the operating room made me feel increasingly righteous. As a lifelong critic of those who let power go to their head, this feeling made me uncomfortable. Hence I consulted ever more widely before any action.

I also leaned over backward to avoid conflicts of interest such as deciding the fate of surgeons who competed with any aspect of my own work. Consequently, I never completed the "unending" task of upgrading surgical care and limiting surgical privileges to areas of competence. Though every disciplinary decision I made was open to in-hospital or legal appeal, the former was rare and unsuccessful and the latter never happened.

I mention this here because I had supposed I would be immune to feelings of unjustified importance. So now I am even more convinced that it is essential to have built-in safeguards against any (and especially against *chronic*) abuses of power. After all, it is hardly recent 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 get, since "Chief of Surgery" was a temporary one-or-two year post held by most of

us in turn. But when a *single payer system* comes to pass, it will require a huge cooperative effort and frequent transparent, public, rotations of responsibilities and contracts, to ensure adequate and fair public and professional oversight of those who administer or work within such a system.

In my case, several of the eight physicians that I successfully restricted or evicted from the operating room—and certain of their buddies—were determined that I would never see another of their patients. And once again, my income declined below my modest office overhead. So when my term as Chief ended, I closed my office and went out to St. Luke's Hospital in Milwaukee for retraining in heart surgery—six months earlier than previously planned.

RETRAINING IN HEART SURGERY

I had already made several annual visits to St. Luke's state-of-the-art "open heart" surgery facilities to observe the work of Alfred Tector—a friend from Iowa City days—who completed his own thoracic surgery training some years after we went north. By 1972, it was clear that heart-lung-machine-supported-operations to bypass diseased coronary arteries had advanced enough to be performed in Anchorage on our neighbors and friends.

Naturally, this remarkable advance in skills, knowledge and technology, entirely superseded my seven-years-earlier *state-of-the-art* resident-level training in heart surgery. And of far greater importance to Alaskans, modern coronary bypass operations finally guaranteed enough patients to sustain a competent heart-surgery team.

Months later in Milwaukee, I learned of the rumor then prevalent among Anchorage doctors who considered me "difficult". Apparently, it explained my ongoing absence from Anchorage (which lasted four months) as inevitable, given that "Marianne has finally had all she can take!"

By this time, Providence Hospital had purchased a shiny new \$4,000 heart-lung machine at my urging, which it later sold to

me for a dollar to avoid liability for mechanical problems. In turn, I simplified my own life by giving my \$1 machine to John Hillebrand (our capable perfusionist) who thereafter billed independently for his services.

The heart catheterization lab had been open for a while and was providing competent diagnostic services. Our initial heart surgery team—which included George Seuffert, an anesthesiologist, George Rhyneer, a cardiologist, and half a dozen great nurses—had tested our new equipment on a couple of large dogs that were already scheduled to be destroyed.

We even operated on one large black bear before its dissection as part of a pregnancy study. Before completing his own work, the government biologist kindly let us anesthetize and run this adult-human-size bear on our heart-lung machinery. That full-scale test showed our equipment to be adequate, though the operative procedure had a slapdash quality.

After darting the bear with muscle relaxant in its cage, we had to trundle it quickly to surgery in a deep wheelbarrow—then induce anesthesia before the relaxant wore off. Not unreasonably, I belted a pistol over my surgical gown to back-up the anesthesiologist. And at one point, I 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 bear and bystanders alike, both forelegs were shaved in a wild search for veins to introduce anesthetic. Then as the operation began, she broke the restraints and swung her left foreleg and claws smartly around my back in an unwelcome bear hug.

Under the circumstances, no one volunteered to stay with her until she awoke, so we never did check for brain damage after bypass. I learned indirectly that our biologist friend was not pleased with how extensively we shaved her forelegs, for that—in addition to my surgical incision—had ruined the hide (which otherwise would have been auctioned at the annual fur festival to pay for needed equipment).

Overall, our initial efforts to develop an efficient open-heart

surgery team made me increasingly nervous. I had arrived in Anchorage brimming with confidence, but my first Alaskan heart-surgery experience had made me sadder and 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 were made by me that 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 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 weak thread snapped and a momentary gush of blood followed (itself a common and easily remedied non-event), my assistant—with 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 huge tear that extended around to the circumflex coronary vessels behind the heart.

Now heart surgeons of the 1960's had not yet developed safe ways—especially without the heart-lung machine, which was still technologically imperfect and bore its own considerable risks—to access or operate in this area. And merely lifting the heart for visual exposure made the heartbeat ineffective. Nor were heart surgeons

yet able to do successful coronary artery bypasses if that became necessary.

So while major bleeding from this no-man's land was soon controlled, I eventually decided to close 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 but finally decided against a lawsuit for malpractice. I appreciated that decision. Her feelings of anger and loss were completely understandable. 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" repair 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 swollen 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. Many years earlier I had requisitioned Tector out of his own surgery residency in Iowa City to work for two weeks in Nome, Alaska when that town's hospital desperately needed a physician.

On my Sundays off call, Tector sometimes dropped me at the Milwaukee Zoo near his clinic. There I could wander for hours before walking eight miles back to St. Luke's. Tector later visited Anchorage to help jump-start our open-heart operations. Our first

two patients definitely 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 underwent bypass procedures for coronary artery obstructions. When I retired in 1983, my cumulative open-heart operative mortality rate was roughly 2%—still too high, but no heart program of that era had better overall numbers. Because our heart surgery referrals began slowly, I still had time to assist in general surgery until 1976. Thereafter, heart surgery occupied most of my time.

With busy cardiologists referring Alaskan patients to me, most of the physicians I had restricted or offended while Chief of Surgery, either retired, forgot or forgave me. One was in prison for homicide elsewhere. And several times I overheard doctors bragging that Providence Hospital was more fussy about surgical privileges than any other Alaskan hospital.

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

So when I advertised for competitors after seven years of always being on call (for I neither wanted to take on more headaches or make more money by hiring a partner), various Chiefs of Surgery promptly issued heart surgery privileges to all who applied, even those who were not fully trained or competent. The first to arrive 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 to have Sarwar enter practice, and later we shared office space.

But if the local rumor at the time was true—and Cooley really

did endorse MH as “better than anyone in Alaska” as alleged—then that recommendation may have been due to Cooley overhearing me joke at a surgical meeting that “In Alaska, a coolie is just a quickie in the snow.”

Anyhow, two or three years of poor results ended MH’s cardiac surgery career in Alaska. On the other hand, after I helped Sarwar through a couple of the usual initial complications, we remained good friends and competitors until I retired—at which point, he generously continued to provide office space for Marianne, who by then had a private practice in behavioral pediatrics.

DISPUTES BETWEEN SURGEONS ARE, UNFORTUNATELY, COMMON

Over my 18 years in practice, I annoyed many 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 the correction of this condition—ordinarily a straightforward one-stage surgical procedure—required special training. Yet JW, an older lung surgeon who had amply demonstrated his skills on three similar patients previously who all died, then justified operating upon his fourth patient (who also finally died), by pointing out he had already repaired three others. We raised Hell.

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

I first learned about 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 condition

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 the names of any who were willing to testify at trial.

During JW's deposition, the plaintiff's lawyer mentioned he was going to ask me for a sworn statement. Allegedly, JW blew up—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 add that JW was a competent lung surgeon. Indeed, he—like most other experienced surgeons with whom I worked or spoke—had developed and willingly shared useful variations on standard surgical techniques.

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

PAINFUL EXPERIENCE INFORMS MEDICAL JUDGEMENT

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, busy older fee-for-service practitioners

commonly find themselves with less time to study or attend meetings. As a result, some progressively 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. Consequently, every capable physician will forever revisit his or her own private graveyard to review the agonizing “if only” lessons that underlie real medical knowledge and humility. Which raises the 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 hopefully, an increasing emphasis on communication and teamwork has helped to reduce such misbehavior. In at least one specialty, surgical arrogance notably diminished as women physicians (who are naturally better communicators and often better team workers) carved out their own private practices in gynecology—that former bastion of male arrogance.

Note: I retired with ego intact before female surgeons made significant inroads into cardiovascular surgery. Thus I cannot comment on how women are faring in that 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-house 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.

In the mid to late 1960's, only half a dozen plaintiff's attorneys accepted medical malpractice cases in Alaska. Three or four of these attorneys were rather despicable fellows (in our view). But as my childhood friend Warren used to say when 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 (I recently read that a Miami-Dade obstetrician/gynecologist's policy cost over \$200,000 for coverage in 2001—or 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 routinely brought a medical textbook to the hospital to confirm 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 yet 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 promised 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. And 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 an unusually large refund to a patient's estate may have 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 since he persisted in gouging his leg wound open with his fingernails, it soon became worth the three thousand dollars he lusted after, 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. Unfortunately, that new medical malpractice insurance was a *mandatory program*.

In the meanwhile, the district attorney had investigated whether physicians 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, State-insured physicians complained that there were no criteria for settling cases. In fact, when one patient complained of a sore knee after otherwise successful knee repair, the state program mailed him a \$50,000 check without any examination or hearing.

Our State-insured physicians protested that this sort of easy money would surely encourage more patient 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 converted everyone who hadn't already bought 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 day 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 the mandatory insurance program fizzled. Eventually, other voluntary plans became available and we reopened the heart surgery program—having gained little through all of our protests except a bit more unity.

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 intentionally 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 or significant assets. So she took the silverware 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 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 a 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.

But as long as a physician maintains adequate malpractice insurance, even a punitive financial award is merely a charge against all malpractice policies and thus a financial burden widely reflected onto all patients. The malpractice attorneys say, “We’re not mad at you, Doc! We just want to punish your insurance company.”

A competent single payer that was backed by a decent social safety net, could easily support good quality care for all (see Chapter Fifteen and Epilogue). But Bush-II and his billionaire corporate buddies would soon run such an entity into the ground for their own short-term gain.

So is it possible to design *a separate national health care system—based upon regional and local units in which all adult citizens are equal voting shareholders*—that could run independently, responsibly and responsively—and be supported by stable long-term funding from a progressive income tax?

In the meanwhile, to the extent that a malpractice policy resembles the *mother lode*, it encourages attorneys to prospect. And in response, all physicians practice expensive defensive medicine—routinely requesting unnecessary tests or consultations even if such studies will likely return ambiguous results or add nothing useful.

In my own practice, because I was a chest surgeon, almost every adult patient got 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 an examination of their leg or tummy vessels might assume they had no chest problem.

And the last thing I wanted was people saying “von Hippel missed That?” Unfortunately, the mirror image of such a statement—and the image too many of us competing physicians savor and encourage—is “von Hippel sees all—knows all”. Yet even the most carefully cultivated reputation for infallibility shall surely collapse with a crash.

In small town practices where almost everyone is in the loop, it is especially important to share credit and keep others from overestimating your every success. The best approach is to try hard 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 have faith 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 also be fair to the patient’s previous physicians and not proclaim or let others proclaim your brilliance.

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

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 competing practitioner or consultant, as incompetence of the prior or referring doctor. That is especially true when academic physicians only see that patient months later.

Many physicians, clinics and private hospitals generate so much of their income from psychological or laboratory or x-ray screening tests that they would do unnecessary studies even if they weren’t always at risk for a malpractice suit. And seemingly sensible malpractice insurance rules often 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. And an insurance attorney may 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 biased so either attorney loses a lot of money

by considering the plaintiff's welfare. Under such circumstances, a proper arbitration clause with a timely completion guarantee, might be in the patient's and surgeon's best interest.

Sarwar once assisted a newly arrived surgeon (K) who mistakenly sewed a bypass graft onto a heart vein rather than to the nearby 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 vein from the leg 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 demonstrated by a postoperative coronary angiogram. But the point here is that the lawyer for the insurance carrier insisted that Sarwar and K 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 had been optimally resolved by re-operation, referral or whatever. But both physicians lacked confidence in their own common-sense ethical or legal standing, which might have guided them to flout insurance company rules.

So they followed the insurance lawyer's advice in his area of expertise and authority. Indeed, since both surgeons assumed that the attorney's counsel was their legal mandate, they abandoned the patient forthwith and refused to see 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.

Not surprisingly, their apparent lack of interest infuriated and thoroughly confused the patient and family, who soon contacted me through a printer's organization that 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 is, malpractice attorneys who give useless or worse advice must be disregarded when that advice conflicts with the

physician's commonsense obligations or the patient's best interest. And every malpractice policy should make that clear.

OUR ANNUAL FUCK-UP CONFERENCE

We had been in Anchorage for about ten years, and our heart surgery program was up and running, when a physician friend recommended me to his 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 the annual meeting at Keystone ski resort near Denver.

In addition to providing an important educational service, Cobe Labs gained good will and insights into our current problems and needs. Cobe also asked us to attend a final half-hour presentation by their product manager, so we could critique their products. It looked like a 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 problem case that had resulted in unexpected death. Right after that presentation, the other group members in turn critiqued his care and judgment, proposed alternate approaches or merely expressed sympathy. We also had time to present other interesting or troublesome chest surgical or open-heart problems for brief discussion.

The few surgeons who (unbelievably) hadn't made any major mistakes 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 that proved very worthwhile.

Despite my medical retirement from surgery and from 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 that our group had been the most productive and successful. Contributing factors were the blunt but friendly

critiques that we generated, perhaps aided by 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. And our operating-room and ICU nursing teams were always eager to hear what I had learned. Cobe personnel never pushed us to utilize more Cobe products. Nor did Alaskan orders to Cobe 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 and absence of attorneys or stenographers—especially as it became evident that we all screwed up occasionally, and that this was a forum where anyone could ask others for advice, rather than a public relations event for well-known MD's or a sales meeting for the manufacturer to promote 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 opening themselves to malpractice litigation or institutional reprisals? Might such mini-conferences help reduce current high rates of hospital error?

Would politicians and administrators, grieving families and malpractice attorneys, ever agree that an honest admission of error ought not result in repercussions to the individual or team? Is there any parallel here to FAA or maritime rules that sometimes hold individuals harmless for self-reported near misses or accidents?

If so, such circumstances might offer an opportunity to substitute simple "harmful incident insurance" for the present, far more costly "punishment" or malpractice insurance—especially if this were instituted under a single payer who also had full responsibility for quality control.

My current guess is that honest self-reporting will not soon become widespread except in small trust-building specialty meetings like our Cobe groups—at least until an established single

payer arrangement develops a track record of objectivity and truthfulness. In other words, not 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 anonymous 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 and the “concerned visitor” was long gone. None of our usual 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.

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 that our overall open-heart operative mortality rate may actually have been just under 2%.

CHAPTER NINE

ON THE ORIGINS AND IMPORTANCE OF TEAMWORK

Teamwork in surgery

* * *

Teamwork was never mentioned as a part of my formal education. My first lessons came early as scary reprimands when, as a pre-adolescent volunteer farm hand, 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.

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 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 the branding and nut-cutting could commence.

As usual, I made lots of mistakes. During haying season in Wyoming, I worked my team too hard on the wide hay rake, with the result that one horse died during the 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 was a) unsuccessful, and b) filled my mouth with gasoline so I burped leaded gas and had to avoid open flames for several days. Plus c) the dirty hose contaminated the truck's entire fuel system, which then 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 hands knew I intended to go to medical school so I was viewed as a minor medical authority (despite my recent bus trip to investigate 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 mutter 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, was a kind-hearted man with a sense of humor who treated all the young hands as family (as several were).

In earlier times, Wyoming sheep ranchers and the Union Pacific Railroad maintained a complex and annoying fiscal relationship,

since the Union Pacific's monopoly on freight movement—long before Interstate Highways were built—meant the ranchers were regularly ripped off for shipping costs.

So to prevent ranchers from extracting and selling the valuable wool fat (lanolin) separately, 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.

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

Under such circumstances, local juries unanimously agreed 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 great value was apparently conferred while the animal was 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. For example, in the summers of 1952-3 I regularly drove a flat-bed U.S. Navy "squid truck" from Weston, Massachusetts to Sakonnet Point, Rhode Island, where I boarded a fishing boat to help harvest squid from large net-enclosed traps. These traps captured all sorts of fish as they naturally headed for deeper water upon encountering the long net leader to shore.

Interesting fish that we caught included 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 ocean sunfish (worthless but coated with a half inch thick layer of slime that made it nearly impossible to heave overboard), sharks, flying fish (which often flew in groups from the trap, with some escaping while others bumped into one of us or landed in a boat), bonito, sting rays, skates, sturgeon, mackerel, bluefish and many huge-mouthed, exceedingly ugly Irish Lords (a politically incorrect name that raised interesting historical questions).

My job was to fill the truck's tank with fresh seawater—keep that water cool with unreliable refrigeration equipment—and deliver 50-100 healthy squid to MIT. There researchers studied nerve impulse conduction through giant nerve fibers that controlled swift contractions of the squid's muscular body mantle. During capture, the six to twelve inch-long bodies of these squid required gentle handling as they soon died if a delicate support structure protecting their mantle nerves was damaged.

Each day our sturdy 38 foot diesel-powered fishing boat towed two smaller open crew boats out to empty several anchored and buoyed, heavy mesh fish traps and larger-mesh gill nets. These wooden boats had all been homebuilt by old Holder Wilcox for his fishing business after the hurricane of 1938 wiped him out.

Upon reaching a trap, the larger open boat was positioned centrally along the trap periphery over the trap intake funnel while the smaller skiff took its place nearby, along one side of the trap. Then these life-long fishermen began to lift trap mesh hand-over-hand with their huge hands and stout, cold-impervious fingers (each finger half the diameter of my wrist). By progressively lifting and releasing empty net behind them, they gradually reduced the trap volume to herd enclosed fish toward the far corner where our fishing boat awaited.

There, the bunched fish were scooped up in a long-handled pursed-bottom scoop net or brail—hoisted from the sea by a sturdy rope that ran through a mast-top pulley and down to the power takeoff—and dumped onto the deck by loosening the purse rope that gathered the brail-bottom purse rings.

Our tuna was encountered on a day when we had no gaff on

board, so that “giant” (to me) fish was taken by suddenly tightening the noosed brail rope around its tail. This final capture followed twenty long minutes of failed attempts to position the noose as our tuna circled slowly and the noose was silently passed from boat to boat.

When 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 small open boat like an enraged torpedo on a bungee (a thoroughly mixed but totally valid metaphor). Fortunately, Carl Wilcox, the skipper (a true leader), had huge, powerful arms—and the rope, mast and power takeoff all held—as that descending tuna might easily have smashed any of us or our open boats, or torn up the trap.

Ordinarily, before the trap size was diminished sufficiently to compress or suffocate squid, there was a brief flurry of activity and often much amusement as live squid were carefully hand-netted and thrown at me from both smaller boats. Standing by the fresh seawater barrel on the stern of the fishing boat, I swiftly became an skilled squid catcher.

Now squid catching is not as easy as it sounds, for a hard catch kills the squid. Nor was it sufficient to merely catch all incoming squid gently: I also had to convert the backward catching motion to a smooth dunk in the water barrel before the aggrieved incoming squid had time to bite 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, and also because I helped wherever I could, especially in rough weather when our reduced crew just pulled the gill nets for bluefish. And I put on a good Sunday show.

For Sunday was when 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 also 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 barely underwater, grasped gently near the 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, if squeezed slightly, any squid with a visibly full ink sac will eject ink as well. And unlike octopus ink, which spreads widely in water as a "smoke-screen," squid ink is a thick black mucoïd substance that remains in place as a decoy while the squid turns transparent to flee.

I generally managed to accidentally soak-and-ink one or more of these good men—which always amused the hard-working stolid fishermen. Of course, as the black mucoïd mess dripped down the intruder's face and over his immaculate seersucker suit, we knew from personal experience that those stains would never wash out.

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 when things don't go well.

In the usual case, those who have 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 our rabbit was dead when released. Clearly, in my eagerness to help, I held it so tightly that it suffocated, or else I fatally compressed its heart. This was an unforgettable lesson for one who

would later be responsible for restraining and operating upon many tiny infants, some “the size of a squirrel.”

Like 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 satisfying outdoor jobs with my interest in books and learning rejuvenated.

Nonetheless, in those early years, I would have been happy to work on a farm or ranch or boat, or build log cabins or drive 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. Well-informed citizens 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 all. Our wealthy, technologically complex nation cannot afford to leave citizens 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 far enough behind on complex developments in their own field of expertise that the most sensible option was retraining. 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 small stipend (\$1000/month) 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 such a 1-to-3 month refresher apprenticeship, or another interesting term of study, every seven years or so—as desired and needed. Such a program could be sustained by employers, unemployment benefits and other taxpayer-supported subsidies.

Many (most?) American employees are 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. New possibilities appear for those who prepare. Old jobs vanish.

Our human potential and productivity can only be sustained 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 flourish when we get involved—work—encourage—relate—teach and learn. Don't give up and just sit in front of the wide-screen motivation killer. Read! Write! Grow! **Build!**

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 included some good men) who enjoyed patient care and were eager to learn. Naturally, a few 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 should be burdened with those who cannot help—or worse yet, who hope the team leader and project will fail even if that failure only becomes evident through multiple unnecessary deaths. Yet a few of the folks who regularly work in life-or-death situations, eventually act out their petty likes and dislikes—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 better to reduce stress by developing a reasonable work schedule and a compatible team that succeeds or suffers together. For while cynicism may reduce stress and burnout by lowering standards, a happy team will seek and take pride in shared excellence (see also Lancet, June 15, 2002, 2089-90).

Incidentally, few people are naturally night-shift workers. So those placed on 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).

Thus 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). Sleep researchers suggest that seeking and training people who are naturally “night owls” for the night shift, might 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—retains full responsibility for adverse outcomes).

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

Humor helps, and no posturing. Most importantly, 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 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 the scrub nurse said, “Why do you need a knife?” before quickly handing it over when I said “I want to kill myself.”

Thus 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 began a remarkable recovery after a very long weekend in deep coma.

A couple of other patients suffered minor 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 that selectively removed clumped blood components 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 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 making loud reports such as "Pump is off—Restart anesthesia!" that were immediately confirmed "Pump off. Anesthesia restarted!"

Fortunately, both of these patients did well. The first resolved his infection with antibiotics. The second awoke promptly and was obviously 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 concluded that no more cases could be done until the problem was found and corrected. At that point, a perfusionist mentioned 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 would henceforth rewarm by the clock. Our bleeding problem was solved.

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. This former tech told me that such visits had been hugely important to them and really made them feel 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 have more minuses than pluses*

* * *

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 20 pound weight gain (to 250). In June of 1983, I had an unremarkable treadmill stress test that I terminated slightly early. 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 an earache—may represent angina. As one might expect, angina-manifested-as-earache is relatively rare. However, any pressure in or on the chest or shoulders, or discomfort down the arm or into the neck and jaw—especially if on the left side or associated with physical exertion or stress (even without changes in heart rhythm)—may suggest a need for medical evaluation.

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 similarly speedy 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, try a different food or medicinal plant, assume a new position, or stop an activity and rest until the problem resolved by 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—*when compared with traditional remedies or even prayer (Christian “Science”)*—was more likely to harm than heal, kill than cure.

Anyhow, with the 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 nitroglycerine. So I returned to the hospital and scheduled myself for a coronary angiogram right after an emergency study then underway.

That angiogram showed all my coronary arteries to be highly irregular and repeatedly obstructed, resembling tiny strings of homemade sausage. My cardiologist friends handed me the films, a handful of pills and their best wishes. Sarwar agreed to cover my patients, and since my vessels 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 the 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. As I arrived, she informed me that while previously I had given the orders, now she was in command and would tell me what to do (So there!).

A younger nurse was supposed to come by and explain the proposed bypass operation but didn’t bother. Instead she fabricated a lengthy (and to my Milwaukee friends, highly amusing) description of how poorly I comprehended the proposed coronary bypass procedure, despite her best teaching efforts. By 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 nurses station where 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 Marianne, who had learned of 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. This proved faster, cheaper and more comfortable than flying. From Chicago we flew home. I returned to work several weeks later. But while surgery again went smoothly, 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.

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

Prior to my unexpected retirement, the family agreed that our college-bound 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 quickly applied for scholarships or teaching assistant posts and soon were pretty much on their own.

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 originally bought my little beachcombing 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 over three days by large propeller-driven unpressurized National Guard cargo airplanes to Anchorage.

On arrival, these harried flood refugees—many airsick, most with no 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 10-15 days. Our station wagon happened to be next in an endless line of volunteer hosts waiting with their vehicles to pick up evacuees, when the Citabria dealer's wife and seven children (including those of his business partner) were the next bedraggled group to exit the airport.

Fortunately, this was years before mandatory seat belts and kiddie car-seats. And those Fairbanks kids especially loved our shower. So after the women washed all 11 children (including ours) in assembly-line fashion, they noticed many kids were back in line for a repeat wash.

Several years later, I bought my new Citabria from these Fairbanks folks at full retail price (which I could easily afford), ignoring a generous discount offer because their business was still recovering. In turn, when the dealer sold my plane, he refused any commission. *Sooner or later, we all need friends.*

Through 1984, I occasionally assisted in surgery. But then, rather than waste 17 hours of each year attending lectures on diarrhea or whatever in order to meet Alaska's irrelevant *continuing medical education* (CME) requirement, I let my medical license lapse.

CONTINUING MEDICAL EDUCATION MAKES NO SENSE

Alaska's CME policy (and our mandatory malpractice insurance) had been instigated (and negotiated) a decade or so earlier by several soon-to-retire internists who thought physicians would appear more competent and caring "if we do it to ourselves before they do it to

us.” This rationale sounded even sillier after my retirement as I wrote my third book on chest surgery, which again was favorably reviewed internationally.

My objection to all such mandatory irrelevancies was the truism “You can lead a horse to water but you can’t make it drink.” (Of course, one can easily give enough intravenous fluids to drown a patient like Zackoverich). So nowadays many physicians sign in for lecture credits on any random topic, then sit or stand near the rear exit—not to be seen again after house lights dim for the first slide.

In this way, the CME obligation simply adds another intrusive irrelevancy plus pointless paperwork and a new physician liability to Alaska’s medical licensing requirement.

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 faded medical politicians who score free trips and supplementary income by touting Big Pharma products to their captive audiences.

Some CME advisers even suggest role-playing, games and meditation to improve attitudes, though I doubt this would do much for mine (Lancet, May 17, 2003, p1752). *Yet there is absolutely no evidence that CME requirements enhance medical knowledge, wisdom or effectiveness.*

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 discussion with their peers. CME requirements may even reduce physician attendance at big meetings with hard chairs where one might actually learn something from fellow attendees—if not from the speakers.

Overall, I believe that *CME requirements waste physician time, reduce taxes collected and unnecessarily raise costs for the patients who eventually support our entire medical enterprise.* In my case, writing a textbook was not listed as a way to meet Alaska’s CME requirement.

And I was happy for an 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, in order to *remain* Board Certified, most specialists must pass a Recertification examination by their specialty Board. However, at least in chest surgery, that Recertification requirement was never extended to the older academics who thought it up, or to older Board-Certified surgeons like me. Marianne was similarly grandfathered-in by her Pediatric Boards.

You might assume that many other less-time-consuming methods of evaluation such as *patient outcomes analyses* were carefully evaluated before Recertification finally was shown to be the most cost-effective solution to a serious problem: And that evidence for and against Recertification was carefully considered before Recertification was voted the most appropriate remedy by most surgeons in practice at that time. But you would be wrong.

For there was no competency crisis or serious new problem. And Recertification was never tested against any 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 an outstanding example of the way outmoded academics sustain demand for their own services. So I opposed Recertification from the start.

This was a classic case of the *Judas goat* leading sheep onto a railroad car and then hopping out the other side just before the door slammed and the train rolled off to market. Of course, *had there been real risks from which patients could be protected* by regular Board Recertification, then *it would have been a conflict of interest as well as highly unethical not to demand Recertification of those original organizers and us older peers* as well.

Earlier, I pointed out that not one of the lectures on biology or

chemistry or medicine that I endured during my formal (and mostly mandatory) education as a chest surgeon, would be considered useful or relevant by today's practitioners unless it was first fully updated. Also I noted that every training program and teaching hospital approached important medical problems rather differently.

Hence it is arrogant and dishonest for the average academic politician to present himself as more knowledgeable than specialists in busy practices who routinely devise their own solutions and often achieve better results than their academic peers. Medicine is not yet physics. Every practitioner soon encounters situations the professor has not faced.

So *why should*—not to mention—*how could* academics ever claim authority over, and insist upon reexamining, experienced Board-Certified specialists. Especially when so many practicing specialists restrict their efforts to some part of an entire specialty and therefore would waste valuable time if forced to study prevailing views of all subjects in their overall field when so many of those views were probably already outdated or not relevant to that practice.

I view Board Recertification as just another annoying manifestation of Aging Academic Syndrome (see Gastric Freezing earlier). Like CME requirements, Board Recertification is *yet another support system for superfluous senior specialists* that has generated yet another new and useless industry—the production and marketing of Board-recommended books and other 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 was not merely to place no-longer-productive academics in an ego-and-wallet-boosting position of authority over practitioners, but sadly, that too is 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-to-be-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? This can be done easily and cheaply within a single payer system where patient follow-up information is already available in a data base.

I have heard representatives of large health care organizations declare that patient outcomes analysis has proven effective. 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 these folks don’t do as well as an average case.

Properly performed outcomes analyses ought not even be noticed by most surgeons whose patients seem to get good care. It has been said that when outlier physicians who are privately counseled, see that their peers have better results or use fewer expensive tests, they 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 only bother those who may actually need retraining? The average practicing physician is far more interested in improving her/his patient outcomes than any faraway academic 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 may *barely have 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, and I required three months of further training 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 preparations 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 textbook published and my medical license expired—hoping I still might 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*.

The standard, repeatedly tested, reliably effective Republican smear 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 complaineé 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 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) that intentionally mislead in order to frustrate the will of the majority.

To a yet undetermined extent, recent Republican electoral wins also depend upon the rapidly expanding use of touch-screen voting machines with secret proprietary software operated by Republican vendors (see Introduction). For example, “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 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 to understand how President Bush—who declares himself a born-again Christian—gets 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).

After losing that election—for the first time in my adult life I was finally free to do as I liked; even to stay in bed if I felt ill or tired. Various friends and certain hustlers, knowing we still had children to educate, attempted to help me or help 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 the tattered remains 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” (slightly different) “wonder” drug (as in “we wonder how to hype this me-too drug”) just so I might detect any obvious adverse effects—though physicians often encourage their patients to enter such studies.

One local urologist wanted to switch my good (and well-insured) friend from the costly drug then 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 company hoping to hype its slightly different product into a 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. Perhaps coincidentally, that mutual friend’s chronic coronary heart disease flared up shortly after completing the new-drug test and he soon died. (see also *Clinical Trials*, Lancet, Oct. 30, 1999 p1534)

My next career was as a part-time instructor of anatomy and physiology in various local branches of the University of Alaska. Because all available A&P textbooks were useless clones that mentioned everything and explained nothing, I undertook to write *Human Evolutionary Biology; Human Anatomy and Physiology from an Evolutionary Perspective*. That book came out in 1995 and still sells through Amazon.com—two other recent books of mine are available through www.authorhouse.com.

SCREENING TESTS OFTEN HAVE MORE MINUSES THAN PLUSES

As I recuperated from heart surgery, it seemed clear to me that I no longer was an acceptable risk to undergo other surgery. Perhaps surprisingly, that was a relief, as it further justified my ongoing avoidance of screening tests (see *Uses and abuses of screening tests*, Lancet, March 9, 2002 pp881-4) such as colonoscopy or prostate specific antigen (PSA) which commonly lead to additional unpleasant, confusing or meaningless studies.

In the late 1960's or early 1970's, FS, our friendly long-time hospital pathologist, asked me for a blood sample in order to test his latest 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.

Now pathologists deal mostly with rude doctors and dead folk, so they often come up short on bedside manners. Of course, 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 my body parts would outlast his new machine, and rode my bicycle home. As expected, his machine died within the week. But before it passed away, it sure stimulated a fruitful flurry of follow-up blood tests for the hospital lab.

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

Though 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 killed the patient.

Furthermore, it is reasonable to assume that usual treatment complication rates apply even when less aggressive cancers are treated—which means the modern high prostate cancer detection rate has left many more men impotent, dribbling and so on, without providing them any survival benefit (the US Preventive Services Task Force estimates that prostate cancer surgery leaves 20-70% of patients impotent and 15-50% incontinent).

Nonetheless, some urologists want 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 tests has significant risks, yet cannot reveal whether a 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).

In addition to their 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 wherever 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/psix.htm) “reviews all scientific evidence for or against the different preventative interventions and then grades them accordingly” Harvard Magazine Sept/Oct. 2003.

An 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, even a known low rate of testing errors will reliably produce unacceptably high frequencies of incorrect results and thus 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 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 might still 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 or importance of 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 much brain function and 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.

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 the 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 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 more 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), and so on.

Apparently, post-splenectomy patients are still considered candidates for antibiotic prophylaxis or immunization against certain varieties of pneumococcus that may quickly kill patients lacking a spleen. So current calculations presumably still identify that follow-up care as cost-effective.

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 VS 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 undermine decent health care

* * *

THE ROLE OF PHARMACEUTICAL ADVERTISING

T rue medical breakthroughs such as penicillin are uncommon and need no promotion. Hence the role of pharmaceutical advertising is to generate enough excitement about the latest *ho-hum product* so that physicians say “You should be on this medicine” (even if you can’t 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.

Nearly half a century ago (see Introduction), 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 hype creates an apparent need for ordinary (non-essential) drugs, while high prices make ordinary drugs (and diamonds) more desirable *and far more profitable*. In fact, *of our major, public, lawful industries, Big Pharma is the most profitable*. And that excessive profitability harms Joe and Jane Average in multiple ways.

As discussed in Chapter Four, Big Pharma's focus 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, has increasingly diverted corporate attention and investment from longer-term projects that create 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 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 many other businesses are delighted to make ordinary profits.

The mere fact that Big Pharma *can* discontinue essential vaccines and medicines *at will*—allows those wealthy multinational corporations to extort guaranteed or excessive profits for vaccines and other medicines that they currently *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 firms to issue timely market-wide notification or to continue providing such essential but low-volume medications until others can think it over and ramp up 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 corporate 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* only shows 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 it is not surprising that 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 excessively expensive.

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 improvements in survival of patients with coronary artery disease, or 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. But once a drug patent expires, its monopoly price can be undercut by generic competitors, so a drug manufacturer is unlikely to achieve significant financial gain by investigating other applications.

Under such circumstances, only a patient advocacy group (whose members might benefit)—or a single payer—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 misrepresentation and failed ideas.

Examples from the positive side include Ramsdell and

colleagues' work at NOAA in Charleston, S.C. For they 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 a fascinating article, David Horrobin asks—*Are large clinical trials in rapidly lethal diseases usually unethical?* (Lancet, Feb. 22, 2003 pp695-97)—then answers that opening question with a resounding “YES!”. Fortunately, this author and some friends were able to devise a currently effective treatment for his own **rare and rapidly lethal type of lymphoma** *after uncovering at least six possible (but 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 companies become more adept at identifying probable-good-responders through advances in pharmacogenetics.* For such advances would allow them to 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).

Of course, a company that receives a specific FDA approval may choose not to provide practitioners with the appropriate tests necessary to identify potential good responders if such helpfulness could severely limit the number of patients to whom their expensive drug might be prescribed.

Rather, expect manufacturers to report great trial results that encourage physicians to try an apparently impressive new drug on patients outside of the specified “likely responder” group. *Such off-*

label uses of a potent drug with many dangerous side-effects could then harm lots of "likely non-responders" without offering any significant likelihood of benefit (see *Hardly a wonder drug* about misleading promotion by AstraZeneca of the anti-cancer drug Iressa, which may only rarely help, 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 answered the "yes" or "no" question of drug efficacy, inexpensively and quickly, there are now huge administrative, ethical, clinical and financial barriers to block all but the most wealthy and persistent Big Pharma sponsors, or the most experienced investigators.

In good part, these barriers were erected *as clinical trials changed from an interest-driven enterprise to a new institutional profit center*. As a result, no one can afford to study anything except patent-protected new chemical entities. Indeed, academic researchers in most institutions allegedly determine which trials to join by the size of the financial contribution from a commercial sponsor *rather than by the likelihood of benefit for the patient*.

Furthermore, *very large clinical trials are only helpful for revealing very small* (generally useless or hardly significant) *effects*. And with unusual diseases, a large trial may even 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. Such committees tend to impede innocuous investigations rather than safeguard the patient.

Yet 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 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 to those based upon local herbal products. Or must the control population receive the best treatments available to western medicine?

One may even question the ethics of most ethicists, since industrial companies now engage bioethicists to assess controversial work—hoping thereby “to convince the public that they are (finally) taking ethics seriously”. But at a time when bioethicists are being offered board positions, consulting contracts, research grants and even stock options, only one ethics center of the 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 received backing from industry, over 80% reached pro-industry conclusions—versus only half of all studies without such industry links.*

Currently, two thirds of 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. 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 drug companies withhold negative information from the FDA (for example), 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 is declared a trade secret by the manufacturer.

Which results in truly evil outcomes such as *more Americans dying each year from anti-arrhythmia drugs than died in action during the entire Vietnam war.* “Had some of the early evidence suggesting the 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 6% 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, with most trial participants suffering 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. Big Pharma still controls CRO research—often to the point of withholding complete data from researchers doing the study. As you might expect, studies with negative findings rarely see the light of day. And big advertising firms have started buying up CROs and packaging 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 that appropriate follow-up care is provided even when the trial is done. After all, it is often 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 the administrators, fire all the ethicists who have cooperated in this unethical folly, and return to doing what 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 milk and extend 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 mentioned that highly hyped medications are rarely 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 that 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 to be confirmed).

An inexpensive, 40 year-old drug, Aldactone (Spironolactone) 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 one of the most effective anti-hypertension drugs. It also reduces deaths from heart failure by 30% (with side-effects that include reduced sex drive or breast growth in 10% of men).

As an old surgeon, I feel driven to praise the more effective anti-hypertension agents now available. For these truly are wonder drugs—especially compared to the risky diagnostic studies and low-benefit operations used into the early 1960s during our forlorn attempts to control “*malignant* (uncontrollable by drugs) *hypertension*”.

Those anti-hypertension operations included *bilateral lumbar sympathectomy and renal artery surgery and partial kidney removal*. But nowadays, rather than initiating major invasive studies or engaging in such major surgery, physicians simply try one anti-hypertension agent after another until they find the drug—or a combination—that works at the time with tolerable side-effects for a particular patient.

Big Pharma claims that exorbitant charges for patented drugs are the only way they can sustain their *fabulous* research programs. This claim is truly a *fable*. For most *actual*—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 THE EXCLUSIVE CONTROL OF AN INDUSTRY OR SERVICE, AS GRANTED BY A GOVERNMENT”

A commentary in Technology Review by Seth Shulman (April 2003, p77) provides useful points to ponder as this story unfolds.

- 1) The U.S. taxpayer supports about two-thirds of all research performed in our universities and non-profit research institutions.
- 2) The Bayh-Dole Act of 1980 lets universities license their patents to commercial entities without disclosing what deals they make.
- 3) Over half of such licensing deals are *exclusive arrangements that grant a monopoly* to a patented technology.
- 4) Hence Bayh-Dole should be revised, for taxpayers have the right to know what happens to intellectual property they pay to create.
- 5) Furthermore, exclusive licensing is often against the public interest. And the obvious point not made by Shulman was that *those with a legal monopoly on a life-saving technology can demand anything they want—including the first-born child—from those who are desperately ill.*

Exclusive licensing has already blocked important innovations. 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—at which point, that 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 from them in royalties*).

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 boss and hit him for a raise.

Presumably, it was not a just bunch of drunken clowns seeking a raise who initially rumored (and thereby market-tested) a \$3,000 manufacturer's price for *each drug-eluting* (drug-releasing) stent. Now the basic stent is a springy metal-mesh cylinder that is sometimes positioned in a previously narrowed coronary artery to hold it open after coronary *angioplasty* (coronary artery dilation). Sometimes several stents are inserted by a cardiologist during an angioplasty procedure on a single patient.

Bare-metal stents were originally developed in the 1980s to reduce the widely varying (15% to 80%) *early failure rates* reported with angioplasty. Even with such basic stents, a fourth of dilated-and-stented vessels still re-obstructed within six months. Now one study claims less than half that many closures within 9 months for drug-eluting stents.

Longer-term local effects of the stent coating or the drug eluted have not been determined. However, previous attempts to decrease vessel closure after angioplasty by local treatment with a radioactive material, proved counter-productive within two years.

Science News (Oct. 4, 2003 p214) reported that despite 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 bare-metal stents). Thus a single drug-eluting stent (releasing a chemical to minimize early local cell growth—which hopefully will reduce the risk of artery closure near the stent) costs the patient more than my basic surgeon’s fee for an entire heart operation in 1983.

In any case, coronary artery closure rates after angioplasty—with or without stents—remain consistently higher than failure rates of surgically installed bypasses. But as mentioned, each approach has real advantages under some circumstances.

Of course, the same cardiologists who *evaluate* patients with coronary heart disease, also *perform* those increasingly costly angioplasties. So cardiologists get to decide whether a patient will receive angioplasty by a cardiologist—with or without stents—or will be referred for heart surgery. Similarly, a surgeon usually decides if a patient seen in consultation will undergo surgery.

A salient point here is that all procedural physicians or other therapists have an inherent conflict of interest—of which they are acutely aware—in that most make a good living by prescribing their own procedural services for the ailing patient. Physicians are taught to put the patient’s interests before their own. Hopefully, most 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 latest patented drug for 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 soon).

Here the question is apparently 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? The obvious answer is “You bet!”*

However, in the case of the pulmonary hypertension drug, the company apparently does offer reduced or compassionate prices for the very poor if those folks can get one of the few physicians qualified by the manufacturer to care for them, to 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 avoiding competition. Were it otherwise, generic drugs could not be sold inexpensively at 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, Big Pharma's marketing expenditures only start with visits and bribes to physicians (Marianne was recently offered a fully paid Florida resort holiday plus a thousand dollars spending money) or those colorful promotions in print and other media. Yet as mentioned, the greatest return on Big Pharma marketing dollars comes from dollars used for generous campaign contributions, or to support the throngs of lobbyists and attorneys who manipulate government legislation to alter our domestic as well as foreign policies.

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 damaging our great nation's image—just to make multinational Big Pharma a few more bucks.

Robert Kennedy wrote that when police receive more money from criminal payoffs than from their usual civilian 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 how politicians did vote (and who they really worked for) by who hires them on retirement, or who employs their relatives.

Big Pharma has even corrupted the pharmaceutical management organizations that were initially set up to monitor prescriptions and negotiate discounts from pharmaceutical manufacturers for major health care organizations. For HMO's and other health care/health insurance programs once saved 30% by restricting drug purchases to discounted, less expensive, more effective remedies.

However, it became obvious that the original reason for their existence had been co-opted when drug costs to individuals and large organizations again skyrocketed while pharmaceutical management organizations reported huge profits from new *services to drug-makers* that they preferred not to 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 expects 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 all 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, too, is trying to stop this cross-border discounting. And Bush won't permit Medicare to negotiate with Big Pharma for lower drug prices either—though every other major American health care provider regularly receives major discounts.

Under such egregious circumstances, there is no need to ask whether Bush-II's salary as President is far less than Bush-II's rewards from Big Pharma. *For every day in every way, our President*

serves 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 preferred 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 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 taken 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 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 their having been used by man and beast as remedies for countless millenia—seems 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 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 I** *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

Self-medication allows interesting experiments . . . Simpler is often better, as well as less expensive . . . I take low dose tetracycline for coronary insufficiency . . . My medical parameters . . . What about cholesterol? . . . Heart rhythms, muscle cramps and magnesium ions . . . Gatorade and atenolol

* * *

My college, medical school and surgical residency training consumed 16 long years. *My career as a practicing surgeon lasted just 18 years.* And only during the last seven of those years was I mostly occupied as a chest surgeon. Now twenty years have elapsed since my medical retirement. Except for college, which mostly bored and irritated my impatient and rebellious teenage self—and my general surgery residency, which was often brutal for patient and doctor alike—I enjoyed it all.

After 37 years of medical practice, Marianne still takes pleasure in her low-paying behavioral pediatrics career. She recently joined a pediatric group. But during her 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 by staying home.”

So now I cook, sew on buttons, do the dishes, vacuum and

occasionally wash windows. I also take out garbage, do yard work and shovel snow. She shops and does laundry. We both agree that productive work and helping others are major aspects of "*the meaning of life*." More specifically, she encourages her patient's parents to seek a balanced existence that includes work, love and fun.

Marianne writes my prescriptions. I take inexpensive generic medications. My daily medications include atenolol (an beta blocker that reduces cardiac stress, holds down blood pressure, and reduces the risk of sudden cardiac arrest)—Mag 64 (a generic version of Slow Mag)—Gatorade—tetracycline—a few dried or canned cherries—or more recently, a tablespoon or two of black cherry concentrate—or a slice or two of turnip (all discussed below)—and 1/2 aspirin tablet per day.

When I was a youngster, every farmer treasured his own junk pile of discarded implements, auto wheels, axles, differentials and broken or rusty iron parts *out back*, for that was where he or a 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, questionable concepts and dubious information, often in desperate need of revision—at least according to the ultra-sensitive *crap detector* that I have pieced together from my pile of obsolete methods and experiences out back.

So I regularly reshape rusty or outmoded portions of my formal or informal education to reconfigure them to the latest hypotheses and bits of evidence about those wonderful life processes that keep us all going. Missing pieces are often supplied by helpful folks like a part-time cashier of one local grocery who told me that *black cherry concentrate* worked better than the dried cherries I had purchased to treat my gout—and where I might buy that concentrate.

My total medication costs run 50-75 cents/day, not counting the old-folks multivitamin tablet plus extra Vitamin C whenever

the grandkids are snotty. I get enough Vitamin E from the multivitamin tablet (too much seems to give me nosebleeds). Among other important reasons for taking sufficient *Vitamins B6, B12 and Folic Acid*—these vitamins suppress blood *homocysteine* levels, and homocysteine contributes to arteriosclerosis.

SELF-MEDICATION ALLOWS INTERESTING EXPERIMENTS

A lot of reading and ongoing familiarity with many medical fields allows me to believe that in plotting my own care, I will err no more than most physicians. Thus despite the well-worn cliché “The physician who provides his own medical care has a fool for a doctor and a fool for a patient,” I hope to live and die by my own counsel.

At this point, it must be obvious to the reader that up-to-date self-care according to Western (as opposed to traditional or alternative) medical principles is impossible for those who have not studied modern medicine.

Nonetheless, all patients should try to understand and participate in their own medical care as much as possible, rather than mindlessly follow or ignore their doctor’s advice. For we each have different goals, plans and ideas. And as with foods, some accept or prefer rather different outcomes.

Except for several non-productive visits to a dermatologist in the mid-1980’s (for seborrheic dermatitis that neither of us then recognized), I have managed to avoid all medical care over the past 20 years—other than one recent eye exam. Even that simple, competently performed, negative exam for occasional retinal light flashes (which—especially when associated with many new floaters—can signal a retinal tear requiring urgent laser treatment to prevent *retinal detachment*) raised interesting cost/benefit issues.

For the lights used to examine my retina were so bright that when I closed my eyes two weeks after that examination, I still saw bright afterimages (in this case, spider-like visual patterns

resembling my retinal vessels). In addition, I had decreased visual acuity for several months—during which time I couldn't spot mountain sheep on nearby peaks without binoculars.

So if gazing at the sun during an eclipse endangers eyesight, might regular eye exams themselves eventually reduce visual acuity—just as some estimates suggest that the X-rays received during regular mammograms may themselves promote a malignancy in less than 3% of individuals?

I realize that modern mammograms use less radiation. And I understand why the Cochrane Collaboration—a worldwide association of 10,000 volunteers who sift through mountains of data in search of medicine that works—have doubts about the value of mammography (Science, 1 March, 2002, pp1624-5—and Science, 27 June, 2003, pp2024-5).

I also know that modern soldiers are equipped to see and shoot accurately in the dark. Hence I wonder why modern ophthalmologists need such strong lights, or did my old ophthalmologist friend just have early cataracts.

SIMPLER IS OFTEN BETTER, AS WELL AS LESS EXPENSIVE

Over a decade ago in early winter, I fell on a steep and slippery path in the forest. Upon waking from a brief concussion, I noted a shimmering left visual field and temporary loss of leftward vision (consistent with *visual migraine*), as well as many broken ribs and a probable compression fracture of one or more thoracic vertebrae.

After walking out and driving home cautiously, I sought comfort by lying on my injured side—which caused my broken ribs to cave in like a dented ping-pong ball and made breathing even more difficult. When Marianne came home from work, she fluffed the bedcovers—which elicited a painful sneeze and popped those ribs back into place.

Upon reopening my eyes from this sudden remodeling, I had what others might interpret as a “near-death experience”—for I

saw a bright light and an old guy with white whiskers in a long white robe. However, in this case, it was just me in my old white bathrobe, reflected in the closet-door mirror.

Soon my ribs only hurt when they shifted. But over subsequent days, the joint in my right great toe became red, painful and swollen. Eventually, that swelling extended to my knee—so I started 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 lets underlying bones and tendons move freely). Anyhow, after several weeks of hobbling about and taking ibuprofen, we enjoyed a family reunion in Hawaii. An older nurse in a nearby unit, noticed my swollen toe and recommended cherries.

In the health section of a nearby bookstore, I learned that cherries were an old Chinese gout remedy. That day I purchased a can of cherry pie filling, and my symptoms faded within minutes of eating one or two dozen cherries. From then on, I ate one to two dozen cherries per day without otherwise altering my diet,—plus a few extra cherries if my toe squawked, which it did reliably whenever I forgot my cherries.

Although dried tart cherries or a tablespoon of *black cherry concentrate* worked wonders (within minutes), sweet Bing cherries had little effect. An occasional batch of dried cherries was completely ineffective. And some of those dud “cherries” turned out to be dried cranberries placed in the wrong bin at the store.

About five years ago, a brief item in Science News mentioned that an interesting anti-inflammatory molecule had been extracted from cherries. But whether or not I could explain the cherry effect, I was happy to stop ibuprofen, which had raised my blood pressure to 180/100 within weeks.

Like others with gout, I sometimes 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, etc. Hence uric acid is present in all of our cells.

Elephants and other long-lived mammals regenerate their own Vitamin C. However, *early primates* (the common ancestors of humans, apes, monkeys, lemurs, and so on) lost that ability to regenerate Vitamin C—as did guinea pigs independently. Fortunately for us, the antioxidant activity of uric acid is comparable to that of Vitamin C (*Biochemistry*, by Lubert Stryer, 3rd ed, 1988 p622).

Indeed, uric acid's antioxidant activity may be why humans retain near-saturation levels of uric acid in their blood and other body fluids. For lower primates—whose blood uric acid levels are far lower—have relatively short life spans and high cancer rates. Hence high uric acid levels (as well as Vitamins C and E, and bilirubin) appear to protect cellular DNA from the oxidative damage that encourages early-onset cancer and aging.

Due to our normally high *intracellular* uric acid levels, any significant escape of intracellular fluid into nearby tissue fluids leads to *uric acid crystal formation*. Which makes uric acid crystal formation *a reliable signal of nearby cell damage in humans*.

A recent report suggests that *uric acid crystals* (but not dissolved uric acid) initiate the inflammation that encourages immune cells to seek out and destroy microbes whose proteins appear in synchrony with the cell damage signaled by uric acid crystals. Most likely, that is more than you wanted to know about how an injury may stir up gout.

In summary: My accident damaged many cells. A lot of intracellular uric acid was released which incited a nasty inflammatory response that soon focused on the base of my 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).

By chance, I planted a few turnip seeds for the summer of 2002,. Before long I had a bumper crop of turnips in several large pots on a balcony that local moose couldn't reach. During the

several weeks that turnip greens or sliced turnips featured on our daily menu, I totally forgot to eat cherries. So now I use black cherry concentrate *or turnips* to prevent or stop my great toe from squawking.

Turnips have always been easy to grow and so cheap that formerly they were only considered food fit for slaves. At the same time, rich people like Charles Darwin's father (a physician), suffered agonies and eventually died from gout and its mistreatment. Peeled commercial turnips work for me raw, fried or heated in a soup—where they could pass for potato.

My own turnips grow without pesticides and herbicides so I just wash and eat. The peel has the strongest (radish-like) flavor and maybe the most beneficial impact on gout. A 1/4 inch slice once or twice a day is usually enough. But Nature rarely delivers standard dosages so—as with dried cherries—some turnips seem noticeably more effective for gout than others.

Early in 2003, I awoke with several swollen and tender joints in my hands. This resolved within days after I started swallowing glucosamine capsules—so I continued taking glucosamine for a month or two. One medical study (Lancet, Jan 27, 2001 pp251-6) suggests that glucosamine may help to preserve joint cartilage.

The article points out that short-term studies show glucosamine is safer “than standard NSAIDs (aspirin, ibuprofen, Vioxx, etc.), especially concerning 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 the U.S. need not meet any dosage or purity standards. Hence I only take it intermittently as needed. Anyhow, older folks might want to avoid chronic use since glucosamine allegedly inhibits “inducible nitric oxide synthesis”—which implies it could diminish small-artery flows as well as sexual function. And after taking daily glucosamine religiously for the past five years, one friend developed unexpected circulatory problems that contributed to frostbite of his toes.

I TAKE LOW-DOSE TETRACYCLINE FOR CORONARY INSUFFICIENCY

In February of 1999, almost sixteen years after Tector installed my six coronary artery bypasses, I developed “angina at rest.” 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 that another vein bypass graft had closed (vein grafts into 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 called for 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—nor was reoperation to connect additional bypasses into my severely corroded arteries, likely to bring benefit.

The “turtle-heart treatment” which in its latest incarnation involves burning many laser holes through left ventricle muscle into the cavity of that blood pump, probably doesn’t lead additional oxygenated blood out into heart muscle either (though it sometimes relieves angina—as did other placebo interventions like cardiac surface abrasion or internal mammary artery ligation).

My cardiologist knew of no new medications that were likely to help. Thus my situation seemed grim. In fact, he subsequently advised “*Anyone wishing to see von Hippel alive*” to drop over soon. So my old friend John came by. Given all the people I had irritated over the years, there might have been a better turnout had he invited *anyone wishing to view von Hippel*.

The following week some old friends insisted we come to dinner.

On our return home after a light meal, I had severe angina for an hour. Fortunately, this was some years after Finnish researchers found the DNA of an intracellular bacterium—*Chlamydia Pneumoniae*—in 80% of coronary artery plaques that they tested (this work deserves a Nobel prize too, but as they surely work outside of the “good old boy network” it won’t happen).

After two straight weeks of unstable angina, I decided to experiment with low-dose tetracycline. This antibiotic has long been given to cattle in feed-lots as a food supplement (in thousands of tons annually) to improve health and growth. And in earlier times, I had treated infected adult humans with up to 4 grams of tetracycline per day. Now I started myself on a half gram of tetracycline twice daily.

My symptoms gradually diminished. Within eight days, my heart seemed well enough for me to very slowly climb a dead spruce dragging a heavy chain. Then my 77 year-old neighbor, Al Moe, and I used my ancient two-man crosscut saw to drop that tree before it could topple on my garage.

For the past 5 years, I have remained stable and 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 here I am—somewhat surprised to be enjoying life—still puzzling over which tetracycline effect provided what benefit.

Bacterial suppression presumably played a role, as did the known *anti-inflammatory* action of tetracycline. Perhaps tetracycline’s metalloproteinase 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 chronic tendon soreness (inflammation), and a gradually increasing tendency of my tendons and ligaments to tear. At different times, during minor exertion, I snapped inconsequential plantaris tendons in both calf muscles. During another effort, I felt a ligamentum

teres pop (this ties the hip bone directly to its socket and sometimes brings important circulation to that bone), and this hip joint demanded limited use for years thereafter.

Once I separated a shoulder falling from my bicycle. Another time I completely tore one quadriceps tendon (I slipped in the woods, the entire front-of-thigh muscle contracted suddenly and ripped away from my knee cap—this one required surgical repair). Then the outer joint of my thumb dislocated as I hung from a sturdy root while climbing down a rock. One might say I was falling apart as I aged ungracefully.

But since starting tetracycline five years ago—though I have continued to age—I only slightly tore my other quadriceps when I slipped on ice in the woods (after which our son bought us ice grippers), and I also popped the long tendon of one biceps—both minor events. Though I long-ago began taking extra Vitamin C (see scurvy in Chapter One) when my collagen started popping and ripping, overall I seem to be holding together better since starting on daily tetracycline.

Tetracycline's metalloproteinase (collagen-dissolving enzyme) inhibition may even have blocked enzymes produced by oral bacteria and thereby secured my gums more tightly to my teeth. On the negative side, my joints seem to be getting stiff a bit more rapidly. Perhaps the tetracycline is interfering with natural repair (which involves collagen removal as well as new collagen formation). On the positive side, I no longer feel occasional minor ripping sensations inside my chest (which pleases me since my aorta already was a bit enlarged when last seen by Tector).

Given these positive anecdotal findings, one might anticipate great eagerness among cardiologists to study the effect of tetracycline on coronary artery disease. Such a study could easily be funded out of their office petty-cash since several companies produce inexpensive generic tetracycline capsules. (In bottles of 100 capsules, retail tetracycline costs me about 36 cents per day. However, outdated tetracycline can be toxic, so whenever we purchase larger quantities, we make sure the expiration date lies far ahead).

There have been recent clinical trials of antibiotics on coronary artery disease, but those Big-Pharma-supported trials naturally only looked for beneficial effects of very expensive antibiotics still protected by patent (and therefore 100 times more expensive than tetracycline). Unfortunately, those drugs did not relieve the signs or symptoms of coronary artery disease, even when blood tests documented *Chlamydia pneumoniae* infection.

Since Big Pharma lacked costly products to hype at the time, it apparently lost interest in antibiotics for coronary heart disease. On the other hand, 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 syndrome 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 *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 the 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, weight loss)—or drugs like statins (or black cherry concentrate and tetracycline)*—see below, and 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 personally know several people who take low—or even-lower-dose tetracycline to prevent or suppress presumed coronary artery problems—and I am aware of others. Apparently, most feel that they have benefited, but at present this is just *unsupported anecdotal evidence*.

Dermatologists have treated patients with low-dose tetracycline for years to help suppress their acne. One could easily look for obvious differences in the incidence of coronary artery disease between acne-treatment groups and comparable populations—which might at least 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). And chronic Chlamydia pneumoniae infections in blood vessels seem to be associated with an increased risk of stroke.

MY MEDICAL PARAMETERS

My only cholesterol tests—taken at the time of my bypass surgery in 1983—were on the high side (220-240). I don't recall the HDL or LDL. My customary breakfast has long been a tough piece of steak and an egg with homemade sourdough bread. I eat

and drink lesser amounts throughout the day, often including plain low-fat yogurt.

In the spring of 2003, I again began to feel run down and more tired than usual—especially after eating a high protein steak. By this time it was becoming clear that severe atherosclerosis or arteriosclerosis—the sort of corrosion that extends throughout my coronary arteries—*was basically an inflammatory, and to some extent an autoimmune process, rather than a mere 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 by simply losing weight. Apparently, this beneficial result of reducing fat is related to the inflammatory impact of hordes of macrophages (cells that dispose of tissue debris and bacteria) that are drawn to expanding visceral fat stores (perhaps when 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. So I decided to cut my caloric intake slightly in order 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 how much, what or when I ate except for 1) wild salmon and fruit more often, 2) far more veggies and 3) 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.

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 what 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 or cold and so forth) as part of a sporadic body-wide inflammatory process.

So nowadays I view my own bad days as an indication to increase my low daily consumption of turnips and black cherry concentrate, and adhere more faithfully to my gradual anti-inflammatory weight loss program. My reliance on steak was easily diminished without calling upon will-power because I felt better and was more productive after a big breakfast of one egg, fried vegetables and a little fish or meat with my home-baked multigrain sourdough bread.

I occasionally eat sweets, usually nap one or two times a day and currently weigh myself every few days rather than every few years as previously. 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. 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 far less muscular than I was as a young adult.

That lengthwise gravitational compression has expanded my soft center to the same circumference as my chest and hips. With my guts 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 me up, Marianne and I often just stop for coffee and a snack, or split a single restaurant meal, after our walks in the woods (three or four times a week).

Speaking of restaurants, in the unusual event of food poisoning—when my belly gets distended—I become short of

breath. This complaint is common among older folks in any large hospital emergency room, but that is no place I wish to appear.

Under such circumstances, this condition—often referred to as an “ileus” or “partial bowel obstruction”—probably won’t get worse and may improve if one walks about as much as is tolerable (inside the home is fine), since walking naturally assists the onward passage of bowel gas and might prevent that unwanted trip to the hospital for a variety of yukky tubes, tests and treatments.

I walk in a nearby green belt or around the neighborhood most afternoons for less than an hour, unless it is below zero or very windy or I have done enough snow removal or yard work. Being overgrown with roses, wildflowers and raspberries, our yard doesn’t demand much work.

As mentioned, people 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. The increased nitric oxide production within small blood vessels of those who walk and exercise on a daily basis even helps to lower blood pressure.

I began this little book by mentioning common microbial epidemics and infections of pre-antibiotic days. At that time “the experts” considered it impossible for widespread chronic bacterial invasion of the body to 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 recent 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 seem unlikely, 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 more likely to spread than those that dry up body secretions. And I would bet that no traveler has ever been disabled by infectious constipation.

Modern researchers commonly scrutinize huge libraries of molecules—including already-FDA-approved therapeutics—seeking appropriate shapes to jam up or relieve some specific microbial disease or molecular malfunction. 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, hogs and me.

At present, 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 and currently incurable conditions. After all, widespread trial and error is how medicine slowly advanced in the days before Big Pharma gained control of medical experimentation and discovery at our expense—in their favor.

I suspect that committees in larger hospitals would not encourage any physician in private practice to test tetracycline or turnips on hospitalized patients. Fortunately, such studies could easily be run on ambulatory patients through a medical office.

Not surprisingly, even well known researchers working for Big Pharma revert regularly to that reliable old empirical approach when seeking additional profitable applications for costly drugs like the *statins*—a previously mentioned (Chapters Ten and Eleven) family of *cholesterol-lowering drugs*, many of which are still under patent and heavily hyped.

WHAT ABOUT CHOLESTEROL?

Statins were initially promoted to reduce blood cholesterol levels. Yet they are currently touted as “possibly useful” for

everything from Alzheimer's Disease or osteoporosis to chronic inflammatory diseases and auto-immune-related disorders like multiple sclerosis. So what is going on?

All physicians know of some families whose members seem to do well despite high blood cholesterol levels. And of other families with equally high cholesterols whose members appear unusually susceptible to early heart attacks and strokes. Quite likely, those in the latter group can reduce their risk through cholesterol-lowering strategies like weight loss and drugs.

But life evolved over billions of years. During those eons, innumerable molecular modifications and interactions appeared and were deleted. Those 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 who promote patented health care products want you to 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 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 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 deposit cholesterol in their blood vessel walls, regardless of blood cholesterol levels.*

In other words, smaller-size cholesterol transport particles in your blood increases your risk for blood vessel 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.

Furthermore, among those who peddle statins, some even claim that up to *half of all adult Americans have sufficiently “elevated” cholesterol to benefit from taking statins*. But we already know that half of all heart attacks occur in those with normal cholesterol.

So if the population with high cholesterol has a similar overall risk of heart attack to the population with normal cholesterol, logic suggests that reducing blood cholesterol levels of most people with elevated cholesterol should only lead to small decreases in coronary heart disease.

Furthermore, current evidence indicates that cholesterol deposits in blood vessels are not a direct outcome of high blood cholesterol levels anyhow. And that *atherosclerotic cholesterol plaques in arteries usually reflect damage from inflammatory conditions 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 treated in a more direct and timely fashion. 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 seem to be associated with coronary artery disease. High interleukin-6 levels may also be associated with increased risk of stroke. And low levels of adiponectin have been associated with an elevated risk for heart disease (see Science News, Nov. 22, 2003 p334).

Fortunately, a simple 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. Much of that \$900 million might have better been spent on subsidies for 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 cannot 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 older or ill patients, the gradual appearance of muscle weakness or polyneuropathy or even minor amnesia might pass for natural decline.

Yet it could 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—which was 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*. 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 simply implies that there are probably still other similar remedies for gout out there—or that gout reflects a dietary imbalance most easily corrected by eating such items or just lots of veggies.

But surely it would be easy 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.

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)—*for losing that market might make it unprofitable for generic manufacturers to produce cheap generic tetracycline at all.*

HEART RHYTHMS, MUSCLE CRAMPS AND MAGNESIUM IONS

Soon after having my coronary arteries bypassed, I noticed many extra heartbeats. Sometimes those premature ventricular contractions (PVCs) made my heartbeat quite irregular. Coffee aggravated such rhythm disturbances, but since atenolol lowered my heart rate (pulse) to the low 50's and high 40's—and coffee boosted my pulse and pep—I was reluctant to give up coffee.

Fortunately, I knew that potassium and magnesium ions are the two principal intracellular ions with positive charge, and that if either is depleted, the heart becomes more irritable. Of course, too much potassium can kill by stopping the heart. But my kidneys seemed fine (hence able to eliminate any minor excess of potassium) and I drank a lot of fluids (see Gatorade below), so I simply switched from ordinary table salt (pure sodium chloride) to Morton's Lite Salt (half sodium chloride and half potassium chloride).

As for magnesium ions, those are easily purchased as *magnesium sulfate*, which is safe to eat but so poorly absorbed that it retains fluid in the bowels and causes diarrhea. Indeed, the English town of Epsom became famous among constipated Brits for the powerful salts in its waters. The same Brits also appreciated Siberian rhubarb brought back by the British East India Company from its earlier forays.

Well, I had confidence that my sourdough bread microbes—which can readily recycle or renew stale bread, potatoes or chopped citrus peels—would also have no trouble converting Epsom salts to a more easily absorbed magnesium ion combination. So I concocted an effective dietary magnesium supplement by tossing some Epsom salts (magnesium sulfate) into a batch of sourdough bread.

Thereafter, I simply defrosted a slice of “Epsom Salt bread” for my daily magnesium ration—thereby effectively soothing my heart rhythm without annoying the bowels. Eventually, I heard about Slow Mag, an enteric-coated over-the-counter tablet that contains more-easily-absorbed magnesium *chloride*. So now I take one Mag

64 tablet daily (the generic version) or twice a day if I notice many extra heartbeats.

An overdose of magnesium ions merely makes me a bit sleepy—in which case I skip a dose and resume one Mag 64 per day. Several friends have found Slow Mag useful for suppressing muscle cramps as well as for alleviating minor heart rhythm disturbances.

Some people apparently use it to reduce the frequency of migraine headaches, since low blood magnesium levels may raise the risk of a migraine attack. And recent studies suggest that magnesium ions inhaled or taken internally may even help to control bronchospasm (wheezing)—see *Lancet* (June 21, 2003 pp 2095 and 2114).

GATORADE AND ATENOLOL

Gatorade is a balanced salt solution that mimics the salt concentrations of your blood serum. It comes as a powder or ready-to-drink liquid in various flavors (the red version can stain). In any case, after I began taking atenolol tablets (which as mentioned, reduce pulse rate, stress on the heart and blood pressure as well, while letting smaller blood vessels dilate), I often found myself feeling a bit wobbly when slightly dehydrated.

Soon I learned to keep a pint of Gatorade close by in case I might need to top up my fluids—especially when hiking. Of course, I could also have eaten foods that released their nutrients slowly, and thereby encouraged a gradual absorption of the water taken with that food. However, I exercise more comfortably with an empty stomach—and Gatorade offers a more durable 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 I prefer to walk where there are many more trees than hikers. Only once have I encountered an adult black bear behind a tree while I was urinating. In that case, the unsuspecting bear—approaching from upwind—ran off when I smacked the tree sharply with my walking

stick (I also carry a 44 magnum revolver when strolling in the woods).

Beta-blockers like atenolol inhibit the sympathetic nervous system, so at times I sweat excessively. But it is an inexpensive and lifesaving drug for many of us cardiac patients. And by blocking the adrenalin rush of a fight-or-flight reaction, atenolol also helps me to avoid becoming annoyed.

Politicians sometimes take atenolol before a speech if 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 are currently being evaluated by Gerard Karsenty's team at Baylor College of Medicine as a possible way to prevent osteoporosis.

Beta blockers also help to preserve muscle tissue of burn victims by blocking epinephrine and other catecholamines that cause post-traumatic hypermetabolism (see Herndon et al, NEJM Oct.25, 2001). And ACE inhibitors—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 also help older hypertensive women preserve their muscle strength.

Incidentally, cooked (but not raw) 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 small canned tomatoes daily—or the equivalent in canned tomato juice, ketchup and so on. Since tomatoes (like turkey and many other foods) can stir up gout, they remind me to eat my turnips or take black cherry concentrate. *Life is a balancing act.*

CHAPTER THIRTEEN

IS THERE ANY REAL DIFFERENCE BETWEEN FOOD AND MEDICINE?

*Would we benefit from a computerized database of old
wives tales? . . . Food, drink and common sense versus drugs like
Viagra*

* * *

Around the world, humans consume (or apply externally) countless varieties and different parts of plants and animals. Many foods have a season when they ripen, or become more accessible through migration, or when the concentration of some ingredients are deemed most favorable. Like bears, humans are omnivorous. Indeed, sufficiently hungry bears or humans may consume bears or humans.

More generally, eating can be viewed as an act of self-medication, since all life selects specific food items to relieve a current or potential metabolic deficiency or to treat an infection or other complaint. As Cynthia Engel reports in *Wild Health*, inquisitive humans and other animals frequently taste and eat unusual foods and even soils—often after observing others prosper by such consumption.

Some diatomaceous soils are eaten to harm intestinal parasites. Clay soils such as kaolin—a fine white clay used in Kaopectate (and 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 foods require soaking or more complex preparations to ensure safety or palatability. And any act observed may be misleading. One medical instructor who taught clinical skills and observation, demonstrated the old urine test for diabetes—dipping and licking a finger to detect sweetness. He then passed the urine around so we all 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". An average female orangutan may only give birth to an infant every 8 years, in order to educate each one 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 important sources of environmental and tribal knowledge.

Alaskan natives have foraged on land and sea—over beaches, rivers, lakes, forests and tundra—for thousands of years. Many resume their traditional ways wherever an opportunity for subsistence presents. Recently arrived Asians often become competent foragers in Alaska as well. Yet few Caucasians seem to 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 as midwives.

Thus older women sustained and passed along a huge botanical knowledge base—including information on the herbal control of female fertility. But eventually these age-old social activities—and this separate female-controlled knowledge base—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 the maintenance and expansion of a dominant world-wide faith necessitated high taxes and wealthy church estates that could support costly explorations, missions and wars—while also sustaining the profligate and dissolute life styles of church leaders. Naturally, all of these activities depended upon a copious and unending supply of impoverished peasants, soldiers and sailors.

Furthermore, the growth and development of towns and businesses encouraged epidemic diseases, which—together with poor pay, inadequate clothing and housing, overwork and unhealthful conditions (noise, toxic smoke and dust, polluted water, inadequate or rotten food)—consumed a comparable stream of desperately poor workers.

All of 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 midwives to be witches and had them burned at the stake.

At the same time, the church and its cooperating male medical practitioners, tried to find out who was pregnant and bully them into remaining so, on fear of death. This background may help explain why witches are still routinely depicted as evil old hags riding self-stimulating broomsticks while male wizards with glowing wands retain a far more sympathetic aura in folk tales. And wizards never cackle while stirring the medicinal kettle.

Everyone knows that in 1492, Columbus “discovered”—or at least was first to publicize—a fully self-aware, inhabited and equally civilized America. Because Columbus thought he had reached India, America's original inhabitants were thereafter known as Indians. In view of the evils that soon befell those Indians, it is

understandable that their survivors routinely protest Columbus Day parades.

Similarly, William Withering became famous in 1775 for “discovering” 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 when male practitioners could not help.

Note that Withering took all the credit—and that he and other male practitioners were fully identified rather than being described as “an old man from X.” Presumably, no one bothered to reward that old woman, or to burn her at the stake.

Sixty years ago, women entering health care were more or less restricted to low-paid nursing positions. Now more men are becoming professional nurses, and most nurses draw decent salaries. With so many females entering medical schools, women doctors may soon outnumber the men.

Furthermore, midwives and female physicians are resuming their traditional dominance of childbirth, female complaints and the medical care of children. But since many physicians are now mothers who provide much of their own family’s child care, they tend to enter specialties that offer regular schedules (like dermatology and radiology) rather than become internists or surgeons.

DO WE NEED A COMPUTERIZED DATABASE OF OLD WIFE’S TALES?

As a young teenager, I spent the summers of 1947 and 1948 in then-remote Passaconaway Valley of New Hampshire, working on a small construction crew. During the first summer, my brother Peter and I worked for room and board—and were subsidized by our father. We lived in a cozy log cabin with our elderly, still active boss, Cliff Pratt and his wife Mabel—plus 2 bird dogs, 2 milk

cows in a separate shed, and a few pigs out back. The following summer, I earned 65 cents an hour.

Cliff and Mabel delighted in passing on tales about this heavily forested valley, which had been logged and farmed during the previous century. For example, Cliff mentioned that local sheep regularly died of “the blind staggers” until someone determined that this was due to their cobalt-deficient diet. Apparently, a cobalt salt supplement soon eliminated the problem.

That tale 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 Creutzfeldt-Jacob disease. After an excellent science magazine wisely ignored my vague ruminations, I went on to more pressing concerns.

Nonetheless, an easily searched, cross-referenced data-base to which many such “old wives’ tales” could be submitted, would surely include useful nuggets of traditional knowledge for researchers who were willing to plow through entertaining rhetorical debris—as long as someone, perhaps a single payer for health care, thought this a worthwhile project to subsidize.

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 (maybe just women?) to brew a strong tansy tea for the “spring cleanout”. At the time I assumed tansy was 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*—strong tansy tea was formerly a well-known abortifacient. Riddle lists many other commonly consumed herbal teas—such as pennyroyal—that exert similar often-unwanted effects on modern uninformed consumers.

Apparently, many flavorful herbs that remained popular and available over centuries, were initially domesticated for easy access to pharmacological effects that no one dared later explain or now remembers. This makes consumption of herbal teas a risky way to protest the past dominance and abusiveness of the Church and its affiliated medical establishment.

So while I would be last to criticize anyone who feels pleasantly subversive while drinking herbal teas, ordinary black or green teas and coffee or even hot vegetable broths are definitely safer for those who lack the knowledge and experience of skilled olden day midwives.

From an evolutionary perspective, the tansy plant and other such herbs presumably benefited by including chemicals that aborted and thereby limited populations of mammalian herbivores. Though I never tasted tansy tea, I can vouch for another of Mabel's herbal remedies, having on several occasions found that a cup of raspberry leaf tea immediately stopped (or as we used to say, stoppered) troublesome diarrhea.

More than once I heard Cliff describe how—after feeling fatigued over many months—he consumed an entire case of celery, and immediately felt like a new man. Most of us have had similar moments, and I have related some of my own.

Perhaps the lesson to take away is that humans eat thousands of different foods, many of which—like cherries or turnips or celery—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 one of our chronic complaints.

For example, every milliliter of seawater contains billions of viruses released by the rupture of bacteria, algae, fungi or other infected sea life cells. Everyday knowledge and experience assures us that seawater viruses that have specialized for killing particular microbes, cannot attack human cells. On the other hand, if we submerge ourselves in seawater, might some of those viruses harm the bacteria or fungi residing on our skin?

Well, I did notice that my chronic seborrheic dermatitis, which usually subsides after occasional applications of antifungal ketoconazole cream—or by simply placing a paper towel moistened with vinegar on inflamed surfaces for several minutes (many fungi do poorly at acid pH)—also improved slightly in sunshine but nearly cleared after several ocean swims in Hawaii.

As for how knowledge about foods and herbs was compiled; most of us have inherited the good judgment that leads us to avoid restaurants or foods that made us ill. And 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.

Similarly, kings once had official tasters who lived high off the hog—and whose sudden demise might be viewed as bad news by and for the cook. Others kept pets. And Big Pharma now supports disposable mice and rats who cannot give informed consent, while clinical trials routinely enroll the desperate and the misinformed.

FOOD, DRINK AND COMMON SENSE VERSUS DRUGS LIKE VIAGRA

Computer spam messages suggest that costly Viagra will let you “Make love till you drop!” And the old joke about “life’s three stages” (*tri-weekly, try weekly, try weakly*) correctly suggests that adult human male sexual potency declines with age. Nonetheless, many aging men hope that 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, those testosterone-bearing food items provided elderly males with a needed boost.

Yet many men are unaware of ordinary factors other than alcohol—which is renowned for heightening desire while reducing performance—that can also impair their sexual abilities. For example, cigarettes accelerate arterial aging and promote premature termination of male sexual function.

A few other physiological insights may help you make love inexpensively *without drooping*—or even 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 supply maximal blood flow to all 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 these old favorites one at a time. Older males may even find that the usual shift of body fluids into the gut during digestion of an ordinary meal can temporarily reduce sexual performance.

Men should avoid hot tubs, as overheated testes produce less sperm and testosterone. Hot tubs are dangerous for old folks anyhow, especially those with cardiac problems. 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) pharmacologically without competent medical advice.

While we are on the subject of listening to your body, the commonsense stuff matters increasingly 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 in case your wobbly or washed-out feeling represents mild fluid depletion.

According to Graham Giles of Cancer Council Victoria in Melbourne, 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 about one third as much 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. The small calcium collections in frequently injured testes of male extreme bikers may be associated with an increased risk of testicular cancer.

Adult male blood-testosterone levels are highest in the morning, so older men may enjoy more successful intercourse during the

earlier part of the day. Elderly men who have not regularly expelled their sperm through intercourse or by masturbation, may be dismayed to find how much their performance has declined—for sperm and testosterone production fade with chronic low demand. So “use it or lose it”.

Older folks with stiff arteries are increasingly sensitive to changes in their blood volume. Removing or adding an ounce or two of blood may significantly impair or enhance their blood pressure and circulation. So since penile erection easily entraps that much blood temporarily, adequate sexual performance in older men increasingly depends upon adequate hydration (e.g., drinking a pint of Gatorade) and perhaps activation of the circulation with a leisurely cup of coffee. And don't be in a rush—for full absorption of those fluids may take 45 minutes or an hour.

Many manufactured foods now contain soy products. Soy has significant estrogenic activity so avoid soy milk or soy solids and check ingredients lists on manufactured foods for soy additives. Other plant foods also contain estrogen-like substances, and eating too much of any such plant could have an oral contraceptive effect on females.

A varied diet helps you to avoid toxicity from normal plant or animal ingredients or from low levels of toxic substances that these living things may have acquired. All of this makes evolutionary sense.

Tasty plants may gain little by raising estrogen or other toxin levels to a point that punishes random grazing acts. However, many plants benefit by minimizing the population of mammals or insects or dinosaurs that would otherwise overgraze them. Hence some plants reduce the sexual performance of aging human males who overgraze them.

Natural (unprepared) foods often include chemical contaminants that affect health or sexual performance. Common herbicides and pesticides—and some ingredients of plastics—act as potent estrogen mimics, even in tiny doses. Research suggests that modern farm workers have reduced sperm counts. It pays to wash or peel purchased fruits and vegetables.

While Viagra and other erectile enhancers are expensive, they may improve the sexual performance of older men by increasing nitric oxide availability—for nitric oxide acts locally to dilate important penile blood vessels. On the other hand, glucosamine could have an unwanted *anti-Viagra* side-effect (see Chapter Twelve).

In theory, older men might derive benefit—similar to what some experience when taking Viagra—by occasionally adding a small amount of sodium nitrate (saltpeter, formerly considered an *anti-aphrodisiac*) or sodium nitrite to their diet (both nitrate and nitrite are used to make corned beef and pastrami).

But a little nitrite can kill (see *Eleven Blue Men* by Berton Roueche). So it is definitely safer, more practical and generally more pleasant, to consume several slices of salami, or sausage, or preserved fish (nitrate and nitrite are common meat preservatives—check the label) as a way to determine if this modest dietary enhancement can benefit male sexual function through improved nitric oxide availability.

However, the body soon compensates for chronic changes in nitrate levels. Hence angina relief often requires increasing doses of nitroglycerin under the tongue—and *chronic* saltpeter use may well act as an anti-aphrodisiac. The take-home message seems to be, eat what you need but only when you need it.

CHAPTER FOURTEEN

WHY DO HEALTH CARE, HEALTH INSURANCE AND PRESCRIPTION DRUGS COST SO MUCH?

*Do too many internists want to become cardiologists? . . .
Many medical fees are now regulated . . . So what do we need to
do? . . . When it comes to health care, “better” is hard to define*

* * *

We finally consigned our large heavy 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, \$1,400 laptop computers.

Pharmaceuticals and medical technologies have undergone equally incredible improvements, yet their prices only rise while patent protection persists. But once a patent expires and several manufacturers can compete, the price of a simple, potent, now-generic medicine like tetracycline or atenolol, truly becomes a bargain.

Dramatic advances in medical care have mostly reduced hospital stays of weeks or months to hospital stays of hours or days. Although nurses are an increasingly rare sighting, hospital charges go up with no apparent top in sight. In contrast, a discreet friend once told me that his inconspicuous out-of-town motel did even better

with short stays because then he could rent out the same room more than once a day.

Of course, my friend only had to clean and change the linen of those simple high-occupancy rooms, while declining bed occupancy rates leave many hospitals with costly unused beds, or even entire empty wards. Nonetheless, most urban hospitals cannot compete unless they support an entire gamut of modern health-care specialists with fancy equipment and convenient services.

For-profit and non-profit hospitals benefit from many tax advantages and accounting ploys that shift funds between 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, executives and shareholders of for-profit hospitals anticipate yearly growth 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, which began with venture capital backing in 1978, owns and operates 100 hospitals. Over the last 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, while larger disbursement organizations like Medicare or the Canadian government health care plan, only retain 3% to 6% for overhead.

The direct diversion of health-insurance dollars from health care may easily exceed 25% if you include executive perks, agent costs, marketing, administration, subcontractors, investment and legal counsel, dividends, and so on—without even counting the extra employees that physicians and hospitals must hire just to deal with insurance paperwork.

Every health care institution wants more paying patients, but the supply of such patients is relatively stable. Nonetheless, there is hardly any overt price competition, nor can most of us find up-to-date information that might allow elective patients to choose a hospital charging less than \$25 for a tube of toothpaste—or under \$1200 for an emergency room visit to find out 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 have simplified most operative procedures and reduced operative times for ophthalmologists, orthopedists, gastroenterologists, oncologists, cardiologists, general surgeons and heart surgeons. Yet such specialists rarely cut fees when new equipment and techniques allow them to treat more patients, regardless of whether more patients then seek their care or not.

In former times, hospitals bought sturdy glass cider jugs full of delicious fresh cider (or wine or vinegar or whatever), then washed and sterilized those gallon bottles and added a sterile rubber cork with two or three good-size holes for glass or plastic straws, and added some tubing—all for less than 10% of the price then demanded for an equally functional plastic chest drainage device with a couple of plastic tubes attached.

But no large hospital could afford that cider jug device today. It would involve too many meetings, requirements 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. Can't be reused.)—to waste management (Which department gets charged for discarding this?).

On the other hand, physicians frequently invest in out-patient surgery centers, CAT scan or sonography facilities, mammography units, and so on—wherever a lucrative niche tempts them to divert patients from local hospitals and the highly remunerative monopolies enjoyed by prosperous hospital-favored radiologists, pathologists and other specialists. But even under these circumstances, I have never seen published rates—let alone price cuts 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 *truly important requirements that ensure adequate training and certification of expertise to protect the public*. And while each subspecialty defends its turf from other subspecialties, it also promotes products and services in areas dominated by other subspecialties.

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 for patient care or if it simply enables 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 since highly paid specialists can make larger political contributions, their interests and protests receive priority attention from politicians and bureaucrats. And by getting appointed to Medicare committees that determine payments for various services, they remain highly paid.

The problem really is quite simple. *Most people seek meaningful work. And they start 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 to visualize a future beyond finding some institution, clinic or busy practitioner to 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 settled 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. Of course, even had we fallen into an ideal practice opportunity, it could not have stayed 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 “rich enough.”

Having entered medical school with hopes of becoming *a simple country doctor*, I especially appreciated that school-approved externship at Twillingate. But as our family grew and my training continued, the dream of providing medical care on Newfoundland’s northern shore became increasingly unrealistic. *Nonetheless, it would have been hard to resist an occasional request to supply free medical services to this underserved population through its struggling, already organized, health care system.*

Indeed, temporary experiences of this sort often revitalize physicians—especially those whose ordinary practices offer comparatively few opportunities to really make a difference. In our day, if you didn’t want to be a medical missionary, or join the Peace Corps, or enter the Indian Health Service, you just had that big white nicely refurbished hospital ship named Hope. And there mid-career physicians could donate professional services and teach local health workers for a few weeks or months—on foreign duty without family.

Nowadays, those who want a non-religious, non-bureaucratic

workplace where they can fully utilize youthful energies and help a populace with no other options, can also join *Medecins sans frontiers*. Freedom from rigid oversight was a special concern of mine since I would require plenty of elbowroom to do my innovative best in a rapidly evolving specialty.

I also needed to be with my family, and hoped for easy access to a natural ecosystem. Though I had long been enamored by Alaska, Marianne was unconvinced. An elderly physician told me “Enter practice where you wish to live, then provide needed services there.” Simple but true.

Marianne and I finished our Boston residencies about three months before our training would commence in Iowa. Initially, I applied for short-term surgical positions—sending out two-page resumes about my sterling qualifications and merely mentioning Marianne’s training in Pediatrics. 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 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 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 underdeveloped lands, famous medical schools vied to produce famous researchers and teachers who might attract potentially famous students and endow new buildings. So while I had many fine teachers and nice classmates, we shared few interests. After graduating, I soon lost contact with my classmates and medical school.

In fact, I left Boston convinced that most academic physicians were pompous and overrated. Yet I now suspect that the careers of many medical students and academics might become more meaningful if a few students in each class were specifically admitted on a *tuition-free and 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 such an opportunity retained their access to an entire medley of medical school classmates with different interests and skills—the majority of regular-track medical students might find it quite rewarding to cooperate generously with, and occasionally visit, those physician friends who were providing care for the underserved.

Each small, ready-made cohort—held together by a medical-school-based organization and a monthly newsletter—could ask academics, researchers and practicing physicians to occasionally visit and provide needed specialty clinics, consultations and surgical care. Surely all would benefit if first-world medical personnel occasionally experienced third-world realities at a working level, rather than merely passing through as a tourist.

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 class of a school accepted long-term responsibility for enabling and enhancing the delivery of important health care services by a few classmates, all who participated in those meaningful activities would gain.

While there are many valid criticisms of Big Pharma companies, their occasional donation of essential pharmaceuticals to improve the health of impoverished workers or peasants deserves applause. For example, Pfiser gave great quantities of a long-acting antibiotic to control chronic eye infections, and Merck gave great quantities of an antihelminthic drug to eradicate invasive worms.

But except for occasional, well-publicized good deeds, Big Pharma has shown little interest in third-world health problems beyond insisting upon enforcement of its hugely profitable pharmaceutical patents. Even the World Health Organization has serious conflicts of interest, as researchers find unclean reused needles, untrained medical practitioners and improper vaccination techniques to blame for many of Africa's new AIDs cases.

For now the WHO apparently prefers to emphasize the role of unsafe sex, and divert blame from WHO-supported immunization programs—some of which may have involved dirty needles. Many Africans already believe that AIDS is a white man's plot to kill them off. In fact, some Nigerian tribes have 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). Anyhow, there is good evidence that polio vaccination with live attenuated virus can 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—while Big Pharma's apparent priorities include 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.

Worldwide, over 200,000 children have been prescribed costly and often unjustified growth hormone treatments for shortness. Many thousands of 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 socialites could survive terrorist attacks with botulinum toxin. And when all else fails, they might even be able to subsist on improperly stored meat or poorly canned preserves with impunity.

DO TOO MANY INTERNISTS WANT TO BECOME CARDIOLOGISTS?

Anchorage, Alaska presently has about twice as many cardiologists as internal medicine specialists. As one might anticipate, our few internists are relatively underpaid and overworked while our many cardiologists do very well and enjoy plenty of time off with good coverage from their colleagues.

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 the rational response of highly intelligent and motivated physicians to a skewed fee structure that neither group established or can control.

In fact, cardiologists even train as 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) deal with in their daily practices.

At the same time, many of the complex medical interventions previously handled by internists 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 if internists go extinct, such subspecialists—plus family practitioners, nurse practitioners, PAs and PCs (easily updated, interactive personal computers)—of necessity will take over the defunct 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 especially important conditions.

But as more and more people train to deliver ever more highly

specialized care than most of us will ever need or could afford, the best becomes the enemy of the good. And if their only tool is a highly specialized hammer, those specialists will want to be useful and make a good living. Consequently, the whole world will increasingly appear in need of that highly specialized nailing. Sadly, those who obviously don't need or just cannot afford such a nailing are too often mishandled or lost in the shuffle.

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. And it is essentially impossible for any internist to remain truly up-to-date with all advances in such a broad field.

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. So 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 and without health insurance or other resources, soon go broke.

No matter whether certain outdated or 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 adapted to the winding roads laid out by long-ago-consumed cows that compulsively retraced pathways once followed.

For every long-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 their 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 expected to become wealthy, though many did. Among these were some highly respected old-timers with 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 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.

Some Medicaid or Medicare payments for institutional or technological services still seem unnecessarily high. And Medicare’s remuneration for ordinary office evaluation or treatments is widely seen as insufficient to cover office expenses related to that patient’s

visit. A physician friend says his part-time employer billed him a token \$54 for the amount that patient-related office costs exceeded his total compensation from Medicare after a day spent treating Medicare patients.

When we first came to Anchorage, frustrated physicians often complained about welfare payments. Many would rather have provided free care than hear visiting welfare workers reassure sick patients that their doctor's bills were "all taken care of"—especially when that payment might only be several dollars if a \$50 or \$200 dollar fee was deemed legitimate.

Many medical offices are currently unable to care for more than a few long-time patients after they retire and Medicare becomes responsible for paying their medical charges. Some practices even advertise that they won't accept Medicare payments but are pleased to see well-to-do older patients who can 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 to destroy the Soviet economy. Similar strictures still burden other great nations like China and Japan.

As relict 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 their own 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 with 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—regardless of whether it represents a private, non-profit or public health-care program, or 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 could also reduce remuneration in specialties or sites attracting 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. 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 play catch-up with population shifts, technological advances, evolving medical problems and their new solutions.

Then how about paying one standard salary to all practitioners so they choose a 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 provide 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 more to those who are nicest to the administrator.

In any case, it seems safer to let the system evolve slowly by simply adjusting specialist fees, while patients continue to select their own physicians. For major revisions of a complex system incite so many feedbacks that abrupt changes in health care delivery—like other revolutions—rarely deliver either the anticipated result or a desired 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, not below. But there is no inherent reason why all administrators need to be corrupt, or all young doctors should be treated badly, or all politicians must outrank both 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 who try to squeeze a few more dollars out of a system than prosecutors deem permissible. Thus “welfare cheats” are swiftly jailed for small scams they use to survive, while Lay and Skilling (who led Enron) remain 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 Bush-I or Bush-II can endlessly explain why only the wealthy deserve deliverance from evil (taxes).

Of course, no matter what solution is devised for American health care, it 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 non-responsive institutions like Boston City Hospital.

When I first came to Anchorage, an experienced surgeon 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 “progressed” from an open-door nun-administrator and assistant administrator with all department phone numbers listed on one side of a single sheet of paper—to departments uncoun- ted with administrators unknown who were either 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 select 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 produces better outcomes.

Quite naturally, most physicians who are still paying off major investments in education, office space, medical equipment, 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 if patient referrals decline as others offer competitive or less invasive services.

And wherever there are more physicians in practice than seem necessary for relatively urgent matters and proven treatments, one will 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 hearing many glowing reports about great new diagnostic and therapeutic advances, seriously ill patients expect us to operate or offer strenuous chemotherapy or provide major x-ray treatments or *do something big*—regardless of whether standard options available are likely to be helpful or merely might conceivably be so. “After all, miracles do happen!” And if all else fails, patients 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 of a terminal illness. Perhaps some of the terminally ill would feel more confident 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 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 in hopes of denying expensive procedures. In Anchorage, where we have hundreds of 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 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—when not directly challenged to do something—might 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 remedy as I did, rather than risk dying at the hospital with more tubes than orifices. Such a patient could 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 old Indian remedies such as Devil’s Club tea for cancer, that the patient or family might even prepare on their own (physicians would likely be uninformed—and also uninsurable—if directly involved in such therapies).

Cardiologists and cardiac surgeons are currently 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 these advanced procedures, it is unfortunate that cardiologists seem unwilling to hear about—let alone try—my safe and inexpensive Mag 64 treatment on any of their patients with heartbeat irregularities. After all, *up to 50,000 patients may have died of cardiac arrest while taking supposedly useful*

and definitely costly anti-arrhythmia 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 the costly lasers found in most heart surgery centers, ready to punch holes through left ventricle muscle into the ventricular cavity of any insured. While no one has demonstrated that this really benefits the patient's heart, "It might help." One really cannot say whether medical progress might be slowed or accelerated if expensive or intrusive new remedies first had to be tested and confirmed before every patient gained 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 (see 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 were established 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 many stock options whose value hinges on the outcome of trials, may also be less objective.

Over the years, insurance companies 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 companies have always been noted for the multitude of confusing and annoying paperwork barriers a patient must overcome before the company eventually pays a part of the insured's legitimate claim (a sometimes illegal ploy known as "rationing by inconvenience").

Even the partial insurance payments to my friend Tector, who performed emergency heart surgery on me over twenty 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 to reimburse the patient.

Nor had insurance companies cause (before the recent stock and bond market crash) to negotiate reduced payments as formerly difficult and dangerous procedures became routine and much more efficient, while patient's risk and surgeon's time investment 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 which are totally unrelated to risks they currently insure, simply to offset their market losses. So 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 their exorbitant and ever-escalating insurance rates.

Evidently, rather than reflecting policyholder risks, insurance rates are eventually adjusted so that policyholders actually insure insurance companies against stock and bond market losses. 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 about 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?”

Of necessity, American medical care evolved to develop, promote and provide services and procedures at a profit. 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 by 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 will surely become an essential aspect of modern medical practice.

Medical costs have been uncontrollable for many reasons, including the unmatched political clout of HMO's, insurers, multinational pharmaceutical manufacturers 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 represent.

CHAPTER FIFTEEN

POTENTIAL BENEFITS OF A SINGLE PAYER SYSTEM*

More jobs; better pensions; fewer strikes; no need for health insurance; fewer bankruptcies; less paperwork; free choice of physician; fewer and more reliable or more effective diagnostic tests and treatments; periodic retraining for health workers; better clinical trials; a single federal health care system for all Americans including veterans, congresspersons, judiciary and the executive branch; no need for pharmaceutical management groups; only subsidize drugs of proven efficacy; support generic drugs; regulate all health care monopolies; monitor physician practice outcomes; effective coverage for mental, dental, pharmaceutical costs; drug and alcohol rehab programs; regularly survey all physicians and other providers for suggestions on useful and cost-effective interventions; promote healthy life styles to all age groups; ensure competent education in human biology and encourage self-care.

* * *

I: MORE JOBS, BETTER PENSIONS, FEWER STRIKES

Recent government estimates indicate that at some point during the past two years, almost 80 million Americans had neither

* (a partial recap—see also *US doctors group calls for single-payer national health-care system*, Lancet Aug. 23, 2003 p621)

health insurance nor access to regular medical services other than public hospital emergency rooms—which were often so overloaded that they had to refer true emergency patients elsewhere.

The 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 first-world nation provides worse health care coverage for its lower-income working population who do the most tedious, dirty and dangerous jobs.

Over 14% of the gross national product disappears into 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 about national political decisions that neither side has made or knows how to correct.*

Many industries move overseas to escape that heavy burden. Low or middle-wage workers still become trapped in unsatisfying, stressful dead-end jobs because these jobs include otherwise unaffordable insurance coverage for current medical problems. To evade health care and pension obligations, companies like Nestle have shut down efficient profitable plants when most workers reached their 50's. Duty, loyalty and trust no longer matter. Everyone feels betrayed.

II: NO NEED FOR HEALTH INSURANCE, FEWER BANKRUPTCIES, LESS PAPERWORK, EXPANDED COVERAGE

Medicare is the only tax-subsidized—hence 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 while caring solely for Medicare patients.

Though I am currently out of the loop, I suspect that those who perform diagnostic and therapeutic procedures are still doing well with Medicare funding. Not coincidentally, the groups representing 170,000 highly paid medical and surgical specialists have combined their lobbying efforts.

In any case, Medicare or any other single payer system could markedly trim provider overhead, and itself operate more efficiently, were all patient outcomes automatically monitored to allow the early detection of worrisome variations. One result would be far less paperwork and fewer computer entries. Any Medicare documentation requirements not shown to be cost-effective could be compared to requirements in other national health programs, and reduced or eliminated as indicated.

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 have developed massive medical debts as a result of cancer, stroke or other serious illness—even when they thought they had adequate insurance. Too many are allegedly doomed unless friends quickly help them to raise money for some costly chemotherapy. For insurance policies frequently don't cover chemotherapy or other very costly or unproven treatments that often lead to worse outcomes than the untreated disease.

Many patients only get to see a physician if they pay regularly or even in advance. Patients referred for evaluation by specialists who do costly procedures usually undergo costly procedures. And patients are generally pressured to pay medical bills immediately, even for unexpected illnesses or injuries.

Uninsured accounts have been “sent to collection” while the patient is still hospitalized (and cannot hide). As a result, many patients place unsustainable balances on their credit cards and then pay extortionate interest rates until they lose their job. Medical expenses are a leading cause of personal bankruptcy in the United States.

Those pushing high-interest-rate credit cards prey especially on the elderly, the poor and the uneducated. Yet by lobbying and making major campaign contributions, these bankers *successfully limit the debt relief afforded to poor folks who file for bankruptcy protection*. Bankruptcy rules for owners of costly homes and businesses are not nearly as onerous.

Over the past 50 years, health care costs have increased far more rapidly than overall inflation rates. Individual health insurance policies are only selectively available and routinely refuse to cover preexisting illnesses (whatever is already wrong with you). Insurance companies try to insure individuals for conditions they are unlikely to develop.

III: FREE CHOICE OF PHYSICIAN, FEWER AND MORE RELIABLE DIAGNOSTIC TESTS, CHEAPER AND MORE EFFECTIVE TREATMENTS

Investor-owned Health Maintenance Organizations or HMOs often delay and minimize patient care to maximize returns for their investors. The annual premium for an insurance policy 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 truly inexpensive-and-useful remedies and cures will never appear in large numbers until a single payer or major foundation devotes significant attention and funds to *an ongoing investigation of low-cost remedies for common complaints* (New Scientist, May 26, 2001 pp 31-40).

By this I do not mean music therapy “to raise the chi”—nor would I encourage further evaluation of scientology, chiropractic, chelation or many other favorite causes of those who want medicine with a more human face. At present, the NIH-based Office of Alternative Medicine is funding studies of glucosamine as well as many more questionable therapies (Lancet, Aug 18, 2001 p566).

A single payer could easily evaluate and set up a public information base on possibly useful alternative therapies such as raspberry leaf tea for *diarrhea*, turnips or sour cherries for *gout*, 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), possible anti-inflammatory effects of honey bee stings that may *suppress autoimmunity*, and an entire host of other inexpensive dietary-or-other *traditional remedies that patients might easily learn about, access and afford outside of the modern health care system*.

Thousands of traditional remedies from around the world could be evaluated simultaneously in standardized studies run by ordinary practicing physicians and designed by the best talent that a single payer could find. Many safe and inexpensive (often home-grown) herbal remedies might finally offer legitimate competition for Big Pharma’s billion-dollar drugs.

A single payer could ask a panel of experts to ethically undertake or underwrite international evaluations of local medicines 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 such remedies were deemed effective, international agreements could ensure that a small surcharge on each use could go to responsible local parties in the source country. This might help third-world nations avoid deforestation (see comments on ethnobotanical knowledge in Science, Mar. 14, 2003 p1707).

In contrast, Big Pharma routinely tries to patent (pretend they have made a *new and non-obvious discovery*) all potentially profitable traditional remedies in order to monopolize that market as well.

Too often this occurs with our Government's connivance, despite outcries from areas where such remedies grow and have traditionally been used.

A single payer might markedly lower its own drug costs by studying and buying proven herbal remedies after requiring such herbal products to meet the same safety and purity standards as all foods—while banning dangerous herbs such as those containing ephedra and other dangerous ingredients.

A single payer also could evaluate if, when and for whom various screening tests such as PSA or mammography are cost effective. In many cases, where possible benefits are as yet unclear, it could sponsor studies and circulate regular updates—for example, current status reports on who might benefit from colonoscopy or gastroscopy or mammography—or whether blood cholesterol or C-reactive protein levels are useful indicators of future coronary problems, and how best to respond to that information.

Similarly, they could compare outcomes on statins with those on tetracycline, and evaluate the clinical importance of high blood levels of asymmetrical dimethylarginine—which allegedly quadruples the risk of coronary events—to see if this might identify persons who could avoid future heart attacks through arginine supplementation of their diet (Lancet, Dec. 22-9, 2001, pp2127-8).

There is great interest by academic researchers and Big Pharma in *peroxisome proliferator activated receptors* or PPARs—proteins found directly on DNA in the cell—that seem to play important roles in obesity (fat storage), diabetes (insulin sensitivity), atherosclerosis and heart disease. Apparently, Troglitazone, a thiazolidinedione drug (once used to control diabetes and later withdrawn due to its liver toxicity), turns on these receptors and may suppress some cancers and atherosclerosis (Science News, April 14, 2001 pp238-9).

IV: *SUBSIDIZE PERIODIC RETRAINING FOR ALL HEALTH WORKERS*

Most specialists are well aware of obvious problems that their competitors in other specialties now face. A cardiologist friend

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 we put you heart surgeons 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 less than 20 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 forthcoming 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 changed by advances in medical care, the entire medical enterprise tilts evermore unreasonably toward investigating and teaching about even more expensive remedies.

A point I have repeatedly tried to make in this book is that it would be both unprofitable and hugely difficult for a busy individual physician—who might prefer to study and apply inexpensive remedies—to swim against that tide of opinion. Nor would his peers likely understand or support such efforts. Even his malpractice insurance carrier might disown him if difficulties arose.

The biggest problem for those who wish to change how things are done is that most doctors prefer to practice as they were taught—as pointed out in discussions of electrocoagulation, radioactive gold, tetracycline, black cherry concentrate and turnips. Among other major difficulties, practitioners with “a screw loose” tend to grab the ball and run off in the wrong direction, which soon gives every new effort a bad name.

Without legitimate leadership from academia or sponsorship by a single payer, any sustained effort to discover and develop effective low-cost remedies will swiftly be killed as corporate interests smear responsible investigators to discredit that latest threat.

One article on my desk praises potential legislation that would only allow antibiotic usage in animals to treat current illnesses (allegedly to reduce the risk of antibiotic resistance in infected humans). The long list of precluded antibiotics includes tetracycline, which has been fed for many decades at thousands of tons per year, to spur animal growth in feedlots (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. 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 becomes 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 has surely occurred about as often as it can.

In fact, that chronic feedlot usage alone ought to easily discredit lofty remarks such as "Physicians shouldn't test antibiotics like tetracycline against symptomatic coronary heart disease because using tetracycline for such an unproven indication could encourage antibiotic-resistant bacteria."

Just such a remark was made several years ago by a Seattle physician who is 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 I am still here to tell you he was wrong!

Does he 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?

Whatever the case, times are changing so rapidly that many of today's health care workers will need to upgrade or alter their job description every few years. Unlike Continuing Medical Education or Recertification, a periodic opportunity for subsidized retraining might offer a truly beneficial challenge to many physicians whose new proficiencies would increase their productivity while alleviating boredom and burnout.

Their patients would benefit as well. And under a single payer, it should be no hassle for any competent physician or surgeon to voluntarily retrain in a related field where demand was unmet or growing. My three-month fellowship for retraining in heart surgery certainly helped me and benefited potential heart surgery patients in Alaska.

V: IMPROVE CLINICAL TRIALS; ELIMINATE SEPARATE HEALTH CARE PROGRAMS FOR CONGRESS, THE JUDICIARY AND VETERANS

Government programs, insurance companies and HMO's often (relatively) under-compensate those who deliver basic medical care. As a result, more physicians enter high-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 that these costly specialties provide relates more to the number of specialists available than to any objective measure of need or benefit.

A single payer could probably confirm the commonly held notion that at least half of all diagnostic and therapeutic studies or procedures may be unnecessary, poorly performed or otherwise contraindicated. Not funding the contraindicated half of all tests or procedures would represent huge savings.

It might also free up many presently over-utilized CAT scan, MRI and EEG machines for inexpensive long-term studies on prison inmates or patients in mental institutions—seeking correctible causes of abnormal symptoms or behaviors such as chronic subdural hematoma or variant epilepsy.

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 that is treatable in 60-80% of cases.

Although drastic change is always risky, there is no reason why a single payer couldn't work if it applied equally to all Americans—including our national politicians who quite reasonably have avoided stirring up vicious opposition by wealthy opponents just 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, fully funded by the taxpayer. Whether it is run by Social Security, Medicare or some new quasi-governmental entity comparable to Fannie Mae, any competent and responsible 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 usually less-than-equal care to those who had earned the very best—might meld seamlessly into a new single payer system that was dedicated to lifelong first class medical care for everyone including “all the important people.”

VI: A SINGLE PAYER CAN PROVIDE FAR MORE AT LOWER COST

Judging from our Medicare program and Canada's early experience, the entire single payer organization—which as a **monopoly purchaser of health care services** would need to operate openly with public oversight by both consumers and providers—might run effectively on 3-6% of overall payments—including all of its oversight, quality control and research functions.

Such a single payer would immediately generate huge savings by setting reasonable reimbursement rates for non-profit and for-profit health-care companies—while health insurance, malpractice insurance and the health-care portion of workman's compensation

insurance companies would turn over all assets currently invested for policyholders—who would thereafter have better coverage by the single payer.

This might seem a heartless way to end a long relationship with your favorite insurance company 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 too 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 payments that are currently held in the bond and stock markets to cover your risks as the insured—would simply change their nominal ownership from health-related insurance companies to the single payer who thereafter would accept all health care responsibilities—including preexisting health problems or potential genetic diseases.

Naturally, those insurance company stocks or bonds could not simply be dumped on the market. Rather, the single payer, as the new owner of all assets dedicated to health care or malpractice insurance—representing all of us—would simply take early possession to prevent gambling away of value or other hanky-panky.

Internet pharmacies sell costly patented drugs at 50% to 70% below current U.S. prices—based upon discounts negotiated by the Canadian Government. A fully empowered nationwide single payer could surely obtain important pharmaceuticals at less than half the price that American patients currently pay. Additional huge savings would come from not paying for drugs deemed unnecessary, risk-ineffective or cost-ineffective.

VII: NO NEED FOR PHARMACEUTICAL MANAGEMENT GROUPS

What about the four huge *pharmaceutical management organizations*—Medco Health Solutions, AdvancePCS, Caremark RX, and Express Scripts? All currently report large revenues (Medco's

2002 revenues were \$33 billion). Part of these revenues represent payments for *services to drug-makers* that the companies prefer not to disclose. But regardless of where those revenues originated—from health care organizations or Big Pharma—these pharmaceutical management organizations are very profitable.

As mentioned, Caremark recently 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 significant benefits to health care organizations, Medco still retained 2 cents on each dollar in pharmaceutical sales that it handled.

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 performed faithfully or deviously with a conflict of interest. And the direct savings for health care if a single payer eliminated just this no-longer-needed middleman could easily reach billions of dollars.

*VIII: SUBSIDIZE DRUGS OF PROVEN EFFICACY, SUPPORT
GENERIC DRUGS, REGULATE ALL HEALTH-CARE-
RELATED MONOPOLIES, EVALUATE PHYSICIAN
PRACTICE OUTCOMES, COVER MENTAL, DENTAL AND
PHARMACEUTICAL COSTS, COVER DRUG REHAB*

A single payer might initiate its important new obligation to subsidize drug purchases—subject to negotiated discounts—by accepting all 325 drugs listed as essential by the World Health

Organization. Thereafter, it could swiftly add other discount-negotiated drugs as physicians or drug companies demonstrated the need for and efficacy of such drugs.

A single payer could demand *proof of efficacy before any drug was added to its approved drugs list*. A single payer might additionally limit drug expenditures by refusing to pay for more than one or two comparable (me-too) drugs unless they demonstrated fewer or less serious side effects, greater efficacy or equal benefit at a significantly lower cost.

To prevent new scams, this would have to be an appropriately open process. And the single payer could be required by law to *publish important negative information on any drug*, whether or not that drug's toxicity or inefficacy was declared a commercial secret by its manufacturer.

Another huge reduction in drug costs would follow if the obscene drug charges made possible by *exclusive licenses granted on partially or fully publicly funded drug discoveries* were automatically opened to competition by legitimate generic manufacturers in exchange for a fair licensing fee.

Any Big Pharma drugs developed entirely in-house without public funds would in every way be a monopoly for the duration of the drug patent. Hence the prices of all such monopoly drugs could be regulated by a new and open Fair-Trade or public utilities commission similar to those already regulating (or failing to regulate) other natural monopolies like radio, broadcast or cable television, electricity, gas, phone, water, railroads and so forth.

With even a portion of such savings, a single payer could greatly reduce current health care costs while still expanding coverage to include dental care, psychological care, and drug and alcohol rehabilitation. As part of the negotiation for unburdening businesses of their ever-growing health care and workman's compensation costs, the laws setting up a single payer might require partially offsetting options such as *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*.

An efficient single payer system would already have a computerized data base open to a full-time funded research arm that could design and support *inexpensive evaluations* by practicing physicians—with guidance from statisticians—of *individual physician practice outcomes*.

In addition to supplying real-time information for quality control studies—and identifying outliers in need of counseling, retraining or discharge—these studies would also reveal which medications and procedures were unproven, unsafe or not cost-effective and therefore ought not be widely 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 turns 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.

They 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 recently wrote *The greatest experiment ever performed on women: Exploding the estrogen myth*—it all began when E. Charles Dodds published a 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 promotion of an estrogen called diethylstilbesterol as a possible way to stabilize troubled pregnancies.

Not only did this unproven application cause multiple fetal malformations, but also—over subsequent decades—it led to many cases of a rapidly fatal (otherwise exceedingly rare) vaginal cancer in daughters born to many of those pregnant women who took the diethylstilbesterol treatment. So how did Big Pharma respond? Irresponsibly, as usual.

For rather than discontinuing those highly profitable but sometimes disastrous treatments, they repeatedly revised their estrogen formulations and hyped each slightly altered product as another great advance that was even more likely to keep older women from getting ugly and unpleasant (see also remarks on lead poisoning in my *Human Evolutionary Biology* text, pp155 and 333).

Big Pharma even relied on the same public relations firms that worked such wonders in diverting public attention from health issues for Big Tobacco. 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 declared that studies showed estrogens could prevent Alzheimer's Disease.

It is true that one study did reveal that a studied 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 used estrogen equally—the Alzheimer patients just forgot.

A single payer with complete access to patient follow-up data and a necessarily limited budget, ought to have great interest in evaluating such therapies before they become widely instituted (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 that tabulated and computerized all such usages would become a compendium of additional useful

treatments for troublesome conditions, as well as a monument to failed ideas.

*IX: REGULARLY SURVEY ALL PHYSICIANS FOR SUGGESTIONS
ON THE MOST USEFUL, COST-EFFECTIVE INTERVENTIONS*

With no other entity to blame, a single payer would come under great pressure to provide early analysis and corrective measures for cost control and to ensure safer, more effective care. Most physicians would surely respond to requests for possibly useful insights on important health care problem areas from 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? 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?

Having entered medical school a half century ago, 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 your money and endanger your life.

*X: PROMOTE HEALTHY LIFE STYLES, EDUCATE IN HUMAN
BIOLOGY TO ENCOURAGE SELF-CARE, CONVERT
CORPORATE SUBSIDIES INTO PUBLIC OWNERSHIP
INTERESTS*

A Science (7 Feb. 2003) editorial 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 required 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 drug 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 since it would have payment responsibility for treating all the extra heart disease, diabetes, stroke care, stomach surgery, joint replacements, and the 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 the 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 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**. Because **corporate subsidies** generally transfer cash from government coffers to politically powerful but failing industries, they **have become 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 businesses 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 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 even 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 recently discovered “Mad Cow” in the Pacific Northwest amply demonstrate, 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.”*

CHAPTER SIXTEEN

ARE WEALTH AND HAPPINESS UNRELATED?

*Enough beats “too much” . . . Might wealth and happiness
even be incompatible? . . . A great medical career does not
demand a huge reward . . . Must our choice always be wealth
versus happiness? . . . “Money can’t buy happiness”*

* * *

*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
where conversation’s free

* from *An Evolutionist Deconstructs Creationism* by Arndt von Hippel,
available through www.authorhouse.com or Amazon.com

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

MIGHT WEALTH AND HAPPINESS EVEN BE INCOMPATIBLE?

Patients really don't benefit when procedural physicians making millions become more concerned about investments than remaining up-to-date or treating patients as they themselves might wish to be treated. Many local specialists own several airplanes. One local medical couple has five luxury houses around the world, but quite possibly no home.

Too much remuneration is a serious distraction from enjoyable patient relations in a medical practice. The well-known *overjustification effect*—first demonstrated by Lepper, Greene and Nisbett in 1973, and repeatedly confirmed since then—says that *when there is greater than sufficient justification for engaging in an activity (e.g., medical practice) because it is both a) intrinsically rewarding and b) well remunerated, people tend to lose focus on reason a) because reason b) is so 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 Overjustification hypothesis*, J. Personality and Social Psychology, 28, pp129-137, and also *The hidden costs of reward* by Lepper and Greene, pub. 1978, Earlbaum).

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 get better 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 purposes other than the satisfaction of hunger, since holding dessert hostage, or providing extra dessert as a bribe to clean your plate or 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 is occasional, water is polluted, insects bear hazardous diseases, and equipment and personnel are 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 far more efficient lifesaving efforts in your own clean modern hospital at home?

If so, you can also understand how the crass commercial

transactions of First World health care so often dominate, depersonalize and damage the comradeship that otherwise arises when people make great efforts to help one another. For by requiring patients to first navigate complex insurance forms, and then satisfy office rules demanding prepayment, care-givers inadvertently distance themselves from the joys and sorrows of shared concerns and common goals.

Throughout my years in practice, I routinely charged “insurance only” even though this eventually became illegal (see Chapter Seven). And before long, 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 money that I received on their account to them or to their estate (in essence, a simple warranty—“Satisfaction guaranteed or your money back”).

In this way, 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 or make an issue of my *insurance only* or *refund* policies, at least one well-to-do fellow physician expressed annoyance because patients might expect the same from him. Surprisingly, his argument had some merit, since a diagnostician was less likely to become a focus of gratitude than the 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*—would subtract more from the doctor-patient relationship than those presumably well-justified rewards for jobs well done that their office currently extracts from patients or their insurance policies.

But soldiers, firepersons, paramedics, policepersons 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.

And while these workers commonly consider themselves

understaffed, underpaid and overworked, there are always some citizens who claim they cost too much or their services are ineffective or too slow. Yet few on either side of that debate would want *applicants for help* to fill out multiple forms or pay cash in advance before a foreign attack—or a house fire—or drowning—heart attack—kidnapping—robbery—or rape-in-progress—received the best possible response from a well-trained team.

By law, hospital-based emergency medical care is available to all in most areas. But as mentioned previously, 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 state-supported single payer medical system would likely do better.* Hence 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. Our national politicians and judiciary have long enjoyed free medical care through their separate government-run program. As mentioned, the main opposition to a *Single Payer program for all* has been our Medical-Industrial complex. But many physicians and other providers now believe that a Single Payer is the only way to restore compassion, equity and intrinsic rewards to the practice of medicine.

Think of it this way. “Strictly business” attitudes undercut important interactions. Central heating and TV dinners do not encourage the same easy conversations and 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 a part of why so many physicians volunteer their services overseas in search of a simpler, more meaningful, professional life.

Patients can sense from a physician’s body language (say through helpful hands-on assistance versus never putting down the clipboard) whether she or he cares about them or merely wishes to close another transaction. I have often felt physically and mentally

joined to extremely ill patients when holding them up so they could cough or breathe or just survive the next moment.

Such non-verbal burden-sharing is often essential to elicit another huge effort from a patient who is weary, in pain and ready to give up. Every good nurse or physician has seen what such a sharing of concerns can achieve. On the other hand, as an extern, I was properly embarrassed when in my effort to “bond” I casually sat on an arthritis patient’s bedside, and thereby accidentally on his sore foot (which came off the knee at an unexpected angle under the covers).

In any case, the more money we make, the more we worry about making more or not losing what we have. As the old song says “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, I reduced my supplementary charges for additional coronary bypass grafts by 20% when I began making more money than I needed. But I must confess that, as the song suggests—after three break-ins—I finally signed up for an expensive lock on the door (home burglar alarm system).

Wealthy physicians often become increasingly conservative, seeking moral comfort by blaming the daily problems and worries of the poor on inadequate effort and sacrifice. A surprising number of wealthy physicians even avoid paying for the college education of their own children. Having made it on their own, they wish to grow their own wealth by encouraging others to copy their great virtues or dumb luck.

Consistent generosity (giving what you can according to need rather than when you feel like it) is so difficult to achieve that it can best be taught by example. My parents rightly considered themselves extremely fortunate to be accepted as refugees in this great country. They worked hard to uphold all that was good in their adopted land, 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.

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. Those who regularly help others may even live longer.

A GREAT MEDICAL CAREER DOES NOT DEPEND UPON OR JUSTIFY 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 the average physician makes 4 to 10 times the average national income, depending upon their specialty (see Bulletin of the American College of Surgeons, March, 2003, pp11-12).

Marianne and I believe that physicians and their patients would benefit greatly if 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 salaries are presently 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 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 needed or sought our help, whenever we could make a real difference.

We believe that most physicians feel the same way—especially recent

graduates and those who have not yet been 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 has never stopped motivated folks from becoming veterinarians.

We suspect that initially kind and generous doctors are more likely to remain so if freed of education-related debts. And as mentioned, we are truly impressed by the many medical doctors and other health care workers who 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 seeking great wealth went into banking (where they could 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 very wealthy for very long, who seems truly content with their money-dominated and often “gated” existence. Too much money is an impediment and a distraction. And the pursuit of great wealth often becomes a consuming addiction. 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.

A very good surgeon and friend who grew up in poverty, was convinced that—having finally become wealthy—he would never again need to rely upon anyone for anything. He was very generous to those who had helped him when he was in need, as well as to those with whom he worked—and he 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. And soon, a scheming nurse did well 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 too often are 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—but this time at least one hundred miles from anywhere in Wyoming. As I was struggling to right the problem with inadequate tools, a car stopped and the driver—who identified himself as a mechanic—offered to help.

While he pulled out his heavy duty tool kit, his wife and kids 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. And his parting request was one I have often heard—and have repeated on those occasions where I could help—“Just lend a hand to someone else”.

On another trip, I was motorcycling through flattest Ohio during the most impressive lightning storm—totally drenched and generally the tallest object around. I stopped late at a small motel. The owner said her rooms were full. I asked if I could sleep in the barn. She said “No!”—but invited me to stay in her son’s bedroom since he was off to college. The following morning, I received a wonderful free breakfast.

More recently, Marianne slipped on crowded and wet subway steps in New York City, which caused her to lose and dump her suitcase. Two separate strangers immediately stopped—helped her to recover her scattered possessions and repack—then assisted her

down to the subway level so she wouldn't screw up again. *And I am sure that 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 enjoy a decent environment in which basic needs can be 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—or from military service, selling software and volunteer activities to 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, luck, flexibility and persistence to get, modify and sustain a satisfying job or marriage.

In these changing times, one must also develop the common sense to recognize a dead-end situation and the courage to know when to retrain or move on. Those without a strong commitment to meaningful work often call it luck when others succeed while they still await the perfect job. Similarly, many seek a perfect spouse despite personal imperfections that would prevent any “perfect person” from giving them a second look.

But Marianne and I realize that the perfect spouse is simply one whose shortcomings are tolerable and sufficiently different from your own so that together both of you are happier and more productive than either would be separately. Furthermore, there is no such thing as a truly perfect person—parent—spouse—or child—and if there were, that perfect person would, by definition,

be a perfectly self-centered pain-in-the-ass (hence extremely imperfect).

The many short and unhappy romances of famous people suggest that if a relationship is to prosper and endure, we need to value each other on more than being good looking, or looking good on paper. Furthermore, all people are annoying and unreasonable at times—yet those who are rich or famous or otherwise self-intoxicated or merely drunk, generally feel they don't have to put up with annoying and unreasonable.

But annoying and unreasonable can represent emotion-driven declarations of what each party in a relationship currently understands and will tolerate. In other words, staying in love requires two people who like and enjoy each other sufficiently to make a huge ongoing effort and sacrifice for one another.

Temporary fun can sometimes be had for free, but ongoing fun usually requires careful organization, good relationships 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 in the absence of a major ongoing effort.

As a result, even where conditions are 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. And 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 or net worth.

“MONEY CAN'T BUY HAPPINESS”

“What do you do?” ranks high amongst the questions asked of strangers. As a physician, when traveling alone and hoping to read or write, I often answered “I am a meat cutter” or “I collect garbage.” Thereby, I generally avoided tedious conversations about headaches, hemorrhoids and hospitals. For in my experience, most travelers

can't relate to a meat cutter or garbage man (though one militant conversationalist kept trying to discuss the relative merits of different cuts of beef).

As mentioned, much of human happiness or unhappiness arises from the presence or absence of productive 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 feel entitled. 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 it seems worthwhile. 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, slighted or left out. And 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 bringing in 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—and donating valuable items to a charity or young friends is usually simpler and more satisfying than selling them.

One might think that a physician has a perfect job. After all, she or he gets paid for helping others who are always grateful. Right? But sometimes the patient's needs and demands seem endless or 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 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 dominating their patients, or by ruling over others as program directors or administrators (one 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 an 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 be increasingly 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 the best—heart surgeon in Alaska, at least until I advertised for competitors, I had just myself to compete with. At the time, insurance and Medicare/Medicaid rules let physicians charge whatever they wished upon entering practice—but thereafter restricted most fee increases.

Consequently, heart surgeons who entered 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 affected our patient referrals in any way.

On the downside, I had not planned to retire at age 51, and had no retirement plan or savings of note when I suddenly had to stop work. However, our home mortgage was paid and we owned a small unprofitable (I had no time to manage it) farm where our sons worked part-time in summer.

Because Sarwar generously bought my practice, I was 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?* (see 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.

- 1) *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 where money is scarce. Apparently, beyond about \$20,000, gains in material comfort no longer outweigh losses in social connectedness.*
- 2) *People who value money highly tend to be less happy than those who value love.*

It usually takes a life-long self-serving effort to become very wealthy. *And very few 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.*

There is no guarantee of success in either effort. *But the overall amount of money is limited (or else it loses value). So if you take more, others have less. In contrast, love shared expands without limit and increases in value.*

Choose one!

- 3) *Americans are increasingly materialistic, but not happier.*

“The Western notion of progress was shaped during a centuries-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 more elusive.”

EPILOGUE

OTHER THINGS TO CONSIDER

Durable organizations need roles and goals . . . Old corporations rarely die, but often fade away . . . 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) . . . Nations gain respect when they guide others to prosperity

* * *

We all pay taxes so that every child and adolescent can attend public school while one or both parents work. In addition to keeping children off the street and out of trouble, our public schools are supposed to produce literate, numerate and rational citizens, as well as teach important social skills such as settling disagreements without violence.

Public schools serve other important social and *public health functions* such as detecting disabilities or child abuse, ensuring adequate nutrition, offering information on human health and sexually transmitted diseases, preventing teen-age pregnancies through sex education, and controlling epidemic diseases through mandatory immunization programs.

President Bush's "No child left behind program" is another unfunded federal mandate that interferes with teaching and sets impossible performance standards. The religious right's openly desired outcome is public school failure so students can use government vouchers and buses

to attend religious schools at public expense—which would also minimize the teaching of detested subjects like evolution and sex education.

There will always be great room for improvement in the performance of public schools. Though inadequately funded school programs too often utilize campus sales of soda pop and other junk foods to make ends meet, *public schools have a hugely important role in health care.* As Marianne points out, most citizens support *free public education* because an educated public is essential to our national economy, *so how can they not support free basic health-care services for all children?*

Unjustifiably high costs sufficiently impact the quality and delivery of American medical care to warrant any number of book-length examinations. The personal and medical-practice anecdotes in this book were selected to help the reader make sense of modern health care. These stories also encourage the reader to imagine *the efficient cost-effective health care system that might have been.*

But somewhere along the way, health care was ambushed, weakened, distracted and seduced by escalating monetary demands and turf battles. An unfortunate right turn then led to a runaway state of self-reinforcing greed-driven feedbacks. And that uncontrolled, irresponsible, socially divisive escalation of health care costs culminated in our modern unaffordable health care extravaganza.

DURABLE ORGANIZATIONS NEED ROLES AND GOALS

Historical beginnings tend to be poorly defined, but health care's current problems probably date back to when different factions of the early medical-industrial complex first recognized that their prospects would be grim if *better health care at lower costs for the foreseeable future* actually prevailed. Even non-profit organizations felt threatened.

I recall animated public discussions about what new role and goal the nationwide multimillion-dollar March of Dimes fund-raising organization (initiated by President Franklin Delano

Roosevelt, a polio victim whose face appears 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 ongoing interests) fought polio to a standstill. Thereafter, this *enduring corporate 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 early cure. And the new March of Dimes’ corporate mission statement carefully steered clear of any achievable goal.

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 research topics were 1) whether patients with heart disease could return to work and 2) rheumatic fever. As treatments for heart disease progressed, the American Heart Association expanded its venue to include stroke.

Our oldest major health-related “non-profit” corporation—the American Red Cross—currently procures and sells much of the nation’s donated blood. In recent years, the Red Cross has been cited repeatedly for poor controls and inadequate record-keeping that endanger the quality of our blood supply. And while Red Cross representatives still appear at disaster scenes and make themselves available to the media, it is not clear that they are more interested in serving others than in perpetuating their own jobs.

The International Red Cross originated in 1864 as a neutral wartime Swiss Christian relief organization—hence its Cross (modeled on the Greek Orthodox Cross). Though it welcomes Muslim affiliates under their Red Crescent religious symbol, the international organization won’t admit Israel under its six-pointed Star of David “because then they 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 is \$1.9 billion. Its handling of disaster relief funds has often been inept—ranging from misdirected relief efforts after the 1938 hurricane—and attempts to charge poorly-paid soldiers and sailors for hot coffee provided at USO's during World War II—to its proposed retention of funds specifically donated 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 just increases the likelihood that a non-profit's staff will come to view their fund-raising corporation as *a sinecure* ("a job or position that provides a regular income but requires little or no work"). So I am not surprised that a commonly heard complaint among non-profit employees sent out to help citizens of Third World countries is *their difficulty in finding good servants*.

OLD CORPORATIONS RARELY DIE BUT OFTEN FADE AWAY

Early American leaders agreed to legal incorporation so wealthy individuals would invest more freely in new businesses. The idea was to generate jobs and increase national wealth by limiting monetary risk to the amount invested. *But the founders surely did not intend to create permanent wealth-accumulating organizations that would eventually dominate the political process and oppress ordinary citizens. Unfortunately, that is what happened.*

For incorporation combined the possibility of sustained wealth and inhuman longevity with an actuality of reduced responsibility to the public. In essence, it allowed a situation to develop where ambitious and greedy (but fortunately, mortal) individuals regularly gained temporary control of enduring workplaces and assets that had been built and sustained—through good times and bad—by the pride and efforts of others.

The inevitable result was that many such wealthy and powerful

corporations came to be run by socially irresponsible individuals whose short-term interests progressively dominated and corrupted our Republic, thereby giving capitalism a bad name. Not surprisingly, those corporate leaders soon demanded the same rights for their potentially immortal organizations that our Constitution guarantees to fully responsible mortal citizens.

So these leaders—mediocre people, temporarily empowered and hugely overpaid in deference to the enduring wealth and power that they momentarily managed—demanded *Freedom of Corporate speech!*—which they variously viewed as *a legal right to lie about conditions under which something (e.g., a Nike product) is made*—or *a legal right not to prove whether a drug is effective for the purposes advertised*—or *a legal right to spend other people's money* (without permission) on candidates and political parties in order to subvert our government and its policies.

“THOSE WHO LOVE SAUSAGE AND RESPECT
THE LAW SHOULD NOT WATCH EITHER BEING
CREATED”

(Bismarck)

Fifty years ago, first shift employees at one Boston sausage factory were instructed to delay starting their meat-grinding machines if a food inspector was near enough to hear death squeals of the rats still 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 they rarely question whether such causes warrant public support.

In contrast, many wealthy, politically powerful corporations routinely lobby and bribe our elected representatives to reduce

corporate obligations to the public, or to blatantly convert public assets into corporate assets. Because any informed citizen would readily recognize that these arrangements were not in the public interest, such corporate raids are generally carried out secretly, or through distraction (as by declaring a war), or by deception (with outright denial and other lies).

Furthermore, countless anonymous corporation employees—shielded from public view and recognition by their corporate umbrella—routinely achieve small current savings for their organizations through costly acts of environmental vandalism that will only be 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 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. And conniving mining and logging corporations laid waste to pristine lands and waters—then sometimes disbanded to start anew elsewhere, in order to avoid taking 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, innumerable irresponsible villains dumped, burned or buried poisonous pollutants on land or sea. And huge numbers of our citizens were injured or killed by the 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), 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 very different internal risk/reward structures of an established corporation (or dictatorship, gang, religion or other group), one must set aside personal qualms and promote the special interests of that enduring body over the shared public interests of the less empowered and unprotected mortals outside.

The power inherent in long-lasting corporations assures us that many of these increasingly dominant old dogs will become self-serving and unwilling to learn new tricks. *Perhaps every corporate charter should 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.*

To deconstruct the current near-dictatorship by corporate interests in America—to end those huge ongoing subsidies for candy, coal, corn and cotton corporations (while the wealthy fret loudly about welfare cheats!)—to combat corporate anti-environmental practices—and to reverse our declining productivity (which, as in Russia, China and Japan comes from insulating our older corporations from free and open market competition), a 35 to 40 year maximum could be set on any corporation's existence—with corporate taxes rising stepwise to 100% over the final five years.

After all, this limit approximates the productive years of an average worker, who is too often cheated of his rights, opportunities and retirement by corporate lobbying and other shenanigans. Were such a corporate entity still needed thereafter, it could begin anew, unfettered by corrupt relationships and no-longer-relevant arrangements or regulations, and no longer diverted into unproductive pathways by enduring subsidies.

Certainly, such a programmed death is Nature's way of keeping life strong and adaptable. For if bears could live and function indefinitely, the growing population of old males would eat all cubs until bears suddenly became extinct. Similarly, Big Pharma, Big Oil, Big Banks, 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.*

Is it merely a coincidence that tens of millions of good-paying productive American jobs have been exported to China and elsewhere—and that the American Treasury now depends on Chinese loans—and that our stock market may soon be on life-support—while *wealthy long-lived corporations loyal only to money have set our nation's policies?*

100 POSSIBLE WAYS TO IMPROVE HEALTH CARE AND LOWER HEALTH CARE COSTS (YOU CAN EASILY THINK OF MANY MORE)

Evaluate a Single Payer (SP) Health Care System nationwide.

How could such a monopoly best be controlled, financed, organized and directed?

Should SP assume all assets and liabilities of health insurance and workmen's compensation plans?

Should SP overhead be limited by law?

Should 3% of total funds disbursed—plus 1% or so to support ongoing studies (see below) be initially sufficient?

How could that formula best be regulated and revised with public input?

How should a Single Payer Organization be required to meet certain standards of efficiency and transparency or undergo reorganization?

SP could negotiate many major (50 percent and up) discounts nationally and internationally for drugs and equipment.

Should SP use its clout (monopoly on purchasing many health care items) to audit manufacturer's costs?

Should SP publish cost-comparisons with discounts achieved by other nations?

How should patent-based monopolies be regulated?

Should SP determine and publicize current administrative costs for each hospital?

SP to develop appropriate guidelines for overhead costs that can be reimbursed.

SP could subsidize nursing students, medical students, and certain other health care students and residents in order to prevent training from leading to significant debt.

SP could revise total number of subsidy-eligible specialty training positions by a small amount annually, according to projected needs in USA (and overseas, if applicable).

Subsidies for students at programs whose graduates performed poorly could be reduced or eliminated.

SP could regularly negotiate a specific fair maximum income. This would set the upper limit on what physicians and other health care workers—including SP administrators—could earn for SP reimbursed work. From 50% of that maximum on up, SP might progressively diminish remunerations per patient or procedure or hour as physicians approach their maximum.

SP could renegotiate compensation for all medical/surgical procedures annually (by a few percent at most) in order to control overpayment and correct underpayment and thereby increase or reduce the supply of specialists.)

SP could reset hourly rates of non-procedural (medical office or administrative) charges according to training, experience and changes in cost of living.

SP could develop appropriate methods for compensating overhead costs of physicians and institutions.

SP could conduct or outsource studies to analyse and compare patient outcomes, to assess provider competence, and assess medical techniques and pharmaceuticals, assess any benefits claimed for second opinions, assess Continuing Medical Education (CME), assess Board Recertification, and determine which improve patient care

SP would generally not subsidize activities or programs or reimburse procedures or drugs that provided no evidence of efficacy, except as part of a study.

Thus CME and Recertification dependent industries might be identified as “costly and unproven” hence “not deductible or eligible for reimbursement” (in contrast to standard office costs, for example).

SP should maintain an appropriate computerized Survey of Outcomes to detect outliers with poor results for private counseling, retraining or discharge.

Evaluate the practices of those who routinely order many more expensive tests or do many more procedures than their peers. More specifically,

SP could use outcomes analysis and other studies to determine which practitioners overuse specific procedures like coronary angioplasty and carotid endarterectomy.

SP could use outcomes analysis to evaluate off-label uses for drugs that might seem valuable or worthy of investigation.

SP would avoid publicizing physician performance reviews because this has resulted in surgeons avoiding sicker patients.

SP could eliminate malpractice insurance and cover each patient with federal adverse events 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 could 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 process.

Timely arbitration could also be utilized by physicians who are consistent outliers (having allegedly inadequate indications for their procedures or poor results) if they disagreed with private counseling and/or were billed to return excessive charges under egregious circumstances, or were referred for 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 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 pay for expensive non-standard treatments until such treatments have been shown useful and cost-effective by comparison with standard care.

SP will hire qualified evaluators to determine if drug comparisons used appropriate dosages of a generic medication and the comparable patent-protected (far more costly) medication during clinical trials that are supposed to determine which is more cost effective.

SP (and/or CDC or FDA) should study, confirm and promote inexpensive new definitive treatments (such as antibiotics for helicobacter in ulcer patients) in a timely fashion.

SP should study the impact of gradual weight loss, cherries, turnips, low dose aspirin and tetracycline—individually and together—on inflammatory diseases in general and autoimmune problems in particular.

SP could determine if there are benefits from tetracycline treatment of coronary disease and publicize indications (if any) and results.

SP could evaluate sugars and similar anti-adhesive compounds (in milk, cranberries, apples and potatoes) that 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 abortions, turnips and cherries for gout, magnesium supplements for asthma, arrhythmias, muscle cramps or migraine headache prevention.

SP will provide or outsource for computerized answers to common patient questions wherever such could assist SP patients or save SP money.

SP could define the “responsible physician coordinator” in team care so that every hospitalized patient or their relatives know who is in charge.

SP could develop or buy and distribute videotaped operative

information to be sent home with patients who are considering common elective procedures.

SP could solicit, evaluate or publicly critique dietary recommendations by other agencies like the Department of Agriculture whose dietary recommendations may encourage obesity and therefore diabetes and other related illnesses.

SP shall study and report to Congress on how best to reduce health care costs caused by tobacco and alcohol (e.g., regulate or eliminate any advertising that might affect children and so on).

SP would encourage international research into how road traffic accidents might be reduced since they consume 1-3% of the average country's GNP (see *Lancet*, Oct. 4, 2003 p1125)

SP would encourage international research into how to evaluate and improve the health, safety and efficiency of shift work (see *Nature*, 30 Oct. 2003 p885 on morning persons and night owls—also *Lancet*, Oct. 4, 2003 on drug treatment to promote wakefulness).

SP would promote and regularly revise protocols for urgent morbidity-reducing treatments by ambulance personnel and hospital emergency rooms (such as early administration of tissue plasminogen activator for strokes—see *Science*, 19 Sept. 2003 p1677).

SP would subsidize research into—and advise Congress of—the health care costs of recent expansions in the reach of patents and copyrights (which raise costs and undermine competition—see *New Yorker*, July 14-21, 2003 p36 and *Technology Review* Sept. 2003, p82)

SP could outsource annual studies of health costs of illegal drug use and compare these to all costs of the War on Drugs in a published public report to Congress.

SP can recover costs for patient care necessitated by unproven remedies repeatedly delivered under egregious circumstances.

SP need not pay for medicines not considered safe or effective for their stated purpose.

SP could investigate the costs added when therapeutic remedies partially or wholly developed at public cost are licensed exclusively

to one manufacturer or company without also being regulated as a monopoly to prevent profiteering.

Should BIG PHARMA be allowed to deduct the costs of lobbying doctors with “detail men”?

Should Big Pharma advertise prescription drugs to the public?

Should Big Pharma bribe doctors to prescribe costly equipment or medications with cash or non-education-based benefits?

Should testing of me-too drugs only be done on paid fully-informed volunteers?

If Big Pharma files delaying lawsuits against generics to prevent competition, SP may countersue to recover costs.

Generic medications will be used when comparable.

Feedlot benefits of antibiotic supplements need explanation.

Develop and support a public computerized data base for traditional medications and to 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), and so on.

Evaluate the estrogen effects of dietary soy products, and of mercury levels in fish, on public health. For example, some mercury compounds ingested with fish may be less toxic than other forms of mercury and advice on ingestion or other exposures should reflect that (for example, see *The chemical form of mercury in fish*, *Science*, 29 Aug. 2003, p1203).

Run tests and issue recommendations for washing fruits and vegetables that were treated with herbicides or pesticides.

Compare the costs, safety and results of electrocoagulation versus excision of skin cancers.

Compare intraperitoneal radioactive gold at surgery for early ovarian cancer with other possibly effective treatments.

FDA should regulate safety and purity and provide educational material about herbal remedies.

SP could support national poison control centers and post

frequently-called-for information on line for common complaints (“what to do if”) as well as publicize availability of discussion or action groups—fund appropriate topical videos for groups—make information easily available on all health issues.

Should there be *no statute of limitation* for criminal or civil charges based on **major acts of environmental vandalism** (definitions of such)?

Medical care is often a monopoly—only one person on call—only one heart surgeon—only one group of cardiologists (but it makes sense to share costly equipment unless all savings remain in house rather than resulting in reduced charges). Monopolists raise prices to whatever level they choose or whatever the market can bear.

How should natural monopolies be regulated so they can operate efficiently and profitably without ruining others.

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 available to all in reasonable amount for appropriate purposes (with subsidies for basic amounts if rates are unaffordable by the poor).

Would privatisation of NIH research support services undercut scientific advances?

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 how and why 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 entire costs or just a percentage of first few hundred dollars for health care for those that can afford to contribute?

Should SP pay the same for all physicians and all kinds of care—whether these are procedure—or office-hours based? Sometimes procedures tend to be more strenuous and stressful—sometimes a busy day with upset or very sick patients is equally stressful.

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 be easily spread 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 benefits for health of adjustable fresh air vents for each passenger and fully fresh airflows versus airliner designs that recycle foul, depleted, contaminated air.

Currently, Boeing is considering 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 you can anticipate more “any doctor in the plane!” calls for passengers suffering heart attacks and strokes.

IDEAS ARE JUST HOT AIR UNTIL THEY MAKE A DIFFERENCE

It is fun to contemplate what a single payer might achieve. Yet a 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*

is why corporations outbid us citizens for so many politicians whom we 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 wealthy who actually rule.

Undoubtedly, our complaints and suggestions will continue to vanish without a trace unless lots of folks all over the country organize and exert pressure from the local level to bring about changes in the 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 was between Bush II (representing Big Pharma) and various states that order 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 has consistently exerted the powers of his office on behalf of the tax-hating, politically-connected wealthy class that financed his costly campaigns for office. By serving the rich, Bush-II—the compassionate conservative—has 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 with Bush and his greedy insiders when what they are doing is so obviously wrong for the public at large? *Perhaps the irrational exuberance of the recent stock market bubble—when anyone might make millions, fairness was forgotten, and empathy seemed an irrational weakness—prepared the way for Bush’s ongoing campaign to 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 to me “Health care is obscene! It allows the rich to keep ordinary Americans from getting adequate health care at a fair and 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 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 travel 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 fact, a poor person who seemed dangerously well informed—or even able to read—was likely to be killed by the Church, or by the State, or by the plantation slave-owner. And the Catholic

* based on an 1884 address by Oliver Wendell Holmes, Jr. in New Hampshire.

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 their opponents. While 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 threaten to become much 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 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 depends upon 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 at present), 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.*

As of 2004, **these rights are all endangered.** For under Bush-

II, Christian Fundamentalist dogma prevails in high government circles while governmental corruption and the Patriot Act threaten 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 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 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 controls touch-screen voting machines. *That* is why **technologically stolen elections—a huge and growing threat to democracy worldwide—have had no exposure in 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 the essential *equal access to uncensored market information* which 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 beginning another major swing in which populist leaders with few conflicts of interest will increasingly resonate with the public's revulsion for conservative greed, and 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 merely claiming compassion while stealing for the greedy) 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 (Bush-I and Bush-II), or becomes respected by her peers for doing good (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—twice 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 learn 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, 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—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 Bathyscaph* 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.

Voltaire said that *doubt is uncomfortable and certainty is ridiculous*. If by our actions or inactions, we now cede our government to ignorant and corrupt crusaders and hucksters like Bush and Ashcroft—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 own 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 these are the basic elements of our current health care crisis*. Like the other 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 current Bush Administration is obviously not a government of the people, by the people or for the people. Rather it is a government of, by and for wealthy corporations. The good of this nation and the world now demands that the people regain control of our local, state and national governments by eliminating all corporate dollars from politics through a Constitutional Amendment.

GLOSSARY

(the meaning of terms as I use them)

Aging Academic Syndrome; 1) 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. 2) Seeking to retain authority despite having nothing useful to contribute. 3) Those whose membership a good old boy network forever positions them to deliver mind-numbing speeches at public events.

Alternative medicines; by this I mean non-pharmaceutical, mainly biological substances, or soils, or mineral or radioactive waters, ingested or applied externally to maintain health or treat various complaints (see also traditional medicines).

Alternative care; a wide range of hypothesis-driven treatments—from chiropractic to scientology—all marketed to cure a variety of health problems without objective evidence that they provide greater benefit than *placebo* treatments (see below).

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 manufacturers.

Board Recertification; yet another support system for superfluous senior specialists that has generated another new and useless industry—the production and marketing of Board-recommended books and other study materials.

Continuing Medical Education (CME) requirements; these waste physician time, reduce taxes collected and unnecessarily raise

costs for the patients who eventually support our entire medical enterprise.

Cost effectiveness; on average, how much taxpayer or insurance money should be spent to gain a particular health 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 and funding only those that offer the greatest returns for available health care dollars. This would not preclude private efforts, expenditures or contributions to further an individual's care (e.g., *What a father will do* in The Week, Sept. 12, 2003, pp40-1).

Externship; a period of practical out-of-school apprentice-type training before graduation.

Fellowship; a practical, usually individually arranged, variable duration period of postgraduate training/retraining or apprenticeship that doesn't qualify the trainee for any particular specialty certification.

Generic Drugs; When the 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 30% as much as 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, in order to gain a single 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 a harsh and occasionally beneficial chemotherapy against early treatment-associated deaths for the others? One cannot simply ask survivors if a treatment was worthwhile.

Internship; a formal apprenticeship training—usually for the first postgraduate year after medical school graduation. Usually required before entering medical practice.

Last-minute Republican smear; a standard modern, 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 complaineé that it either doesn't vote or simply holds the nose to vote for the uninvolved other (Republican) candidate.

Medical-industrial complex; this includes the 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 speaks for a minority of physicians), and associations of highly paid medical specialists.

Microbe—any small infectious entity, whether viral, bacterial, fungal, single cell or multicellular parasite, or other.

Modern medical care; the physician marketed, more-or-less *evidence-justified care* for every health problem. These treatments—based upon current perceptions of best available evidence—tend to change (and often gain in effectiveness) over time.

Sign; an objective indication of a disease or disorder that is detectable by others.

Symptom; a subjective experience (like pain) that may reflect a disease or disorder

Placebo effect; a benefit derived solely from the knowledge that treatment was given.

The Religious Right; any militant traditionalist group motivated by shared religious convictions. Within the USA, *true believers* promote a diverse array of Christian beliefs. Muslims, Hindus, and others proclaim their own equally certain beliefs about our uncertain world. Extremists from all groups may perform atrocious acts (e.g., September 11th or killing abortion doctors or blowing up innocent civilians) to demonstrate how much they oppose abortion, education of women, or other human rights—or to serve God(s)—or take over a government and become rich through corruption and reduced taxes.

Sinecure; “a job or position that provides a regular income but requires 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 to pay expenses.”

Traditional medicine; time-tested folk medicines or treatments like acupuncture that tradition and observation suggest are sometimes effective. Traditional healers—and others who offer specific remedies such as honeybee stings for autoimmune disorders—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.

USP; the designation that shows a product meets composition and preparation standards of the United States Pharmacopoeia (the official guide for pharmacists that also describes dosages, effects and side effects).

INDEX

(also check chapter subtitles in Table of Contents)

A

- Abbott Labs—93
abortion—13, 230
academia—95, 170, 188,
 192, 241, 262
Accenture—28
ace inhibitors—191, 213
Aging Academic Syndrome—
 80, 315
aircraft ventilation—305
Akerlof, George—23
Alaskan Natives—227
albumin, serum—188
alcoholism—59, 232, 275
aldactone—191
al Qaida—27
alternative medicines—251, 315
alternative press—309, 315
*American Dynasty: Aristocracy,
 Fortune, and
the Politics of Deceit in the House
 of Bush*—14
anatomy and physiology—175
Anchorage—126
Angell, Marcia—38, 195
angina—165, 210
angiogram—166
angioplasty—88-9
annoying and unreasonable—
 286
anti-arrhythmia drugs—188,
 252-3
anti bacterial-adhesion
 molecules—70
antibiotics—94, 97
antibodies—221
Appalachian Mt. Club
 Journal—133
apples—71
Archer, Gary—89
Armageddon—20
Arney, Dick (victor gets
 spoils)—29
arrogance and humility—143
arterial blood filters—163
arteriosclerosis—211, 221
Arthur Andersen—28
Ashcroft, Attorney General—13
assisting at surgery—75, 130,
 133
asthma—224

atenolol—224
 atherosclerosis—211, 221
 atom bomb—47
 attention deficit/hyperactivity
 disorder or ADHD—265
 Australian researchers—96
 autoimmunity—208, 217
 automobiles—24
 avarice—20
 AWOL—26

B

back pain, surgery—58, 120-
 1, 217
 bad days—216
 Baker, James—15
 bankruptcy—11
 Baumol's cost disease—45
 Baxter International—192
 Bayer—184
 Bayh-Dole Act—192
 BCCI—14
 bears—36-7, 125, 136, 224,
 226, 296
 Bechtel—24
 belly-button leak—119
 beluga whales—54
 beta-blockers—88, 225
 bicycle—233
 Big Pharma—10, 42, 83, 91-
 6, 182-202, 242
 Big Sugar—273
 Big Three Drug Wholesalers—
 198

big three of happiness—285
 billion dollar drug —80, 95,
 97, 175, 191
 Billion Dollar Thieves—249
 Bin Laden—14-5
 biodiscovery royalties—200
 black cherry concentrate—
 204-8, 222
 black lists—146
 bleeding—164
 blockbuster drugs—80, 95,
 97, 191
 blood poisoning—46, 57
 Board Certification—110
 body language—280
 Boeing—24, 305
 bone loss—225
 borrow-and-spend
 Republicans—25
 Boston wool merchants—156
 botox—243
 branding—155
 breast cancer—63, 87, 176,
 178, 206, 238
 Bremer, L. Paul—16
 brevetoxin—in PSP—185-6
 bribes—278
 Brownlee, Shannon—251
 burnout, 161, 242
 burns, potato peel extract on—71
 Bush dynasty—13
 Bush, Jeb—15, 25, 27
 Bush-I, President—9-12
 Bush-II, President—12-50,
 197, 305-end

C

- Caesarian births—59
- C-reactive protein—213, 220
- caloric test—53
- campaign contributions—23, 196,
- Canadian drug discounts—84, 197, 266
- cancer chemotherapy—189
- Cancer Council Victoria—233
- cardiology—80-3, 194, 244
- cardiopulmonary resuscitation—59
- Care without coverage*—42
- Caring and cognition—81
- cartel—84
- carotid artery surgery—89
- cash box office—246
- Catholic Church—20, 228-
- cats—218
- CAT scan—86, 238
- CellPro—192
- Center for Disease Control (CDC)—97
- CEO's pay—10, 23, 30, 184
- Cerivastatin—184
- cervix, cancer—178
- Chalmers, Iain—189
- chemotherapy—189, 253
- Cheney, Vice-President—14-6, 30
- cherries—204-8, 222
- chest surgery—112, 129
- childbirth—59
- Chlamydia pneumoniae—211, 214
- cholera —10
- cholesterol—215, 218-20
- cholestyramine (versus brevetoxin)—185-6
- Christian Science—166
- Churchill, Prof.—63-4
- Churchill, Winston—10
- cigarettes—232
- Citabria—168
- classless society—115
- class warfare—18
- Cleland, Max—25
- clinical trials—91, 98, 175, 184-9, 213, 253, 264
- cobalt deficiency—230
- Cobe Labs—151
- Cochrane Collaboration—206
- Coconut Grove Fire—66
- cod—54
- coffee—52, 223
- collagen fibers—103
- college—160
- college aptitude—48
- colonoscopy—80
- Columbus—228
- common sense—113
- compliance officer—39
- conservatism, political—17-9, 34, 255, 281, 295
- Constitution—20
- Constitutional Amendment—314
- consultant brilliance—148-9

Continuing Medical
 Education (CME)—168-9
 contraception—230
 contract research organizations
 (CROs)—189
 Cooley, Denton—90, 140
 Cornwell, John—308
 coronary angiograms—166,
 210, 214
 coronary arteries
 (inflammation)—213-4
 corporate contributors —23
 corporations—295-end
 corporation taxes—23
 corporate welfare—23-9, 273
 corruption—24, 310-11
 cost-effectiveness—271, 316
 cost-plus—21, 254
 Council of United Latinos—12
 counterfeit drugs—198
 cranberry juice—71
 crap detector—204
 C-reactive protein—213, 220
 Creutzfeldt-Jacob Disease—
 230, 303
 Crusaders—15, 311
 crushing experience—60, 137,
 143, 145
 cure—33
 cutting and sewing—81
 cynicism—161

D

Daley's Ranch—156

Dartmouthatlas.org—88
 death payments—22
 debt relief—259
 Declaration of Helsinki—190
 defensive medicine—40, 144,
 148, 254
 deficit—17
 delivery, baby—59
 Delphi, Oracle of—118
 Denny-Brown, Prof.—72
 deregulation—311
 dermatitis—205, 231
 deserter—26
 dessert—278
 detail men—92
 developmental pediatrics—
 110
 devil—163
 diabetes—178, 215
 Diebold—24-5, 174
 dirty needles—242
 divorce—147
doctored research—189
Doctor Olds of Twillingate—61
Does money buy happiness?—
 289
 Dollar—17
 Draft boards—66
 drug discounts—12
 drugs—182-202
Drugs for Neglected Diseases
initiative—185
 Drug wholesalers—198
 Dunphy, J. Engelbert—66
 dwindles—215-6

E

Economics of surgery—88
 elections, privatization—24,
 311
 electrocoagulation, bipolar—
 100-106
Eleven blue men—235
 empirical approach—218
 endoscopy—80
 Energy Task Force—16
 Engel, Cynthia—226
Enough beats too much—276
 Enron—28, 36
 Epsom salts—223
 ES&S—27-
 estrogens—269
 ethicists—188
 Everglades—273
Eve's Herbs—230
 everyone needs help
 eventually—283
 exclusive drug licenses—192,
 268
 extortionate interest—259
 eye exams—205

F

Fairbanks flood—168
 Federal jobs—23
 fees, medical—11, 40, 81,
 247, 258, 282, 299
 Finnish researchers—211
 fiscal crisis—17

fish and brues—54
 fish traps and nets—157
 Florida—15, 25, 27
 Fluor—21, 24
 Food and Drug
 Administration (FDA)—
 38, 40, 84, 186, 188, 195
 food poisoning—216
 foolish federal guidelines—
 132
 Foreign Corrupt Practices
 Act—15
 foxglove—229
 Franck, James—47
 Franseen, Clifford—67, 99-
 free medical services—240
 Frist, Senator Bill—12
 frostbite—133, 209
 fruit—54, 215, 220
 fuck-up conference—151
 fumigation—72
 fundamentalism—313
 fungus, in IV—65

G

gastrectomy—78
 gastric freezing—79
 gastroenterology—80
 Gates Foundation—243
 Gatorade—204, 224, 233
 generic drugs—316
 generosity—281
 Georgia—25
 German cardiologists—85-

Gettysburg—314
 Giles, Graham—233
The Glass Bathyscaphe—314
 glucosamine—209
 good vibes—140
 gold—127-8, 289
 golden rule—289
 gout—207, 222
 government jobs—23
 grandfathered-in—111
 grand global plans—16
 graveyard—143
 Great Depression—37
 greed—10, 313
 Greek diet—220
 Griffin, Joe—113
 growth hormone—243

H

Hagel, Chuck—27
 Halliburton—14-24
 Harken Energy—14, 28, 31
 harm/benefit ratio—316
 HCA Inc.—12
 health care costs—32, 52
 health insurance—37-on, 73,
 237, 280
 heartburn—80
 Heart hospitals—46
 heart rhythms—223
Helicobacter pylori—96, 180
 herbal products—199, 230,
 261
 herbicides—234
 hiatus hernia—80, 98

Hightower, Jim—17, 22, 24,
 28, 305
 Hillebrand, John—136
 Hilts, Philip—38, 253
 Hitler—10
Hitler's Scientists—308
 HMOs—11-12, 259
 Hodnett, Elaine—59
 homocysteine—185, 205
 hormone replacement therapy
 (HRT)—269
 Horrobin, David—186
 hospital committees for
 clinical trials—187, 190,
 218
 hospitalization—64, 237
 hot tubs—233
 house calls—52, 55-6
Human Evolutionary Biology—
 175
Human Givens—113
 Hussein, Saddam—14
 hypertension—178, 190-1
 hypothermia—53

I

iatrogenic injuries—131
 ibuprofen—207
 Indians—228
 illegal immigrant workers—31
 ileus—217
 immunization—242
 impressive diagnosis—64
 inexpensive remedies—197
 inflammation—207, 213-4, 217

Inflammatory fat—215
 influence peddlers—24
 information—307-end
 informed consent—120, 175
 ink, squid—156-9
 innovative drugs—91
 inquisitorial thought—313
 insurance-only charges—279
 insurance payments—11, 40,
 81
 internist—244
 internship—68, 75, 109
 intussusception—58
 IQ—49
 Iraq—15-24
 iron lung—47

J

Jake leg—38
 jobs—17, 115
 Johnston, David Kay—19

K

kaolin—226
 Kean, Thomas (9/11)—26
 Kefauver Commission—42,
 182
 Kellogg Brown and Root—15,
 24
 Kennedy, President John F—
 20
 Kennedy, Robert—195
 knowledge, outdated—114

L

labor relations—24
 Lancet series on Medicines,
 Society and Industry—
 200-2
 last-minute Republican
 smear—25-6, 173-4, 316
 lawyers—24
 lead toxicity—296
 likely responder group—186
 Lincoln, Abraham—314
 lip cancer—106
 lobbyists—24
 looting—23
 Lund, Charles—66
 lymphoma—186

M

Macfarlane and Martin—314
 mad cow disease—230, 243,
 275
 Mafia—153
 magnesium ions—204, 223,
 252
 male barbers and medical
 practitioners—228-
 malignancy—217
 malpractice insurance—143-4,
 254
 mammograms (see also
 screening)—178, 206
Manual of Thoracic Surgery—
 112

manufacturer's reps—92
 March of Dimes—47, 292
 Marge Yoder—125
 Mark Twain—27, 167
 masturbation—233
 Maxfield, Myles—49
 McCain, John—26
 meaning of life—80, 204
 Medco—196
 media—308, 311
 Medicaid—246
 medical altruism—241
 Medical-Industrial complex—
 37, 44, 228, 255, 317
 medicalization of society—118
 medical malpractice
 insurance—144, 254
 medical monopoly—268
 medical specialties—110
 Medicare—12, 38, 87, 246
 Medecins sans frontieres—185
 melanoma—99
 mergers and acquisitions—94
 metalloproteinase inhibitor—
 211
 me-too drugs—184
 Micklethwait, John—308
 microbe—217, 317
 Middle East—14
 midwives—229
 migraine—223-4
 military equipment—22
 millennium, religious furor—
 19-20
 Mills, William—133

Moe, Alvin—211
 money—289
 monopoly—34, 45, 48, 85,
 192
 Moore, Francis—62
 MRI—121, 238
 muscle cramps—204, 223,
 252
 muscle loss—225

N

National Inst. for Health Care
 Mgt—192
 natural foods—234
 near-death experience—206
 needle biopsy—63
 needles, dirty—242
 nephrology—80
 Neptune, Wilford—67
 Nestle Co.—257
 Nestle, Marion—271-
 New England Journal of
 Medicine—133
 Newfoundland—51
 Nigerian natural gas, bribes—
 15
 nightmares, surgical—138
 night shift—76, 162
 nitrate, nitrite—209, 235
 non-bid contracts—24
 nose cancer—105
 NSAIDs—98, 209
 nuclear weapons—20, 47

O

obesity—72, 272
 O'Dell, Wally—7, 24
 off-label prescriptions—185
 Olds, John—51, 61
 old wife's tales—221
 on-the-job training—108, 160
 operative permit—213
 opinion leaders—213
 orangutan—226-7
 organized crime—198
 Orwell, George—308
 Osborne, Mel—66
 outcomes analysis—172
 out-licensing—268
 outsourcing jobs—17
 ovarian cancer—127-8
 Overholt, Richard—67
 Overjustification Hypothesis—278
 over-the-counter drugs—43
 overtime pay—31
 ozone—221

P

palliation—33
 paper ballots—28
 partial bowel obstruction—217
 Patented Medicine Price Review Board—84
 patents—34-6, 42-3, 242, 260, 269, 298, 302

patriotism—27
 patronage—24
 penicillin—9, 33, 190, 211
 people, of-for-by—314
Perfectly Legal—19
 Perini Corp—24
 pesticides—234
 pharmaceutical management corporations—196, 266
 pharmacological treatments—213
 pharmacies—199
 Phillips, Kevin—14
 physician's income—11, 40, 81, 247, 258, 282, 299
 Pinkie—72, 74
 placebo effect—317
 pneumonia—47, 179-180
 pneumococcal pneumonia—180
 polio vaccine—9, 33, 47
 political conservatism—18, 34, 255, 295
 political payoff—22-4
 Popper, Karl—313
 potassium ions—223
 potato peel extract—71
 Power corrupts—134
 Pratt, Cliff and Mabel—229
 premature ventricular contractions—223
 prepaid health system—52
 prescription drugs—42-3, 199
 prevention creep—88-9
 privatization—12, 21
 prostate—177, 225, 233
 prostate cancer—176, 233

Protecting America's Health—
253
provisional drug licenses—189
publiccampaign.org—23
public schools—291
pulmonary hypertension—
195
Putin, Vladimir—30

Q

R

radioactive gold—127-8
Ramsdell and colleagues—
185-6
rapture—20
raspberry leaf tea—231
rats—232, 295
Recertification—170-3
Red Cross—293-4
referring physician—164
regulations—34-6
Rehnquist, Supreme Court
Chief Justice—22
religious extremists—19, 174,
313
religious right—174, 317
Relman, Arnold—195
Renaissance—314
renal artery surgery—191
Republican smears—25, 173-
4, 317
research, drug—191
resident training—68, 75,
109

retail drug prices—199
retinal detachment—205
retractor—75
retraining—135
Rhyneer, George—136
rheumatic fever—46
Riddle, John—230
risk/benefit—98, 316
RNA interference—35
Rocky Mountain oysters—232
Roosevelt, Theodore—36
Roueche, Berton—235
Royal taster—232
ruptured thoracic aorta—141-2
Russia—30
Russian Muslim fisherman—
123

S

SAIC—24
Saint Augustine—117
salami—235
salt (*The political science of
salt*)—55, 273
saltpeter—235
Samuelson, Paul—48
Sarwar, Mohammed—140,
150, 166-7
Saunders, Gary L—61
Scalia, Supreme Court
Justice—22
scholarships—167
schools—291
Schwartz, Lisa M—98
science—36, 116

scrapie—230
 screening tests—176-80
 scurvy—56-7
 Seaman, Barbara—269
 seawater viruses—231
 seborrheic dermatitis—205,
 231
 “second look” reexploration—
 127-8
 second opinions—124, 252
 self-reporting—152
 Sequoia—29
 Seuffert, George—136
 shame—174
 sharks—86
 sharp excision—100-106
 shift work—76, 162
 Shulman, Seth—192
 sign—317
 simple country doctor—113
 sinecure—318
 Single Payer—253, 256-275,
 298-305
 skin cancer—100-106
 Slevin, Peter—24
 Slow-Mag—204, 223, 252
 small town practice—149
 socialized medicine—45
 Soviet Union—310
 soy—234
 spinal fusion—58
 spinal stenosis—121
 splenectomy—180
 squid—56, 156-9
 statin drugs—184-5, 218-20,
 261

stents—193
 Stewart, Martha—31
 Stock Exchange—31
 stock options—23, 183
 streptococci—46, 57
 stroke—163
 subsidies—12-13, 273-4, 318
 subsistence societies—227
 sugar industry—271-
 sugars, antibacterial—70
 sulfa drugs—46, 155
 Sunday show—156-9
 Supreme Court—20
 Surowiecki, James—34-5, 95-
 6
 suspenders—216
 sympathectomy—191
 symptom—317

T

tamoxifen—98
 tansy—229-30
 Taubes, Gary—55
 taxes—16, 19, 25, 30, 167
 taxol—190
 tea—52
 team leaders—162
 teamwork in surgery—161
 technology-driven
 specialties—41, 82, 86,
 88
 Tector, Alfred—139, 166
 Tenet Healthcare—11
 terminal illness—251
 temporomandibular joint

(TMJ)—214
 testes—233
 testosterone—232-3
 tetracycline—210-214, 218,
 222, 262-3
 The Center for Public
 Integrity—24
*The Company, A short history of
 a revolutionary idea*—308
*The greatest experiment ever
 performed on women:*
Exploding the estrogen myth—269
The ironic politics of obesity—271
The over-treated American—251
 Theocracy—20
 the people, of, by, and for—
 314
Thieves in high places—305
 third party payments—38, 40
 thoroughbred horses—156
 tobacco—275
 tomatoes—225
 tongue cancer—105
 Toxoplasmosis—217
 tracheo-esophageal fistula—
 141
 tracheotomy—75
 trade secrets—91, 188
 traditional medicine—166,
 227, 252, 318
 traitor—27
 treason—27
 trust—174
 tryptophan—260
 tuberculosis—10, 46-7

tuna—157
 turnips—208-9, 222
 turrs—60
 turtle heart—210, 253
 Twillingate—51
 Tyrrell, Ivan—113

U

ulcer, perforated—77
 umbilical hernia—59
 umbilicus, irritated—119
 uncertainty—178
 uninsured patients—11
 Union Pacific RR—156
 United Latinos—12
 United Nations election
 monitors—30
 Universal Health Services—
 237
 University of Washington—
 126
 unnecessary procedures—12,
 85
 unproven remedies—39, 181
 unsafe sex—243
 uric acid—208
 urinalysis, fatal—75
 urine stream—225
 US Fish and Wildlife Service—
 125
 USP—317
 U.S. Preventive Services Task
 Force—178
 Utah business scams—174

V

vaccines—10, 183-4
 vagus nerve—77
 veteran's benefits—22
 Viagra—221, 232
 vinegar—231
 Virginia Mason Clinic—126
 visual migraine—206
 visual light flashes—205-6
 Vitamins B6, B12 and Folic
 Acid—205
 Voltaire—67, 314
 volunteer physicians—251, 278
 von Hippel, Arthur—47
 von Hippel, Marianne—49-
 voting machines—24, 174,
 311

W

wages—30
 wake—54
 whales—54
 walking—217
 Wangenstein, Owen—79
 War—21-2
 Washburn, Bradford—133
 Washington Group
 International—24
 Waxman, Henry—16
 weight loss—215, 222
 welfare cheats—249
 Wennberg and associates—87
 wheezing—224

White, Aaron—275
 WHO/FAO study on
 nutrition and exercise—
 273-
WHO Formulary—57
 Who you know—23
 Wilcox, Carl—158
 Wilcox, Holder—157
Wild Health—226
 wisdom—116
 witches—228
 Withering, William—229
 Wolfe, Sidney—98
 Woloshin, Steven—98
 women's complaints—227,
 229
 Wooldridge, Adrian—308
 World Health Organization—
 242
 worried well—118

X

X-ray, back—121
 X-rays—73
 Xylitol gum—71

Y

Z

zombie-look—163
 Zackoveritch—64, 128