A New Health-Care System for America: Free Basic Health Care

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Introduction and Summary

This paper proposes a new health-care system for the United States, based on the provision of free basic health-care services to all Americans. The paper is comprised of five major sections: this introduction and summary; a section presenting background information on the present US health-care system; a brief section that summarizes the major features of the proposed new system; a section that discusses aspects of the new system; and a section of annexes that provide additional detail on some items.

The United States health-care system is a disaster. On a per-capita basis, the cost of health care in the US is two-and-one-half times the cost in other developed countries, yet the quality of US health care overall is no better than in other developed countries. This means that about sixty percent of the US health-care dollar is wasted – spent on health-care services that do little or nothing to improve outcome quality.

Americans spend about three trillion dollars a year on health care. Sixty percent of this is wasted – that represents two trillion dollars a year. Every year! Americans are being ripped-off, year after year, by a massive confidence scheme, and they seem powerless to do anything about it.

Where is the wasted money – the two trillion dollars per year – going? It is going to inflated incomes for the health-care establishment and profits for insurance companies.

The present US health-care system is a national disgrace, an obscene outrage, yet it continues, year after year. For decades, Congress has been pretending to reform health care, but, year by year, the system gets worse, not better.

Congress is unable to fix America's broken health-care system because it is in thrall to the medical establishment and the insurance industry, and it is determined to keep a system that, every year, funnels two trillion dollars of wasted expenditures to the medical establishment and insurance industry. Congress can make changes that make the system more efficient at making money, but the system controllers will not permit any fundamental change that will decrease their income. That is why costs cannot come down. Given this constraint, it is *impossible* for Congress to fix the present system.

The fundamental problem is that the present system is profit-driven. Its structure, purpose and function are to make money for the medical establishment and the insurance industry, not to provide high-quality health care at reasonable cost.

To obtain a system that provides high-quality health care at low cost, it is necessary to compare the benefits of treatment to cost for each case, and to select treatment alternatives for which the ratio of benefits to cost is high. The present system does not do this. If it did, profits would plummet.

The present profit-driven system is fundamentally flawed in approach and structure. It cannot be modified to provide high-quality low-cost health care. The present system has been tried for half a century, and found to be severely lacking and not amenable to repair. It is designed to make profits, not to deliver quality care at low cost. To achieve high-quality health care for low cost, it will be necessary to scrap the present system and replace it with a system having the latter purpose.

This paper describes a new approach to delivery of health-care services that will cost a fraction of the current amount and deliver more appropriate care. Specifically, it is proposed to move away from a national health-care system based on insurance and establish a national

health-care system based on the provision of free basic health care through neighborhood clinics and regional hospitals.

The new system will provide basic health care to all Americans at no cost to the patient, and less cost to the government / taxpayer than the present system. Based on the experience of other developed countries, high-quality basic health care can be provided for a "cost" of about five percent of gross domestic product, rather than the 17 percent of the present system.

The new system will achieve a very high level of equity, or "fairness." All Americans will receive, from the public health system, exactly the same level of care, for exactly the same cost – zero! Under the present system, high-quality care is provided to those with high incomes, while those with lower incomes may receive a lower level of care and experience financial distress. This situation will end. Like public education and national defense, public health services will be provided free of charge.

The new system will take two trillion dollars a year away from the medical establishment and the insurance industry. They will fight very hard to prevent this from happening. The US government will side with them, not with the American people, in this fight, just as they sided with banks and insurance companies in the financial meltdown of 2007-2008. If Americans want a high-quality low-cost health care system, they are going to have to fight very hard for it. Congress is not willing to help in this fight. If the American people want this, they are going to have to force Congress to implement it.

Based on the experience of other developed countries, the present US health-care system is a massive rip-off. Americans are being ripped off to the tune of two trillion dollars every year. They are being driven to financial distress and ruin to pay for care that is reasonably priced in the rest of the world. They should be mad as hell, yet they continue to put

up with it. Why? Quite simply, they have been brainwashed by the medical establishment to believe that if they depart from the current insurance-based business model of health care, the quality of care will plummet. The experience of many other countries belies this assertion. It is not true. Quality care can be obtained for about forty percent of the present cost.

As costly as the present system is, the care that it delivers is generally high quality – it is just not appropriate care. It is like getting your car washed three times, when once is quite enough. There is no good reason for Americans to continue to pay two-and-one-half times as much as citizens of other developed countries, except to enrich the medical establishment and the insurance industry – and, to many people, that is not a very good reason at all.

Many people profit extremely well from the present system. It will not be changed unless there is powerful movement to do so. Allowing Congress to go on posturing year after year with no results is not going to produce any meaningful change. One is reminded of the scene in the *Network* movie (1976) where the character Howard Beale exclaims, "… you've gotta get mad!... You've got to say, 'I'm as mad as hell, and I'm not going to take this anymore!'." When Americans get mad as hell about getting ripped-off big time and decide to do something about it, that is when things will change.

What, specifically, should the American people demand in a new health-care system? I propose the following:

- Direct access to health-care services, not to health-care insurance
- Optimized (managed, rational) care, for which benefits are high compared to cost
- Free to the individual: free public health, just like free public education and national defense

Background on the Present US Health-Care System

How the US Compares to Other Countries

According to a PBS NewsHour report (by Jason Kane, October 22, 2012, posted at Internet website http://www.pbs.org/newshour/rundown/health-costs-how-the-us-compares-with-other-countries/), the United States spends two-and-one-half times the average of the Organisation for Economic Co-operation and Development (OECD) countries (35 economically developed countries of the world). In 2010, the OECD average per capita spending per year was $3,268, and the US average was $8,233, by far the highest in the world. Yet despite this massive expenditure, the quality of US health care, relative to a number of indicators, is generally no better than that of other OECD countries. (More up-to-date data (2016) are available from the OECD website: OECD average = $3,997; US average = $9,892.) *The inescapable conclusion from this fact is that a major portion of US expenditure on health care is wasted (inappropriate: ineffective, inefficient, of low benefit, or harmful).*

A primary source of information on US health-care costs is the Centers for Medicare and Medicaid Services website, at https://www.cms.gov/. According to that website, "U.S. health-care spending grew 5.8 percent in 2015, reaching $3.2 trillion or $9,990 per person. As a share of the nation's Gross Domestic Product (GDP), health spending accounted for 17.8 percent." (OECD figure for 2016 = 17.2%.) For all OECD countries, average health-care spending is just 9.5 percent of GDP. As a percentage of GDP, US spending on health care as a proportion of GDP is almost twice the OECD average. Whichever way you look at it – per capita spending or share of GDP – US spending on health care is approximately twice that of other developed countries. In absolute terms, the magnitude of this difference is staggering: If US per-capita health-care spending were the same as the OECD average, the US would

have spent just $1.27 trillion. So, the annual US cost is $1.93 trillion greater than the cost at OECD rates.

Where Health-Care Dollars Are Spent

Almost ten thousand dollars per year, and over twice the average for other developed countries, and the quality of care is generally no better! This situation begs the questions: Where is all the money going? Why is US health care so expensive?

US health-care spending is greater in all categories of care. The CMS website reports that the three largest categories of care by type of service or product as 32% for Hospital Care, 20% for Physician and Clinical Services, and 10% for Prescription Drugs. (These figures are from the report *National Health Expenditures 2015 Highlights* at https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/Downloads/highlights.pdf.)

Since the early twentieth century, the American Medical Association has worked to restrict the supply of medical doctors, in order to boost their salaries. This program has been quite effective. The ratio of physicians to population is 2.4 per 1,000 people, substantially below the OECD average of 3.1. The income of US physicians is substantially higher than that of physicians in other countries, and greater than that of comparably trained or more highly trained US professionals in other fields, such as engineering and science. US physician salaries are about 50% higher than those of Canada and Germany, and about double those of France and Australia.

The number of hospital beds in the US is 2.6 per 1,000 people, much lower than the OECD average of 3.4. According to the OECD report

cited above, the average price of hospital services (both medical and surgical) is 85 percent higher than the average of other OECD countries.

According to a PBS NewsHour report (by Valerie Paris, February 7, 2014, posted at Internet website http://www.pbs.org/newshour/updates/americans-spend-much-pharmaceuticals/), the US spends almost $1,000 per person per year on pharmaceuticals. That is 40% higher than the next-highest-spending country, Canada, and about twice as much as the average for OECD countries.

Statistical sources such as OECD and CMS present much data on averages, but not so much on extreme values. An annual summary of pharmaceutical costs is presented in Magellan Rx Management's *2016 Medical Pharmacy Trend Report*, posted at Internet website https://www1.magellanrx.com/media/604882/2016mrxtrendreport.pdf (a press release is posted at http://www.businesswire.com/news/home/20170403005121/en/). Here are some interesting statistics showing just how expensive pharmaceutical drugs can be in the United States:

- For a rare disorder drug such as Soliris (eculizumab), over a patient's treatment lifetime (averaged at 40 years), payers may incur more than $18 million in costs.

- On average, the 10 most expensive commercial medical benefit drugs averaged $421,220 annually per patient and affected two per 100,000 members. The 10 costliest Medicare medical benefit drugs averaged $268,780 and affected eight per 100,000 members.

A summary of this report by Adam J. Fein is posted at http://www.drugchannels.net/2017/04/latest-data-show-that-hospitals-are.html?m=1 . He observes that one study reported that hospital charges for drugs were marked up 590% above the hospital's cost for

commercial payers (US Hospitals Are Still Using Chargemaster Markups To Maximize Revenues, from *Health Affairs*.)

The Kaiser Family Foundation funded a study of the impact of direct-to-consumer advertising on prescription drug spending; the study did not see a major impact (https://kaiserfamilyfoundation.files.wordpress.com/2003/06/6084-demand-effects-of-recent-changes-in-prescription-drug-promotion-report.pdf). That money – ultimately paid by the US consumer – is largely wasted.

It is estimated that fraud and abuse represent about ten percent of the total cost of US health care. (References: *Health -care fraud: The $272 billion swindle* (May 31, 2014), posted at Internet website https://www.economist.com/news/united-states/21603078-why-thieves-love-americas-health-care-system-272-billion-swindle; *Health Care Costs: A Primer*, posted at Internet website http://www.kff.org/report-section/health-care-costs-a-primer-2012-report/.) The average cost of fraud and waste in all OECD countries is six percent.

Who Pays for Health Care?

The preceding statistics summarize where health-care expenditures are going. The report *National Health Care Expenditures 2015 Highlights* (at https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/NationalHealthExpendData/Downloads/highlights.pdf) summarizes who is paying, i.e., the major sources of funding. The breakdown is as follows:

- Medicare: 20 percent
- Medicaid: 17 percent
- Private Health Insurance: 33 percent

- Out-of-Pocket: 11 percent

The preceding major sources account for 81 percent of the total. (Note that "Out-of-Pocket" is costs in excess of insurance or taxes.)

The breakdown by type of sponsor (the entity that is ultimately responsible for paying the health-care bill) is as follows:

- Federal Government: 29 percent
- State and Local Governments: 17 percent
- Households: 28 percent
- Private Businesses: 20 percent

The preceding categories account for 94 percent of the total. (Note that "Households" includes insurance and out-of-pocket costs, but not taxes, and that "Private Businesses" includes employee benefits but not taxes.)

A key statistic that will be referred to later is that government (i.e., taxpayers) at all levels pay for 46 percent of the total health-care expenditures.

An issue to address is what is the actual (or "true") cost (or "burden") of health care to households and businesses, taking into account the fact that health-care cost incurred by the firm (via Medicare taxes or employer-provided health-care benefits) may either be absorbed by the business (by lower profits or higher prices) or passed on to the worker in the form of lower wages. The answer varies, depending on the competitiveness of the firm and the mobility of the worker. The "true" cost of health care to the worker hence varies between 28 percent and 48 percent. Similarly, the "true" cost of health care to the firm varies between zero and 20 percent.

Some Reasons for the High Cost of Health Care in the US

So, what is going on? Why is US health care so much more expensive than health care in other developed countries? How is the expenditure on US health care being wasted? Some of the common explanations given are the following (taken from the Kane article):

1. As discussed above, the cost of health-care services and products – hospitals, physicians, pharmaceuticals and others – is generally higher, and often much higher, than in other developed countries.
2. Other governments exercise more control in cost containment, such as setting prices that hospitals can charge, or providing rankings of hospitals from most expensive to least expensive. Americans take more drugs than people in other developed countries. In many countries, government agencies set the prices of drugs, or the amount that they will reimburse. In the US, insurers typically accept the price set by the drug companies.
3. The US has been slow to embrace information and communications technology to improve administration and reduce waste and fraud.
4. The US uses more expensive diagnostic procedures than other OECD countries.
5. The US does more testing than other OECD countries.
6. The US is more litigious than other OECD countries.
7. There is a financial incentive for physicians to do more interventions, regardless of medical necessity.
8. Many services are covered by insurance, so that the immediate cost of treatment is zero or low to the patient, so the patient has no immediate incentive to constrain costs.
9. Waiting times for elective surgery are lower in the US than in other OECD countries.
10. The US spends more on health-care research (e.g., in 2012 the National Institutes of Health registered about 120,000 clinical trials underway, far more than any other OECD country).

11. The US compares poorly to other OECD countries with respect to healthy lifestyles (e.g., obesity and overweightness, diet, exercise, alcohol and tobacco use) and management of chronic conditions such as asthma (the hospital admission rates for asthma and chronic obstructive pulmonary disease (COPD) are over twice the OECD average).
12. Opportunities for fraud and abuse are substantially greater in the US than in other countries.

Wasteful Spending on Health Care Is a Problem World-Wide

The issue of the inefficiency and waste associated with health-care services is a much-discussed topic. An excellent recent report on this topic is *Tackling Wasteful Spending on Health*, published in 2017 by OECD. The report is posted at Internet website http://www.oecd.org/els/health-systems/Tackling-Wasteful-Spending-on-Health-Highlights-revised.pdf , and it is well worth reading. The report summarizes experience for all OECD countries. The major conclusions of the report are interesting:

- One in ten patients in OECD countries is unnecessarily harmed at the point of care.

- More than 10% of hospital expenditure goes to correcting preventable medical mistakes or infections that people catch in hospitals across a range of OECD countries.

- One in three babies in OECD countries is delivered by caesarean section, whereas medical indications suggest that C-section rates should be 15% at most. They are above 35% in seven OECD countries and close to 15% only in Iceland, the Netherlands, Finland and Israel.

- The market penetration of generic pharmaceuticals ranges between 10-80% across OECD countries.

- Australia, Belgium, Canada, France, Italy and Portugal report at least one in five emergency department visits as inappropriate.

- The costs of administering health systems represents on average 3% of health spending but varies in a ratio of one to seven across OECD countries, with no obvious correlation with health system performance.

- On average, the loss to fraud and error is more than 6% of health expenditure and one third of OECD citizens consider the health sector to be corrupt or extremely corrupt (45% globally).

An inference from these observations is that a measure of inefficiency and waste is associated with all large health care systems, for a variety of reasons.

The Oft-Cited Reasons for the High Cost of US Health Care Are a Red Herring

The list given above of reasons for the high cost of US health care is, to a considerable extent, a red herring. While these items are "the usual suspects," they are not the real culprit. Fixing them would decrease the cost and improve the quality of health care, but even fixing all of them would not address the fundamental problem that US health care is vastly more expensive than health care in other developed countries. The listed items, viewed either individually or as a whole, do not show a clear or complete picture of the nature of the problem. The cited reasons just don't add up; focusing on them disguises the real problem.

Each of the listed items represents one aspect of the health-care system, but together they do not reflect the whole situation. As a fraction of GDP, the US spends twice as much as other developed (OECD) countries, and on a per-capita basis the US spends two-and-one-half times as much as other developed countries. If the items of the preceding list captured the essence of the problem, their average, weighted by their share of the budget, would be over twice that of other OECD countries. But this is not the case. The deceptive aspect of the preceding list, and other similar lists, is that it shows that the US system is somewhat more expensive with respect to a number of common performance indicators, without revealing why it is incredibly more expensive overall.

The source of the present problem of the high cost of US health-care services is the fundamental nature of the present health-care system – its purpose, function and structure – not the efficiency with which that system operates. *The present system is designed primarily to make money for its controllers, not to deliver high-quality, low-cost health services to Americans.* It performs its actual, *de facto,* purpose – generation of massive wealth for the system controllers – exceptionally well. It performs its ostensible purpose – delivery of high-quality health care at low cost – very poorly.

The present US health-care system is vastly more expensive than national health-care systems in other developed countries not only because most of the components of health-care cost are higher, but because *the system does not focus on the relationship of health benefits to cost.* It focuses instead on generation of income for system controllers. The following sections will describe the nature of the present US health-care system in greater detail.

A Major Health-Care Cost Factor: Insurance

One of the main reasons for high US health-care costs is a systemic one – insurance, item 7 on the list presented earlier. Insurance increases the cost of health care in three ways. First, by adding the cost of the insurance process to the cost of health care. Although this amount is substantial – on the order of perhaps 20 percent – it is not the main reason why insurance increases health-care costs. The second way in which insurance increases the cost of health care is that it reduces the incentive for patients, insurers and providers to keep costs low. Quite the opposite, it provides a strong incentive to utilize more services, and more expensive services, than would otherwise be utilized. The third way in which insurance increases the cost of health care is that it separates consideration of benefits from cost. If a service is covered by insurance and is requested, it is usually rendered, regardless of the benefit.

In the US, insurance serves mainly to reimburse providers. The insurer does not consider the relationship of benefit to cost – if the service is covered insurance and is deemed medically necessary, it is provided. With the exception of Health Maintenance Organizations (HMOs), the system does not ration care or serve as an effective mechanism for improving the quality of care or the ratio of quality indicators to cost. (Note (from Wikipedia): *Medical necessity* is a United States legal doctrine, related to activities which may be justified as reasonable, necessary, and/or appropriate, based on evidence-based clinical standards of care. Other countries may have medical doctrines or legal rules covering broadly similar grounds. The term clinical medical necessity is also used. In contrast, unnecessary health care lacks such justification.)

In order for a system to achieve high quality for low cost, it is absolutely necessary to consider the relationship of benefits to cost, when making health-care decisions. The present system does not do this, and that is a major reason why US health care is so costly.

Private Health-Care Insurance Is Much Costlier than Public Health-Care Insurance

The heavy reliance of America's health-care system on private insurance is a major reason for the extremely high cost of health care in the United States. The Wikipedia article, *Universal Health Care*, posted at Internet website https://en.wikipedia.org/wiki/Universal_health_care, presents a summary description of national health-care systems in nations around the world. Many countries use some form of insurance – usually public insurance – as the basis for their systems. When private insurance is used, it is highly regulated.

An interesting table referenced in that article is *List of countries by health insurance coverage*, posted at https://en.wikipedia.org/wiki/List_of_countries_by_health_insurance_coverage. This table shows the insurance coverage of 34 OECD countries by percentage of Government / social health insurance, Primary private health insurance, and Total public and primary private health insurance. Most of the countries listed in the table have 100 percent coverage or near-100 percent coverage. The three countries having lowest coverage are Mexico at 86.7%, United States at 84.9% and Chile at 76.2%.

The really interesting statistic presented in the table is that the United States has by far the highest percentage of Primary private health insurance – 53.1 percent. The next-highest percentage is Germany at 11 percent. All other countries have zero Primary private health insurance. Germany's health-care system is very highly regarded, which shows that the cost of Primary private health insurance can be managed, if it is desired to do so. This fact stands out: the US funds a major portion of its national health insurance through private insurance, and its health-care costs are vastly higher than those of any other country in the world. The use of private health insurance as a basis for financing national health care has been a spectacular disaster!

The Extreme Cost of US Health Care

It is difficult to comprehend how corrupt our financialized health-care system has become. The following anecdote is symptomatic of the present situation. A couple of weeks ago my son visited a friend in Santa Barbara, California. The friend was staying at his sister's home for a week, while she was traveling. The house was valued at twenty million dollars. My son inquired what the sister's husband did, to enable him to own such an expensive home. His friend told him that he was an accountant in health care.

There is no good reason why owners of health insurance and pharmaceutical companies should be billionaires, or that doctors, hospital administrators and health care accountants should be millionaires. The present US health-care system is sheer lunacy. Accountants in fields other than health care make modest salaries. They cannot afford twenty-million-dollar homes. Hospital administrators in health care make annual salaries in the millions of dollars, simply for providing standard management services. Salaries of US doctors far exceed those of doctors in other developed countries where the quality of care is comparable or higher. My late wife paid two dollars a vial for insulin while we lived in Africa; here in the US she paid on the order of two-hundred. In Zambia, we paid an annual fixed fee of $400 for complete general-practitioner care for a family. Here in the US, that amount would cover the cost of a couple of office visits for a single individual, or perhaps one-half of a month's insurance premium for a family. Under the present insurance-based health-care system, US insurance companies make billions of dollars simply for standing as financial intermediaries between the patient and the provider. Hospitals in the US use arcane charging algorithms to set arbitrary charges bearing little relationship to actual cost.

By comparing the high cost of care in the US to the much lower cost of care in other developed countries having comparable quality, it may be

inferred that the value of US health-care services represents a minor fraction of the total health-care services bill. A very large portion of the US health-care bill goes to the controllers of the system, not to improving the quality of life of the patient.

The present US health-care system is incredibly efficient at its purpose of generating wealth for its controllers. The actual value of the nation's health care is about five percent of GDP, for which the system bills 17.2 percent of GDP. Every year, the system transfers a "profit" of about 17.2 – 5 = 12.2 percent of GDP to the system controllers. That amount is almost two trillion dollars every year. The present system is a marvelous money machine for its controllers. With respect to generating profits for them, it performs very well. Relative to the goal of delivering high-quality low-cost health care, the system performs very poorly.

In justifying the present system, some may say that insurance increases the cost by only 15-20 percent, and that the rest, 80-85 percent, is spent on health care. This argument is a total misrepresentation of the situation. The fact is (by comparing US experience to that of other developed countries) that health care of the same quality as that provided in the US may be delivered at 40 percent of the cost. This means that a substantial portion of the 80 percent is spent on health-care services that do little or nothing to affect outcome quality. That amount is wasted.

How Did the Present System Evolve?

To understand the nature of the present US health-care system and how the nation got to the present situation, it is insightful to review the history of health insurance in the United States. Over the past century, the US has moved from a system in which people paid directly for their medical care to a system in which much of the care is paid through insurance plans. Annex 1 presents an excerpt from the Wikipedia article

on health insurance in the United States, posted at Internet website https://en.wikipedia.org/wiki/Health_insurance_in_the_United_States.

The situation that has evolved with widespread use of health insurance is that the cost of medical care has risen far higher than it would have in the absence of insurance, much higher than the 20 percent or so that it takes to process insurance claims. Many more services are rendered, and those services and associated products are vastly more expensive than when insurance was not available. Sadly, many of the rendered services have little effect on improving the quality of life for patients.

In 1929, prior to the Great Depression, urban families had average annual income between $2,000 and $3,000; medical expenses for the average American family were $108, and $261 if there are any hospital stays (14%). In other words, the cost of medical care was about 4-6% of income, say 5%. In 2013, the median household income in the US was about $52,000. Five percent of that is $2,600. That amount or less is the OECD per-capita annual health expenditures for eleven OECD countries, including Slovenia, Israel, Slovak Republic, Korea, Czech Republic, Hungary, Poland, Estonia, Chile, Mexico and Turkey. That amount is a far cry from the $10,000 per person per year being spent today in the US for health care.

The US system did not develop overnight – it evolved slowly, over decades. At first, insurance added little to health-care cost. Gradually, over time, more and more items were included, and the cost increased. No one seemed to notice what was happening, until the costs were wildly out of whack compared to those in other developed countries. The situation is well described by the story of the frog in the pot of water, on a stove. The water starts out cool, and the frog is comfortable. The stove heats the water up gradually. The water is warm, and the frog is even more comfortable. The frog does not perceive the danger. Eventually, the rising temperature overcomes the frog, and it dies.

Based on experience in other developed countries, the US national health-care system could provide high-quality basic health care for all Americans for a cost of about five percent of GDP. That is all that is required. Amounts spent beyond that are unnecessary for accomplishing universal coverage and a high level of quality, if the system is well designed and properly managed. As US health-care costs rose slowly from their 1930s level of about five percent of income, no one seemed to be concerned. Now that they represent 17.2 percent of GDP and are over twice that of other developed countries, the US public is very much aware of its predicament. Like the proverbial frog, however, it is overwhelmed by the situation and unable to get out.

The Present Insurance-Based Health-Care System Is Costly – But No Longer just because of Insurance

A primary reason for the dramatic rise in US health care, and the fact that it is vastly higher than in other developed countries, is the move to a *private* health-insurance-based business model for health care. US experience under this system has shown that this model is expensive, wasteful, inefficient, and incapable of providing high-quality health care to the US population at reasonable cost. It contains a strong incentive for the cost of health care to grow and does little to increase the effectiveness or quality of care. It often covers treatments that have little effect on improving the quality of patients' lives.

As discussed earlier, compared to other OECD countries, the US makes the greatest use of private insurance in its national health-care system, with very poor results: access that falls far short of universal, and care that is by far the most expensive in the world. While capitalism (free-market enterprise) may be a fine basis for running banks, insurance companies and hedge funds, it has proved to be spectacularly poor as the basis for a national health-care system.

The role of insurance in contributing to the massive increase in annual per-capita health-care spending in the US is mainly due to the perverse feature of insurance of enabling patients and providers to utilize far more services, more expensive services, and inappropriate (ineffective, of low-benefit, or harmful) services, than they would in the absence of insurance. Neither the patients nor the insurers nor the providers have an incentive to control costs. To the contrary, both the insurers and the providers have strong financial incentives to increase costs, since their revenues are linked to cost. At the level of the individual medical episode, no one is considering the relationship of benefits to cost in making health-care decisions. The present US health-care system is a massive money-making machine. Each year, the system grows larger, like a malignant tumor on its host. Because its growth depends mainly on financial transactions, rather than on growth of demand for health care services, its growth can far outpace (and has outpaced) that of most other sectors of the economy.

In the United States, the Affordable Care Act (the legal basis for the present US health-care system) requires insurers to spend at least 80-85 percent of premiums on medical claims and quality improvement. The requirement to spend at least 80 percent of premiums on medical claims and quality improvement embodies the perverse incentive to increase profits by increasing approvals of claims for inappropriate care.

The Fundamental Reason for High Cost of US Health Care: A Misguided Purpose

Although the introduction of health insurance facilitated the evolution of the US health-care system to a high-cost system, simply removing insurance from the picture would not reduce costs to pre-insurance levels. It would not address the problem that US health care costs about twice that of other developed countries relative to GDP, and two-and-one-half times as much on a per capita basis. The reason for this

situation is that the US health-care system has evolved to a very financialized, very high-cost system, quite different in structure, function and purpose from what existed previously. The system now generates massive amounts of money for its controllers, far beyond the value of the health care provided to patients. *The US health care system is now a massive money machine whose primary function – and purpose – is to generate wealth for its controllers and operators.* Because of the massive financial power of these interests (17.2 percent of gross domestic product), it may be very difficult to achieve meaningful reform of the system. The system controllers have a vested interest in continuing the present system and, because of its magnitude, have much incentive and power to do so.

Although health insurance may have facilitated the evolution of the US health-care system to a very high-cost system, insurance is no longer the essence of the cost problem. Insurance, by itself, as a technical process to spread risk, is now just one of many factors that increase cost. Lots of types of insurance, such as travel insurance, flood insurance and fire insurance, provide protection from risk at reasonable rates. If health insurance were controlled, with the size, composition (mix) and allocation of health-care services determined in a rational fashion (relative to the goal of improving health, not simply providing health-care services or enriching providers), it would not lead to the system that we have today. The problem with the present system is that its primary function and purpose is not the provision of high-quality low-cost health care to US citizens. Instead, it is to generate billions of dollars in wealth for the system controllers. In the US, unlike other countries, the primary function of health insurance is to generate profits for insurance companies, not to provide a rational level and mix of health care to US citizens.

This point bears repeating: *The essence of the cost problem with the present US health-care system is that its primary function and purpose is not to provide high-quality, low-cost health care to the American people,*

but to generate massive wealth for the system controllers. Here is a cogent description of the US health-care system by Thom Hartmann: "No other country in the developed world has 'for profit' health insurance. And you know what, they have lower health care costs than we do. Their people aren't burdened with the cost of supporting billionaire health insurance executives and the millionaires who work for them."

The fundamental reason underlying high US health-care cost is not inefficiency – the system is extremely efficient in realizing its *de facto* goal of transferring the country's wealth to the system controllers. The reason why health care is so costly is that the primary function and purpose of the system is not delivery of high-quality health care at low cost, but the generation of profit for the system controllers. The original primary function and purpose of the system, of providing quality care at reasonable cost, have been replaced with the function and purpose of generating profit. The system controllers are no longer the American public, but the medical establishment and the insurance industry. Keeping costs low is neither a constraint nor a goal – in fact, in the present reimbursement system, profits are increased by *increasing* costs, not by decreasing them. Focusing on all of the efficiency-related indicators listed earlier will not solve the problem, as long as the system's function and purpose are not focused on the nation's health, but on profit for insurance companies.

The present situation should come as no surprise. Placing health care in the hands of the capitalists had to end this way – their primary goal is to make money. In recent years, there has been much discussion of privatizing functions that were previously considered to be legitimately in the public domain, such as education, prison systems, and public infrastructure (highways, water systems, electric systems, national lands and parks, communications systems) – even military systems (such as those supported by Blackwater / Xi / Academi)). It can be reasonably asserted that the capitalists have done nothing wrong. The primary

purpose of capitalists is to make money, not to provide for the public good. They have performed extremely well at their primary function of producing wealth. What has happened to America's health-care system will eventually happen to education, prisons, and all other areas in which privatization takes place. Privatizing those activities will make money for the new owners, and the quality of accomplishing the original purpose of the activity will decline. In privatizing and financializing the nation's health-care system, America got just what it asked for: a system that makes a lot of money, efficiently. America's present health-care system is the legitimate offspring of a regulated free-market economy. From the viewpoint of economics, it is a smashing success.

Our forbears built this country with blood, sweat and tears. With sacrifice. With ideals. The last few generations are now in the process of selling their birthright. How very sad.

The US Health-Care System Has Been Hijacked by Wall Street

The financialization of health-care provision has produced a massively corrupt and wasteful system that does not deliver particularly good care. The system is sloshing with billions of dollars of taxpayer money. Not only are the health-care providers cashing in on this incredible government-sponsored gravy train, but even organized crime is moving into health-care fraud, because it is so lucrative and the penalties so lenient compared to other areas of criminal activity. America's present health-care system rewards abusers and fraudsters better than any other national health-care system in the world. With government approval and support, *the US health-care system has been hijacked by the insurance companies*. The taxpayer and the patient are now nothing more than pawns in this massive financial scheme representing 17.2 percent of gross domestic product. The main purpose of the present US health-care system is no longer to provide health-care services to Americans, but to generate massive amounts of money for insurance companies, health-

care providers and suppliers, advertisers, politicians and fraudsters. The patient is simply a catalyst for the generation of money for these avaricious agents. The health-care services that the patient receives are now an incidental aspect of the present health-care system; the system now exists to serve its controllers, not the patient.

Health care insurers are financial specialists. In the case of health care they provide the very useful function of spreading loss from risk, for a fee. Initially, in a simpler health-care market, that function served us well. Eventually, however, insurance evolved from being a tool to manage risk to being the driving force of the system. The system no longer controls insurance; insurance controls the system. With insurers in control, the primary purpose of the system, as mentioned above, is to maximize profit. Quality of care and cost are no longer objectives or constraints. Health care decisions are made based simply on the basis of ability to pay and medical necessity, not a comparison of benefits to cost. Profit could be increased by increasing cost, irrespective of benefits, and that is what happened. The present private-insurance-based US health-care system embodies a strong incentive to increase costs, and that, quite simply, is why this system is so expensive.

Insurance is provided by financial services firms that specialize in the mathematics of finance. They are part of the sector of our economy commonly referred to as "Wall Street." US health care is now very expensive because health care has been financialized – organized to return as high a profit as possible for the insurance companies. The US health-care system has been hijacked by Wall Street – the same people who brought us the Great Depression; the Savings and Loan Scandal of the 1980s; the bankruptcy of Orange County, California; the collapse of the Long-Term Financial Management hedge fund; and the financial meltdown of 2007-2008, followed by the so-called "Great Recession."

I should clarify my assertion that America's health-care system has been hijacked by Wall Street. Wall Street – the insurers and bankers – is a

salient feature of the system, but it is not the sole important feature. If you run an insurance company, you must have something to insure – in this case, the patients. The present system is comprised of several large, interacting, interdependent components – the insurance companies, which operate the system; the health-care providers and suppliers, which provide services and products; the US government's elected officials, who enable, protect, regulate and nurture the system; the patients, who receive services and are the ostensible reason for the system; and the American people, who pay for it. At present, the first three agents are in control of the system. The patients receive health-care benefits, and the American people foot the bill. The three controlling agents are using the other two system components to generate profits. These three power centers all profit handsomely from the system. A national public health-care system cannot do without the government, the patients, the health-care providers, or the taxpayers. It can very well do without the insurance companies.

The present US health-care system is a powerful alliance, a collusion, of private insurers, health-care providers and suppliers, and the US government, to generate massive income and power for them at the expense of taxpayers and patients. It accomplishes this by keeping charges higher than in other developed countries and by providing services in cases in which the health benefit is low. The patient is incidental to the system purpose. This alliance subverts the legitimate purpose of the nation's health-care system, which is to provide high-quality services at low cost. The present system is a conspiracy, an elaborate scheme designed to generate profits from the citizens' health problems.

The fundamental structure, purpose and nature of the present system are at odds with the goal of delivering high-quality low-cost health care. What is required to address the problem of the extremely high cost of US health care is a total revamping of the health-care system.

How to Achieve High Quality at Low Cost: Base Health-Care Decisions on Comparison of Benefits to Cost, at the Level of the Individual Episode

The preceding sections have discussed various reasons why US health care is so expensive, compared to that of other developed countries. They identify what is wrong with the present system, but they do not explicitly identify what features an improved system might possess. This section discusses an essential feature that a health-care system must possess, if it is to deliver high-quality service at low cost.

At the level of the individual health-care-treatment episode, the quality of US medical care is very high, as measured by indicators of medical performance. Its high quality is the reason why people from around the world flock to the United States for medical treatment. At that level, costs are somewhat higher than in other developed countries, but not absurdly so. What is totally out of whack is the total cost of US health care, compared to the total service provided.

When I assert that some portion of US health care is inappropriate – ineffective, inefficient, of low benefit – I am not asserting that the individual service providers are at fault, or are engaging in fraud or abuse. The vast majority of medical service providers in the US are competent and of high integrity. In our system, however, when making a treatment decision in a case, there is a strong incentive to ignore the relationship of benefit to cost. If the patient or his insurance company is willing to pay for the service, and it is deemed medically necessary, then it is provided. If the patient is paying for the service himself, or has paid for the private insurance, that approach works fine. The problem arises when the insurance is not paid for by the patient, or the insurance benefits are not actuarially sound. I will call such insurance "social insurance" or "public insurance."

In the category of social insurance I include not only Medicaid (health care for the poor), but also Medicare (health care for the elderly). It can be (and often is) argued that people have paid for their Medicare insurance through their social insurance taxes, but this is specious, and is a fundamental reason why the present system is collapsing. For Medicare, people pay into a collective trust fund; they do not purchase individual, actuarially priced policies. Some people pay a lot of Medicare taxes, and some pay little or none. Once they are in the system (e.g., by turning age 65) they all receive the same heroic level of treatment (for most services, but not all, e.g., kidney transplants). Quite simply, many people on Medicare *have not* paid for the level of service they receive.

While recipients of social insurance benefits may be provided a certain level of coverage from public insurance, they cannot be entitled to heroic levels of service independent of the level of benefit, or the system will collapse. As evidenced in the case of the present US system, total costs skyrocket to the point of bankruptcy. For individual policies, the price of the policy is actuarially linked to the expected services to be provided to that particular individual. For social insurance (such as Medicare), this link does not exist – once having paid Social Security taxes, the taxpayer is given the key to free medical care from age 65 until he dies. As we have seen from experience, that approach does not work. For such a system to work, there has to be some sort of management control over the services to be provided. The absurd feature of the present, utopian, Alice-in-Wonderland system is that everyone receives the same service, independent of how much he paid for it or what cost of the service is, or what the anticipated benefits may be. As experience shows, such an approach is doomed to failure.

For a public insurance scheme to succeed, there must be consideration of costs and benefits, in the decision about what services are provided in a particular case. It is even possible to ignore how much the person paid for the social insurance, and have the system succeed ("sunk costs are

irrelevant"). The essential thing is to compare benefits to cost for each treatment episode, and provide the treatment only if the benefit-to-cost ratio is sufficiently large. If the benefit-to-cost ratio exceeds a specified threshold for each individual episode, then it will exceed that threshold overall, in comparing total benefits to total cost. (The actual optimization process is more complex than calculating a benefit-to-cost ratio, as is done in this simplified example. Optimization subject to resource constraints involves calculating the value of a Lagrangian function, which takes into account all of the constraints. The real problem is further complicated by the fact that there are multiple performance (quality) indicators of interest, and it is desired to keep many of them at high levels.)

(The present article discusses general concepts. It is not a technical article, and some license has been taken in the use of technical terms. In technical terminology, the term "cost-benefit" analysis refers to an approach to evaluating social and economic programs in which all benefits are measured in dollars. It is often argued that measuring health-care benefits in monetary terms is inappropriate for a public program (since the economic benefit of a medical procedure is higher for a high-income person than for a low-income person, in which case rational allocation of services might allocate services to people in proportion to their expected earnings). In this article, health-care benefits may be measured in any type of metric, such as quality-adjusted life years (QALY), years of life, premature births, sight-years or waiting times. The methodology discussed in this article would more appropriately be termed "cost-effectiveness" analysis (or "cost-utility" analysis), not "cost-benefit" analysis (and the "cost-benefit" ratios would be termed "cost-effectiveness" ratios). The term "benefits" is widely used to describe health-care outcomes, and that is the term generally used here, instead of "effectiveness" or "utility".)

A comment is in order about whether rational (optimized, managed) care is egalitarian care, or non-discriminatory care. It is certainly egalitarian

and non-discriminatory in the sense that the same rules apply to all patients. It is *not* the case that the decision is made based solely on ability to pay and medical necessity. The rules take into account patient characteristics, and hence the decision depends on patient characteristics. If a 40-year-old and an 80-year-old each need a hip replacement, then the treatment decision may be to provide it to the 40-year-old but not for the 80-year-old, since the expected benefits (measured by a number of performance indicators, such as quality-adjusted life years) are high in the former case and low in the latter. The 80-year-old may be told that free public health care will not pay for the procedure, but that he is free to obtain the procedure using his own funds or private insurance. Or from family, friends, church, charity, or GoFundMe.com – from any source but a free public health program.

Actually, managed care is present in some aspects of Medicare, such as in the use of transplant selection committees to decide who receives donor organs, such as kidneys. But this is driven more by the limited supply of matching donor organs than by cost. The fact is, however, that the approach taken in deciding who receives a kidney is a good example of the approach of rational allocation of a limited resource. This same approach needs to be applied in the decision about whether to allocate every medical resource, not just kidneys. The problem with the present system is that it treats resources as if it were infinite. The only criteria taken into account are (1) is the procedure deemed medically necessary; and (2) will the patient or his insurance pay for it. With kidneys, a third criterion is added: (3) what is the anticipated benefit of the procedure. Patients having high benefit are given the kidney, and those having low benefit are not. The care is rationed, managed, optimized, on a case-by-case basis. When this approach is used, the overall results show a high ratio of benefits to cost.

As an example of comparing benefits to costs in making a decision to provide health-care benefits in a particular case, it is useful to consider the evaluation process to decide whether a kidney transplant will be

provided in some detail. The article, *The Evaluation Process*, posted at Internet website http://www.ucdmc.ucdavis.edu/transplant/learnabout/learn_eval_process.html , identifies 12 criteria that are taken into account in each case: Advanced kidney disease, adequate urinary tract, acceptable cardiovascular function, acceptable vascular system, acceptable lung function, acceptable liver function, active significant fungal or bacterial infection, cancer screening, obesity, functional status, psychosocial status, financial considerations. If the US is going to get serious about controlling the cost of its public health system, the approach of managed care must be adopted. Optimizing public health care is a substantially greater challenge than optimizing private insurance. Under the current private-health-insurance system, there is a single performance indicator – profit – that is to be optimized. The only constraints are that the cost of the procedure is covered and it is deemed medically necessary. There is no consideration of the total benefits and total costs of the system.

For a national health system to show a high return of quality for cost, the approach of assessing the benefit must be applied to each health-care episode (case). This does not mean or imply that a committee must be set up and decide each case, or that the case may be denied service. What it means is that the attending physician or nurse, assisted with an artificial-intelligence program, must consider the specifics of each case and make a rational determination as to whether public resources are well used if expended on this case, and what those resources should bee. The criteria on which the decision is based must take into account the specific characteristics of the case. This approach must be used for all public insurance, such as Medicaid and Medicare. For private insurance, where the patient is paying with his own cash or private insurance, consideration of benefit is irrelevant – he, not the public, is paying for the service, and the insurance policy is actuarially sound (i.e., the policy price is determined by comparing expected benefits (in this case, profit to the insurance company) to risk).

The Issue of Universal Care

The preceding section discussed the issue of providing high-quality care at reasonable cost. It was implied in that discussion that the system is to provide appropriate care to the public (all citizens or residents). The goal of providing high-quality care at low cost can be achieved even though care is provided to all; what is not provided to all is the same, heroic level of service, independent of consideration of benefit. Universal care is *appropriate* care for all, where appropriateness is determined on a case-by-case basis, taking into account both benefits and costs; it is not *identical care* for all.

Some may argue that it is cruel and inappropriate for a wealthy society to deny health care to the suffering, and that managed care will do just that, in some cases. I agree that it is cruel and inappropriate for any society to deny health care to the suffering. That is why I am proposing free basic health care for everyone. I do not agree, however, that managed care will deny health care to the suffering. It will deliver appropriate care to all those with health care problems. It will simply not deliver care that returns a low level of benefit for cost expended. Today's medicine is effective at alleviating pain and suffering at low cost. I do not see any reason why effective pain management services would not be justified and provided whenever they are needed. If a person cannot afford high-cost chemotherapy and radiation treatment for advanced cancer, he can certainly be provided low-cost hospice care, morphine, steroids, marijuana, oxygen and other palliative care to eliminate pain and nausea and achieve a reasonable quality of life, given the circumstances.

The Time Is Nigh for Transition to a New Health-Care-System Paradigm

The US public has not been served well by a private insurance-based health-care system. There is no reasonable rationale for insurers to make money on every health-care transaction. The US population needs access to free basic health-care services; it does not need access to health insurance. Forcing everyone to purchase health-care insurance, as was attempted under the Affordable Care Act, was an inefficient, freedom-destroying attempt to perpetuate the moribund present system. It was the last-ditch effort by the previous government administration to keep the exquisitely costly insurance-based system alive. The forced-insurance approach failed to keep people in the system, and it failed totally in controlling health-care costs. Not surprisingly, by continuing to focus on a private insurance-based system, the new administration has been totally unable – or unwilling – to find an alternative means of keeping the money machine alive.

Congress is not willing to admit that it is the basic nature – the business model – of the present system that is flawed. Trying to fix the problem of the very high cost of US health care by making this fundamentally flawed system more efficient will not solve the problem. As Albert Einstein once remarked, "We can't solve problems by using the same kind of thinking we used when we created them." It is not fraud, waste and inefficiency that are the problem – it is the fundamental nature of the present health-care system that is the problem. The problem will not be solved by tinkering with it; it will be solved only by replacing the system by a totally different one. To achieve high-quality care at low cost, America does not need a National Health *Insurance* system; it needs a National Health *Care* System.

If health care services were still reasonably priced, as they were before the era of health-care insurance, it would be reasonable to continue the private fee-for-service system that served us well for so long. Now that insurance has priced health-care services out the reach of many, both the fee-for-service model and the insurance-based model are no longer appropriate. Under these models, too many people have inadequate

access to basic health-care services, and may face financial distress or ruin because of high health-care costs and high health-insurance costs. The cost to the taxpaying public is far too high. Those models served us well for a time, but conditions have changed to the point where those models are no longer useful. It is time to move on to a new paradigm, or model, for delivery of health-care services in the United States.

Proposal for a New Health-Care System: Free Basic Health Care

I propose to abandon the insurance-based health-care model, and replace it with a model based on the provision of free basic health-care services, similar to that used for delivery of other public services, such as public education and national defense.

Specifically, I propose a National Health Service having the following key features:

1. A nationwide system of basic-health-care clinics will be established, similar in number and spatial distribution to elementary schools (specifically, within walking distance of most homes), but similar in administration to national defense. These clinics will provide free basic-health-care services to all US residents (citizens and noncitizens alike). These clinics will be staffed by nurses, supervised by an onsite nurse practitioner, and provided with advanced information and communications technology (ICT), including artificial intelligence (AI) tools to assist diagnosis and treatment. (Patients in remote areas will be provided services of visiting nurses, similar to that in use in rural parts of Australia). The patient's complete medical history will be instantly available to every clinic and hospital in the country, as in France today.
2. The clinics will refer out-of-scope cases to regional hospitals. The hospitals will provide basic hospital care services, free of charge.

3. The employees of the clinics and regional hospitals will be government employees (just as current Public Health Service employees, military service personnel, school teachers and staff of public universities). They will be employees of the uniformed U. S. Public Health Service.
4. Insurance is not a part of the public-health system, which provides universal access to health-care *services*, not health-care *insurance*.
5. A budget level is set for the total national health-care cost, such as five percent of GDP – the total cost is no longer open-ended.

Discussion

The Proposed New Health-Care System Offers Greater Freedom of Choice for Health-Care Services

Under the proposed new system, public clinics and public hospitals will provide free basic health-care services to all Americans. US residents desiring a higher level of care than basic clinic services and basic hospital services will be free to purchase such services, either directly from private service providers or through health insurance plans. As a result of the new system, no one will be denied the opportunity of continuing to participate in the previous insurance-based system, either in the purchase of health insurance or the sale of it, or in the purchase or sale of health-care services or products. Wealthy people will still be free to purchase the most exotic health care that money can buy.

Under the new system, no one will be denied the privilege of buying or selling health services or health insurance. Also, no one will be forced to purchase health insurance. No civil liberties will be lost because of a transition to the new system, except the freedom to mark up the cost of health-care services by 150 percent, as in the current system, and transfer the markup to insurers and owners of the current health-care

system. The new system will simply offer all basic health-care services free to anyone who choses that option.

In discussing the new system, I will assume that the level of basic health care to be provided free is what can be purchased at five percent of GDP. This is the cost of public health services in a number of OECD countries. (This level is arbitrary. It can be set at whatever the American public wish to spend, in total, on public health care. It is surely not as high as the present level of 17.2 percent of GDP.) This level of care is basic health care, not exotic health care. Basic health care does not include heart and lung transplants, treating hopeless cancer, or keeping people alive as vegetables. It does not include Herculean efforts to keep people alive for as long as possible with little or no regard for the cost and little or no regard for the expected health benefits.

To obtain high-quality health care for low cost it is necessary, when allocating limited health-care resources, the proposed system will provide free basic care in cases for which the ratio of benefits to costs is reasonably high. It may or may not include some high-cost procedures, such as knee transplants, if the recipient is young and strong and the expected benefit of the procedure is high.

For access to care that is unlikely to result in a reasonable level of benefit for cost expended, citizens will have to rely on their own resources, which would surely include private health-care insurance to control the risk of financial hardship or ruin from illness or accident. The present private US health care system will continue, but operating at a much lower percentage of GDP. The doctors and hospitals operating in that system may continue to make high earnings, and insurance companies may continue to make high earnings. The private providers will provide care that the public basic-care system does not provide, such as discretionary care or care that has little benefit compared to cost. That dual public/private system works in other countries.

Although the size of the private health-care sector may shrink, the doctors and hospitals who remain in that system may make even more money on average than they are making now – in fact, they arguably should, since the free public system will tend to take care of cases for which benefit-to-cost ratios are high, leaving the more profitable cases (higher cost-to-benefit) for the private sector. There just won't be as many private doctors and hospitals as before, and using them will be discretionary.

No doubt, insurance companies will be quick to offer "supplemental" health-care insurance plans to provide care beyond that of the free basic care, similar to what they now do for Medicare. That business would not be as lucrative as the present system, but it could easily represent 1-2% of GDP. In any event, insurance companies would do well to adjust to this new level of business, because it represents the future – the gravy train of the present system is about to be history.

The American citizen will have access to high-quality basic health care at zero cost, and he will have the choice to use private health care, if he chooses. The main thing that will change is that the medical establishment and the insurance companies will no longer be able to hold the American consumer hostage, and funnel two trillion dollars of profit to its coffers each year.

In the New System, Health-Care Decisions Will Be Based on Rational Decision Making, Not on Private Financial Incentives

Under the proposed new system, the level of care will be determined by rational decision making, comparing benefits to costs. The proposed system will not provide medications that cost thousands of dollars a year. It will not provide heart and lung transplants to old men for no other purpose than to enable them to attend the funerals of their friends.

It will not provide chemotherapy that gives patients "chemo brain" that extends their lives at the cost of making them unable to focus and work the rest of their lives. Decisions about what services, equipment and pharmaceuticals are provided will be based on rational decision making, taking into account the relationship of benefits to costs, and incorporating concepts (quality indicators) such as quality-of-life days. The cost of a medical service must be justified by the relationship of benefits to cost, not by how much money it will make for health-care providers and suppliers.

The proposed system will cost far less to the government and to the patients than the present system, and will provide quality care to every American who wants and needs it. (The total health-care bill will be set, not free to rise to an arbitrary level. More will be said about this later, relative to the issue of system optimization.) Because the government will purchase all drugs for the system, purchases will be based on rational decision making, employing concepts such as quality-adjusted life years added per dollar expended. The only losers in the transition to the new system will be the monied interests feeding off the bloated, ill-goaled present system – the insurers, the lawyers, the advertising agencies and media, the overpaid managers and support staff, the pharmaceutical industry, the fraudsters.

Health Care Indicators: Level of Care, Cost of Care, Effectiveness of Care, Efficiency of Care, Quality of Care

Annex 2 presents a summary of benefits of the proposed new health-care system. That summary summarizes the expected performance of the proposed new system with respect to the list presented earlier of reasons for the high cost of health care in the present US system. The items listed in that table are just a few of the indicators of performance of a health-care system.

There are a number of variables (indicators, measures) that measure the nature of a health-care system. The level of care is the quantity of services of various types that the system provides, either total or per-capita. The cost of care is the monetary cost of those services (either total or per-capita). The effectiveness of care is an indicator that measures the extent to which the care achieves a particular objective, such as increasing quality days of life (compared to a care alternative). The efficiency of care is the ratio of an indicator to cost. The value-for-cost is a ratio of a goal-related performance indicator to cost. Such a ratio is called a benefit-to-cost ratio or (more frequently) a cost-benefit ratio. The quality of care is the effectiveness of the care in addressing the ultimate goal of treating health issues. It can be measured by a number of performance (outcome, impact) indicators, such as number of days lived, number of quality days lived, or quality-adjusted life-years.

If the total budget for a system is not limited, or constrained, it is not possible to obtain reasonable estimates of the value of a utilized resource, and make rational decisions about how the resource should be used. At present, there is no specified limit on the total cost of the nation's health care. If insurance will pay for it, a service will generally be provided, regardless of how little benefit accrues to society – or to the patient! Without a limit on health-care costs, they continue to increase, year by year. Once a limit is imposed on the total level of resources to be used (such as total cost), the relative value of the resources can be assessed, and it is possible to allocate those resources in such a way as to maximize performance (quality, output, impact) subject to the resource constraints. This procedure is called Lagrangian optimization.

At present, the primary function of America's health-care system is to generate wealth for the system controllers. The controllers do not wish to set a limit on cost, since that would limit the generation of wealth for them, and there is no limit to their greed.

In designing a system to accomplish this goal, it is important to realize that *what gets measured gets done*. In the present system, attention focuses on delivery of services and generation of wealth for the system controllers, and that is what gets done. Attention does not focus on the relationship of health benefits to costs, and that does not get done. The principal reason why America's present health-care system is costly is that it is not designed or optimally configured to provide high-quality health-care services at low cost. In making decisions about the allocation of health-care resources, it does not take into account the relationship of health benefits to cost in such a way as to maximize the value obtained for cost expended.

The cost of the American health-care system will not decrease, and value-for-cost will not increase, until the system goal is changed from its *de facto* goal of generating wealth for the system controllers to the goal of delivering high-quality low-cost health care to all Americans. The present system is akin to a high-performance racing car for the system controllers, when what is needed is a family station wagon for the American people. The present system is a complex, complicated, massive system that has evolved to accomplish a specific goal (generation of profits for the system's controllers) very well. The present system is not a general-purpose machine that can be reprogrammed to accomplish a quite different goal (delivery of high-quality low-cost health care) well. No amount of "tweaking" will transform a race car into a station wagon.

The New System Will Make Use of the Methodologies of Modern Management: Quality Management; Systems Engineering, Operations Research and Management Science

The major features of the present system – control by private insurance companies, bloated health-care salaries, financialization – have no relevance to a high-quality low-cost health-care system. Conventional

health-care reform will not work to transform the current system into the proposed new system. That approach has been applied for years, to no avail. The present system must be scrapped. Repealed and replaced. But not replaced with the same type of system as we currently have – a high-cost system based on private insurance, oriented to generating profits for the system owners. The oft-cited approach of "fixing what is wrong" in the present system is misguided. That approach has been tried for seven years, with no satisfactory results. The present system is fundamentally flawed and beyond repair. It is a financial scheme designed to generate income for system controllers, and it cannot reasonably be adapted to provide high-quality health-care services at low cost.

The new system will provide high-quality low-cost care through quality management, systems engineering, operations research and management science, making full use of available technology (medical procedures and equipment, artificial intelligence, information technology, and communications technology).

In order to construct a health-care system that produces high-quality low-cost care, the American people will have to do two things. First, they will have to decide on what percentage of the total national budget is to be spent on health care, such as five percent of gross domestic product (the current level is 17.2 percent). Leaving the total cost unconstrained, as is presently done, is not a feasible option. Second, they will have to decide that they want an optimized (or optimal) system of health care. What this means is that the level and mix of health-care services is determined to maximize certain health indicators, subject to the constraint on total cost. Exactly how that is done is a technical matter that can be done using well established constrained-optimization theory. It will be accomplished using the proven techniques of quality management, systems engineering, and operations research / management science (especially decision science and Lagrangian optimization). Unlike the current method of determining the level and

mix, the methodology can be completely transparent, so that Americans can see exactly how their health-care dollars are being spent, and why.

A well-established methodology exists for assessing and ensuring quality. The concepts of quality management arose in the 1940s in the United States with the procurement of massive amounts of defense materiel from numerous suppliers in World War II. The name most closely associated with quality management is the statistician W. Edwards Deming. The standard approach to quality management today is to adhere to an international quality-management standard, such as ISO 9000 (in a nutshell: "Say what you do, do what you say, prove it, and improve it".)

Who Pays, Who Benefits?

From a political viewpoint, an important consideration in evaluating any health-care system is the issue of who pays and who benefits. The following table shows the cost to the government / taxpayer and the cost to the individual (apart from taxes) under the present system and under the new system, as a percentage of GDP.

Key statistics on which this table are based are the percentage of health-care costs paid under the present system by government sources (46%), by individuals (28% - 48%), and by private businesses (0-20%).

As mentioned above, under the new system the total healthcare budget is set at a fixed proportion of GDP, such as five percent. Although this value is arbitrary, it is reasonable to set it at five percent, since this value has been seen to be from experience what the cost of universal high-quality health care can be in a developed country. The table also shows four other levels – 6%, 7%, 7.9% and 8%. The cost to the government for the present system is 7.9% of GDP (i.e., .46 x 17.2 = 7.9). For all

values of the total healthcare budget below 7.9%, the cost of the new system to the government / taxpayer is less than for the present system.

Note that the "cost to individual" is an average for the nation. Under the present system, the cost to specific individuals varies wildly, depending on how much the individual pays for insurance and how much he pays out-of-pocket if he requires health-care services. The cost to the individual is shown as a range for the present system since, as discussed earlier, it is not certain how much of the employer cost of health insurance is passed on to the individual (in the form of lower wages).

Cost to government / taxpayer and to the individual (apart from taxes) under the present health-care system and the new health-care system						
	Present system	New system				
Total cost of health care (% of GDP)	17.2%	5%	6%	7%	7.9%	8%
Cost to government/ taxpayer (% of GDP)	7.9%	5%	6%	7%	7.9%	8%
Cost to individual (apart from taxes, % of GDP)	4.8-8.3%	0	0	0	0	0
Cost to business (apart from taxes, % of GDP)	0-3.4%	0	0	0	0	0

The table is (intentionally) somewhat redundant, since, for the new system, the cost to the government / taxpayer is whatever the national health care budget is set to, and the cost to the individual is always zero.

It is important to keep in mind that in the new system, the total national cost of health care is fixed, not open-ended. Since the experience of other developed countries shows that universal high-quality health care can be provided at a level of about 5% of GDP, that figure is used as a "nominal value" in this paper.

The table emphasizes the fact that for the new system the cost to the government / taxpayer will be less than for the present system for any total health care budget less than 7.9% of GDP, and the cost to the individual (apart from taxes) is zero in any event. In short, for the new system, health-care costs are less both for the government / taxpayer and for the individual.

Corruption, Waste, Efficiency and Effectiveness in the New System

The preceding section discussed theoretical aspects relating to the performance of a health-care system. An issue to address is just how effective and efficient the proposed new system would be. In view of the OECD report on wasteful spending on health, it is reasonable to conclude that all large health-care systems are subject to a nominal percentage of inefficiency and waste. It may be useful to consider the experience of the Veterans Administration (which provides health care services) and the Public Health Service. Of late, the VA has a tarnished reputation with respect to provision of timely service. The US public education system is both effective and efficient. The US military is the most powerful war machine in the world. The National Institutes of Health enjoy a fine reputation. Australia has proved the feasibility of delivering high-quality, low-cost health care in remote areas using advanced information-technology and artificial-intelligence systems.

Almost all developed countries provide affordable access to health care for their citizens, and a number of countries provide free health care to their citizens. The new system can be as efficient and effective – or as costly – as people desire it to be.

Under the new system, fraud would virtually disappear. It would disappear because the vast opportunities for fraud would cease to exist. The system will not be dispensing billions of dollars of reimbursements, subsidies, incentives and other payments, as the present system does. The purpose and function of the new system will be the provision of health-care services, not moving money around. All providers in the new system will be public employees receiving salaries. Patients will receive only services, not cash or vouchers or insurance cards. Service providers will receive salaries, not reimbursements. There will be no insurance claims to process, because there will be no insurance. There will be no litigation, since the government cannot be sued without its permission. Malpractice by doctors and other health professionals will be addressed by within-system review and arbitration, as is practiced in police departments and the military.

As the OECD paper on wasteful spending on health reveals, there is some level of waste in most large health care systems. The present US health-care system affords unusual opportunities for fraud, abuse, and wasteful spending, on a massive scale. The new system would eliminate most of these opportunities, by dramatically reducing the amount of money flowing with abandon through the system, and by measuring quality and the relationship of benefits to cost.

The present system is very efficient at generating wealth for the system controllers, and reasonably efficient for delivering health-care services (for example, waiting times for treatment in the US are among the lowest in the world). It is very poor, however, with respect to delivering high-quality services at low cost.

The main reason why the new system will provide high-quality low-cost health-care services is that its primary function and purpose will be to do just that, not to reimburse, and definitely not to funnel vast wealth to the system controllers.

Two Impediments to Reform of the US Health-Care System: The Fixation on an Insurance-Based System and the Reluctance to Employ Rational Decision Making

The Fixation on Private Insurance

Some people may argue for replacement of the present system of private insurance for health care, having multiple payers (insurers), with a single-payer system. With such a system, the government would be the single payer. While that approach could lower costs and improve quality, it is unlikely that it would do so. One has only to look at America's high-cost, wasteful, perverse-incentive welfare system to understand why. That system has destroyed the nuclear family, promoted and produced large single-parent families, resulted in welfare dependence that spans generations, and wasted massive amounts of public money.

A major problem of that system is that, like the present health-care system, it relies on distribution of money, rather than on distribution of services. Instead of providing services directly, the government sends out welfare payments (checks, deposits, cards), or reimburses service providers. It focuses on activities and distribution of cash, not on achieving a well-defined goal. That process enriches service providers, but it relegates the welfare recipients to lives of dependence. It lends itself to fraud and abuse, and does little or nothing to address the problems leading to the need for help. Quite the opposite, it perpetuates and worsens the problem by enabling dependence and provides no

motivation for achieving independence. It provides an incentive to continue dependence.

Insurance and reimbursement are not useful approaches to America's health-care problem. Moving to a single-payer system could theoretically help, but it is not sufficient, and experience has shown that the payment / reimbursement approach to social and economic problems is an extremely poor one (except for the financiers and service providers who feed off the system). America's public education was one of the best in the world at delivering high-quality educational services at low cost in large part because it centered on direct delivery of services, not on private providers, vouchers and reimbursements. America's welfare system has performed very poorly because it focuses on efficient delivery of cash, not on delivery of services that will make a difference in quality of outcome for low cost.

The present welfare system has no set limit on expenditures, and there is no attempt at rational distribution of services (to achieve desired outcomes, using resource-constrained optimization). A single-payer insurance-based health-services system could be a larger disaster than the current single-payer welfare system.

Almost everyone is fixated on an insurance-based system (whether public or private) as the only reasonable basis for America's health-care system. It is a quintessential capitalist approach, utilizing the private sector to deliver the products and services. They appear not to recognize or admit that an insurance-based system has been in use for over half a century, and that it is a spectacular failure in large part because of the insurance feature. The July 22, 2017, issue of *The Economist* magazine includes an article about current efforts to fix the broken US health-care system (*Heath-care fraud: The $272 billion swindle*, posted at Internet website https://www.economist.com/news/united-states/21603078-why-thieves-love-americas-health-care-system-272-billion-swindle). All three of the article's recommendations recommend retaining insurance

as the fundamental basis for the system. That approach has proved more than wanting – it has been disastrous. The focus is on insurance and profit, not on health care.

While private enterprise may work well for providing many goods and services, it does not appear to work well for providing public services. The primary goal of private enterprise is always generation of profit – the product does not matter to stockholders. It did not matter to stockholders that Singer moved from making sewing machines to aerospace, or that Goodrich moved from making tires to aerospace, or that Nokia moved from making rubber boots to making cellular telephones. But it *does matter* that the US national health system remain in the health business, and that provision of high-quality health care to all Americans at low cost remain its primary goal. Profit should not be its primary goal, but profit is in fact the primary goal of every private insurance company.

The Reluctance to Employ Rational Decision Making

In order to establish a health-care system that provides high quality care for low cost, it is essential to compare, for each medical episode (that is, taking into account the patient's characteristics), the expected benefits of alternative treatments to their costs, and select a treatment alternative for which the ratio of benefits to costs is high. In the present US health care system, making such comparisons is considered anathema. There are all sorts of maxims floating around to disparage that approach: "you can't put a dollar cost on human life," "government bureaucrats have no business making decisions that should be the domain of the physician and patient," "the government will set up death panels to decide who lives and who dies." The fact is, if it is desired to establish a system that delivers high-quality care at low cost, it is essential to make a comparison of expected benefits to cost, and make decisions based on that comparison. If people wish to ignore quality and effectiveness and value-for-money, they have every right to do so – when spending their

own money in a private health-care setting. But making decisions independently of considering the relationship of benefits to costs has no place in a public health system that is designed to provide universal access to basic health care at low cost.

In order to achieve high quality for low cost, it is necessary to do two things: to place a constraint on total cost, and to allocate services based on a comparison of benefits to costs and selecting services for which the ratio of benefit to cost is high. If you are 65 years old and need a heart-and-lung transplant, you may have one if you have worked hard and saved for it, or if you have purchased good health insurance. That is fine. You worked for your money, and you should be able to spend it as you wish. If, however, you are asking for free public health services, and you will never work again, there is no sound (economic) reason why the public health system should provide this service to you free of charge. The limited resources could be much better spent. Rational allocation of health-care services is an essential feature of a system that is to provide high-quality care at reasonable cost. To operate such a system, it is necessary, for each specific episode and alternative treatment considered, to compare performance indicators such as quality days of life added and expected lifetime earnings to the cost of service. Accepting this essential feature of rational allocation of health-care services of free public health care is necessary, or such a system will never become a reality.

It is noted that the concept of managed care is embodied in some parts of the present US health-care system, namely in health maintenance organizations (HMOs). HMOs provide health care for a fixed annual fee. As implemented in the US, private HMO plans, based on insurance, do not achieve significant cost savings over non-HMO plans. Although out-of-pocket costs are reduced for consumers, controlling for other factors, the plans do not affect total expenditures and payments by insurers.

The Role of Systems Engineering in the Development of a New Health-Care System

The preceding paragraphs have identified two impediments to design of an improved system. In designing a new system, it is important to identify a wide range of alternative solutions, and not to eliminate potentially useful candidates for arbitrary reasons, such as their being quite different from the current approach. As mentioned, the methodology of systems engineering will be used to assist design of the new system. The major steps in system engineering are (1) identification of goals, objectives and constraints; (2) identification of relevant technologies; (3) identification of criteria for assessing system performance; (4) synthesis of a range of candidate solutions; (5) evaluation of the identified alternatives with respect to the performance criteria; (6) selection of a preferred alternative; (7) detailed system design (the preceding steps are concerned with top-level design).

The US government does not employ, or require to be employed, the principles of systems engineering in the design and development of its social and economic programs, and is the major reason why our current tax, welfare and health-care systems are so poor. Systems engineering is used to design our weapon and space systems, and that is why they are so effective.

A key aspect of the design of a good system is the synthesis of a range of alternative candidate solutions. By arbitrarily restricting the range of candidate solutions, such as by requiring the system to be insurance-based, or the refusal to allow rational decision making on a case-by-case basis, it is not likely that a particularly good solution will result. Those features are key elements of the present system, so that requiring them for a new system virtually guarantees that the new system will be little better than the old.

Recently, I heard two comments that reflect limitations in vision that can doom the attempt to develop an improved system to failure. The first was the opinion that all of the reasonable alternatives had already been identified, and the problem was simply a political one of choosing from among them. This view is totally false. All of the reasonable alternatives *have not* been identified. The system proposed here is a feasible solution to the problem, and it is not (at present) under discussion at all.

The second comment I heard recently on a national talk-radio program on health care was that consideration of a "single payer" system was a dead-on-arrival non-starter politically, because the American people would never accept it. This view is also totally false. Americans are more interested in relevance to the quality of their quality of life than in adherence to abstract principles. They are more interested in having access to affordable health care than in minimizing the level of socialism in the country. They are quite willing to accept free public education (which is highly socialistic), and they will be quite willing to accept free public health care. Americans do not wish to waste 60 percent of their health-care dollars on health care that makes little or no difference in outcome quality or that unnecessarily enriches the medical establishment and the insurance industry. These features of our present health-care system are promoted by its capitalist basis (profit orientation). Both capitalism and socialism have a place in American culture, and both have contributed to its success. At present, however, unfettered capitalism has severely damaged the country's health-care system. Americans have tried the profit-driven health-care model for half a century, and found it to be severely wanting. If it means universal access, high quality and low cost, Americans would be quite pleased to see more socialism and less capitalism in health care.

The Establishment Will Resist a Move to the New System, and Assert Many Reasons Why It Is Un-American and Destructive of Liberty

The move to a new health-care system will terminate the flow of income and wealth to many people. These people will fight hard to prevent that from happening. They are represented by powerful lobbyists, who are skilled at controlling the US government.

Organizations such as the AMA and AHA will fight aggressively, as in the past, to resist the ideas presented here. Their goal is to maximize income for physicians and hospitals, no matter what the cost to the public. The goal of the US government is to maximize free-market capitalism, including protection and nurturing the health-care industry, the insurance industry and the legal industry that thrive so well on the current insurance-based system. Treating public health as a cash cow to be milked by private interests, such as the insurance industry, the legal industry, the pharmaceutical industry, the advertising industry, the medical equipment industry, physicians and hospitals has not served the public well. The proposed alternative system will.

In view of previous experience, the establishment will refuse to admit that the main reason for their resistance to the new system is that it will reduce their income, wealth and power. Instead, they will couch the reasons for their opposition in philosophical terms, stressing the loss of freedom to the patient. They will assert that the new system is "socialistic"; they will claim that it reduces the freedom of the American citizen; they will say that it reduces his choice of health services provider; they will say that it gives the government too much control over health-care decisions. They will claim that under the new system the quality of care will decrease; that the government will be making decisions that should be left to doctors and patients; that the government will ration health care; that the government will set up "death panels." They will divert attention from consideration of the relationship of benefits to cost. They will say all manner of things to imply that the

quality of health care will be worse. They will say anything to deflect attention from that fact that their major concern is their loss of money. They will not admit that the salient features of the present system are that US health care is very expensive and needlessly costly, that many people do not have access to quality care, and that the system funnels a needlessly large portion of the country's wealth into the owners and operators of the system.

In the past, the AMA and AHA derided health insurance as socialistic, although they now embrace it since it has provided their members with massive wealth. Some still view national health insurance as socialistic and criticize it on that ground. Now that many US citizens have been priced out of access to medical care and access to health insurance, they are participating in socialistic schemes, such as Medicaid and Food Stamps. The irrational focus on socialism, implying that it is a bad thing, is misguided. Socialism is an essential and pervasive aspect of civilized society: public education is socialistic; the New Deal programs of the 1930s (which saved the country) were socialistic; Social Security is socialistic; unemployment insurance is socialistic; the US military is socialistic; corporations are socialistic; mandatory bank deposit insurance is socialistic; the rule of law is socialistic.

Contrary to what many Americans believe, socialism is not communism, and socialism is not a bad thing – it is a good thing! It dramatically improves the quality of people's lives. The US has one of the highest levels of regulated free-market capitalism in the world, but it is also one of the most socialistic societies in the world. It ceased being truly free when, in 1890, it closed the Frontier, and there was no more free land (to be taken from indigenous peoples). In the context of today's highly populated and highly socialistic United States, decrying the present proposal for direct access to free health care as socialistic is laughable. Free basic health care is an idea whose time has come, and is as appropriate in today's world as free access to public education, police services, and military defense services. Compared to the present system,

it is less costly, both from the viewpoint of the government budget and the health-care consumer.

Whatever negative things the AMA and others may say about the proposed new health-care system, one fact is undeniable: the nation has tried the private insurance-based approach for over half a century, and that approach has failed miserably. In fact, each year, the situation becomes worse and more dire. The present insurance-based approach is a catastrophic failure!

Although the efforts of the AMA to restrict the number of US physicians was motivated by greed, it is interesting that a reduction in the physician-to-population ratio was bound to occur eventually. The reason for this is that a nurse, equipped with an artificial-intelligence computer program, can accomplish higher quality diagnosis and treatment than a physician alone, without an AI program. There does not have to be a physician in every clinic. A nurse practitioner, along with a full range of artificial intelligence and information technology functionality, can operate just as effectively, at substantially lower cost. Complicated cases can be referred to consulting physicians or specialists at regional hospitals. American medicine has been loath to embrace artificial and information / communication technologies. While that stance may have worked to keep medical salaries high in the mid-to-late twentieth century, the time is nigh for full acceptance and use of these quality-enhancing, cost-reducing technologies.

The proposal to provide free basic health-care services is not as radical as it may appear. A century ago, health-care services were low-cost – on the order of five percent of annual income, as is the level of public health care in a number of OECD countries today. The US is now a fabulously wealthy country. While the current mix and delivery system for health-care services is very expensive, delivery of basic health-care services can be reasonably low-cost. The US is currently spending vast amounts of money on padded-cost delivery of often-inappropriate

services. The cost of providing basic health-care services, totally free of charge, will be much less than the cost of the present system – both for the government (taxpayer) and the patient. The country can easily afford this system. All that stands in the way of establishing it is denying the controllers of the current system, so lucrative for them, the power to continue it.

If US citizens decide that they wish to spend 17.2 percent of GDP on health care, that is fine – that is their right (inappropriate as that choice may be). But it makes no sense at all to spend it through today's corrupt system. In today's system, an estimated one-third of the today expenditure covers useful health-care services, and an estimated two-thirds is wasted on inappropriate care, inefficient care, bloated salaries, fraud, and insurance. If US citizens want to spend 17.2 percent of GDP on health care, so be it – but spend it on health care, not on funding Wall Street and providing lavish incomes to medical establishment doctors, executives and administrators! Massive incomes and profits have no place in a public services program supported by taxpayer dollars.

Some people object philosophically to the concept of providing free health care as contrary to American values of personal responsibility, self-reliance and independence from government. The fact is that the proposed system of free basic health care will be far less costly than the present money-making monstrosity, in which a major portion of the cost is wasted. With free basic care, the public will in fact be *less* dependent on the government, not more so. The total cost of health care, as a percentage of GDP, will decrease.

In reality, no public services are free – they are paid for with taxpayer money. With respect to providing public services free of charge, it is noted that many public services, such as defense, air traffic control, education and environmental protection, are delivered at no additional charge to the beneficiaries or primary recipients. In some instances, that is the efficient, rational way to deliver the services.

Some may refer to the system proposed here as a "single-payer" system, implying that that is a disadvantage. That label is no more appropriate and relevant here than referring to the US military or public education system as single-payer systems. The US Department of Defense is the single purchaser of cruise missiles, but what of it? In the new system, health-care professionals in the free clinics and free hospitals will be employed in the same fashion as military personnel and education personnel. Some issues, such as national defense, atmospheric pollution, education and public health affect everyone, are essential to the continued existence of the nation, and are best handled in an integrated, efficient, effective fashion. A single payer system can keep prices low and promote the rational distribution of health-care services. It is very clear that the present multi-payer system, based on loosely regulated free-market competition, has failed to accomplish these goals.

Whether the health-care system is a single-payer system or a multi-payer system is not an essential issue. Whether the system is based on private or public insurance is not an essential issue. An essential issue is whether health care expenditures are controlled (constrained, limited, capped) and rationally allocated. An essential issue is whether the primary function and purpose of the system is to provide high-quality low-cost health-care services to Americans, or to provide billions of dollars of wealth to Wall Street. Efficiency by itself is not an essential issue. The issue is efficiency *to what end*. Making the present system more efficient in accomplishing its mission of funneling America's wealth to Wall Street will not solve the problem that America's health-care system is absurdly too expensive and is not efficient at providing high-quality low-cost health-care services to Americans.

If Americans Want a High-Quality Low-Cost Health-Care System, They Will Have to Fight for It

The US Constitution asserts that the role of the federal government is to provide for the common defense and promote the general welfare. Some may interpret this declaration to mean that Americans have a right to health care, along with a right to education, defense, a clean environment, justice under the law, and a myriad of other things. That assertion is not my assertion. The meaning of the word "right" has been perverted in recent years. A right is a privilege granted to someone by a power willing and able to enforce it. Americans may claim the rights listed in the Bill of Rights (the first ten amendments to the United States Constitution) only so long as they preserve the United States. Human beings do not have "natural" rights or "human" rights or "God-given" rights to anything, even to air in a jug. They have rights to what they are willing to fight for and are able to establish and preserve. They do not deserve high-quality low-cost health care. They do not deserve anything. They have a right to high-quality low-cost health care only if they are willing to fight for it and acquire it. Until now, the American people have demonstrated only that they are willing to allow Wall Street and the medical establishment to continue to make billions off their sickness and accidents. It is hoped that they will recognize the folly of this viewpoint and approach, and work to establish a system that serves them better.

For a good discussion of rights, read John Brigham's book, *Civil Liberties and American Democracy* (Congressional Quarterly Inc., 1984). Brigham cites (pp. 257-260) three major threats to Constitutional Democracy: from Elites, from the People, and from the Experts. The present US health-care system reflects damage from all three threats. The Experts – the health-care professionals, the managers, the insurers – have constructed a system that does not provide high-quality low-cost care to all Americans, but instead funnels a massive portion of GDP to Wall Street. The Elites – the Senators and Representatives – in some instances do not understand the nature of the problem (that is why they cannot come up with an alternative to the Affordable Care Act), or have sold out to the monied interests that control the current system, and wish

only to "improve" that obscene system. The People have abandoned their responsibility to hold the Elites responsible for promoting the general welfare, and of assuring high-quality low-cost health care for all Americans. If they want free health care, why do they allow insurers to charge massive amounts of money to provide it? They can have free health care at a much lower cost to taxpayers than the cost of the present system, if only they choose to do so.

Americans may have a "legal" or "on-paper" or "Constitutional" right to affordable health care (depending on how you interpret or implement the Constitution – a right to health care is not explicitly specified), but they will not have an actual (realized) right to it unless they insist that the US government provide it. Over the past three quarters of a century, they have gradually relinquished the right to affordable care to Wall Street. Recall that a right is a privilege granted by a power willing and able to enforce it. The US government no longer wishes to provide affordable care to all Americans, so they no longer possess that right. Instead, the US government backs the authority of Wall Street and the medical establishment to make vast sums of money off Americans' health problems. Americans did not choose to preserve their right to affordable health care, but preferred instead to allow the construction of a health care system that pays fabulous amounts to insurance companies and the medical establishment.

The US government shares control of the US health-care system with the insurance companies and the medical establishment. At the present time, the American public does not control this system. No one is going to give Americans access to affordable and universal care unless they insist on it. Through negligence, they have let it slip away. Getting it back, when it has proved so lucrative to the controllers of the present system, is going to be a challenge. The challenge will be to deny Wall Street and the medical establishment the privilege of receiving two trillion dollars a year more than is justified by the value of the health care they provide. They now view their profits and incomes as an

entitlement. Under current laws and regulations, they are in fact legally entitled to these vast sums. They will fight to keep this entitlement.

The American public have relinquished control of the nation's health-care system to the medical establishment and the insurance industry. If they wish to change the country's health-care system to one that serves them better, they are going to have to regain control of it.

In the Fight for an Improved Health-Care System, Congress Will Side with Wall Street and the Medical Establishment, Not with the American People

In the fight for an improved health-care system, congress will side with Wall Street and the medical establishment, not with the American people. To see why this is so, consider the role of the US government in the economic meltdown of 2007. Brooksley Born (head of the CFTC 1996-1999) warned of the danger of unregulated financial derivatives to the US financial system. The spectacular failures of Orange Country, California, Barings Bank, and the Long-Term Capital Management hedge fund showed the wisdom of her viewpoint and efforts. Government officials (Alan Greenspan, Robert Rubin, and Larry Summers) suppressed Born's efforts, and directly caused the economic meltdown of 2007. As a direct result, millions of Americans lost their homes and financial security.

Although the meltdown was willfully and knowingly caused by Wall Street and the US government, no leader of government or the private finance industry was punished for this massive economic crime against the American people.

Further discussion of the role of Wall Street in creating financial crises and the role of the US government in using taxpayer money to cover Wall Street's losses, is presented in Annex 3.

The Likelihood of Implementing the New System

Now that Wall Street controls the health-care system in the United States, it is germane to address the issue of the feasibility of wresting control of the system back, and establishing a rational, efficient, effective, high-quality, low-cost system. US politicians are now in thrall to lobbyists. If they do not toe the line, they will not be re-elected. It may be too late to dismantle the current system, which has a cancerous stranglehold on the country, reflected in the 17.2 percent health-care share of gross domestic product. In view of the incredibly strong vested interests in the current system, meaningful change will be very difficult, if not impossible. (A similar situation exists with respect to the present US tax system. Despite previous attempts at tax reform, the US tax system continues to be a highly inefficient, privacy invasive system, serving to enrich tax accountants and attorneys for no good reason. The US government has steadfastly resisted moving to a value-added tax, despite overwhelming arguments of its superiority to the income tax, and the fact that most of the developed nations of the world have adopted it. See my book, *The Value-Added Tax: A New Tax System for the United States*, at Internet website http://www.foundationwebsite.org/VAT.htm, for details on this topic.)

The medical, insurance and legal industries have a stranglehold on Congress and the Executive Branch. These industries and their political thralls will fight the system proposed here tooth and nail, even though it will serve the nation better. Change will be possible only if the US population embraces the concept proposed here, and insists that it be implemented.

It is ironic but satisfying that the greed that spawned the present US health-care system – that obscene money machine that is sucking our people dry – will likely be the principal factor leading to its demise, the

Achilles heel that will eventually kill it. The system will likely be destroyed by its own fabulous success – not as a health-care system but as a money machine. It has grown too large, and it consumes too great a portion of our economy to be ignored, hidden, condoned or reasonably allowed to continue to exist. Like the financial crisis of 2007-2008 that destroyed so many homes and life savings by means of financial derivatives, the US health-care system is impoverishing American citizens, with the full backing of the US government. It is one more blatant example of how the US government aids and abets elaborate financial schemes that benefit the rich at the expense of everyone else. Socialize the costs, privatize the profits.

We can have better quality health care for lower cost, so why does the government continue to promote the present system of insurance-based health care? Why? Because the US government is owned by Wall Street, and, unless it is forced to do otherwise, it will pass and enforce laws and regulations that benefit Wall Street. The present health-care system is now so obscenely large that its venality and corruptness can no longer be ignored, or hidden, or justified by any stretch of the imagination.

The truly amazing feature of the present US health-care system is that it provides far less access to health care than other national health-care systems, at vastly higher cost. All Americans could have access to free high-quality health care, for a fraction of the cost (to the government / taxpayer) of the present system. It is remarkable that, instead of that, they prefer to send two trillion of their hard-earned tax dollars to Wall Street each year, simply for the privilege of including private insurance as a major component of their national health-care system. The public evidently does not realize and appreciate that the present system is designed primarily for the benefit of Wall Street, not for the benefit of its health care, and it evidently does not realize the magnitude of the private-insurance rip-off. Like income taxes and overpopulation, the problem did not arise overnight – it evolved gradually, over decades.

Now, however, the problem has become so massive and apparent that the American public, that sleeping giant, will soon awaken and demand reform. The outraged public will turn on the present system and destroy it. If ever the time was right to implement the proposed new system, it is now.

If the US population wants direct access to free basic health-care services, it can have it. All it has to do is make its voice heard. What is proposed here is Constitutional: the federal government is to provide for the common defense and promote the general welfare. Under the present system, about 60 percent of each health-care dollar spent by each US citizen goes to insurers, to inflated salaries for health-care providers, to equipment providers, to pharmaceutical manufacturers, to inappropriate care, and to fraudsters – above and beyond the value of the health care (as compared to that of other developed countries). Under the new system, this obscene disgrace will end, and the US citizen will receive full benefit of his tax dollars spent on provision of health-care services.

On Equity

A major factor that will help determine the outcome of the fight for a new health care system is the issue of equity, or fairness. The present system is not at all equitable, from several viewpoints. First, compared to other developed countries, more than half of each health-care dollar is wasted – spent on care that does not improve outcome quality, and serves only to enrich the medical establishment and the insurance industry at the expense of the patient or taxpayer. This is not at all fair to the patient or the taxpayer. Americans sense strongly that something is very wrong here, but many are not sure what to do about it. They have been brainwashed into believing that socialized medicine is evil, and they do not see a better way. They do not like the present system at all, but realize that it is not reasonable to terminate the present system

unless it is to be replaced with a better one. Replacing the present system could make things worse, not better.

The second reason why Americans view the present health-care system as inequitable is that illegal aliens – criminal invaders of our country – are provided free health care, while citizens have to pay for it. They can visit emergency rooms for free. (The care that they receive there is extremely high cost. One night, with ear pain, my mother was taken to an emergency room by her assisted-living facility, and Medicare – the US taxpayer – paid almost one thousand dollars to have some wax removed from her ear.) In the ultimate indignity, they can have their babies delivered there, and have them certified as US citizens. They have hit the jackpot, courtesy of Uncle Sam and at the expense of the American taxpayer.

Third, people who pay substantial taxes are fed up with the fact that people who have paid nothing or very little for social insurance are provided free health care at exotic levels of treatment (e.g., Medicare), while those who have paid substantial taxes have to pay for that level of treatment, or they will be denied it.

Fair is fair. Taxpaying citizens should receive at least the same quality of care as criminal invaders of our country, and as those who receive free care. Under out present system, this is impossible. The incredible unfairness of the present system is a major reason why this bizarre system will be replaced.

Cost Advantages of the New System

A salient feature of the new system is that the total national health-care cost is fixed, and the services to be provided are determined by Lagrangian optimization (to meet the budget). Since OECD data show that universal high-quality care can be provided at a budget level of

about 5% of GDP, that figure has been used in this paper as a "nominal" total cost of health care.

Under the new system, the cost to the government / taxpayer is less than that of the present system as long as the total health-care cost (budget, limit) is set to less than 7.9% of GDP. The cost (apart from taxes) to the individual is free, whether or not he receives care. No one is forced to purchase health-care insurance.

The fact that the cost to the government / taxpayer and to the individual are substantially lower under the new system than under the present system is a strong "selling point" for the new system.

The Next Step – Detailed System Design

This article has addressed only high-level conceptual issues. In order to develop a high-quality low-cost health-care system, it is necessary to construct a detailed design of the system and implement that design. The primary methodologies for doing this are systems engineering and Lagrangian optimization, making full use of modern technologies such as artificial intelligence, database systems, information and communications technology, operations research / management science and quality management. A look at past experience in the US and current experience around the world shows that the cost of a national health-care system that delivers high-quality care to all US citizens can be just five percent of gross domestic product; it does not have to be 17.2 percent of GDP. All it takes to accomplish this is the will to do so and the application of existing scientific methodologies for system design, development and optimization.

An example of the application of systems engineering to solve social and economic problems is presented in my book, *A New Tax System for the United States*. An example of the application of Lagrangian

optimization to solve an economic problem is presented in my article, *A Lagrangian Approach to Customer Relationship Management: Variable-Rate Pricing Strategy*, posted at Internet website http://foundationwebsite.org/LagrangianApproachToCRM.htm.

As part of the detailed design, national health systems in other countries should be examined in detail. Almost all developed countries have national health systems that provide reasonable-cost access to health care, either by means of direct access or through health insurance (almost always public social insurance, not private insurance). About a dozen countries provide free health care. America's national health care system, heavily based on private insurers, is the costliest of all developed countries, yet it does not provide universal access to health care for its citizens and its quality of care is no better than that enjoyed by other developed countries. It does not have to be this way.

This article has described and discussed America's health-care system, identified reasons underlying its very high cost, and proposed an alternative approach that will provide high-quality care at lower cost. The purpose of this article is to explain why America's health-care system is so costly, and to show that feasible alternatives are available that can provide high-quality care at lower cost. As always, it is up to the American public to decide on what level of quality and cost they desire. They can choose to continue with the present system, which funnels a massive portion of health-care expenditures to Wall Street, or they can choose to adopt an alternative approach that delivers high-quality care at lower cost. May they choose well!

Annexes

Annex 1. Excerpt from Wikipedia article, Health Insurance in the United States

Here follows an excerpt from the Wikipedia article, Health Insurance in the United States, posted at Internet website https://en.wikipedia.org/wiki/Health_insurance_in_the_United_States. (The entire Wikipedia article is worth reading. I have extracted the introduction to the section on history. If you find this article worthwhile, I urge you to consider making a contribution to Wikipedia, to support continued development, maintenance, and operation of its Internet encyclopedia.)

[Start of Wikipedia extract.]

Accident insurance was first offered in the United States by the Franklin Health Assurance Company of Massachusetts. This firm, founded in 1850, offered insurance against injuries arising from railroad and steamboat accidents. Sixty organizations were offering accident insurance in the US by 1866, but the industry consolidated rapidly soon thereafter. While there were earlier experiments, sickness coverage in the US effectively dates from 1890. The first employer-sponsored group disability policy was issued in 1911, but this plan's primary purpose was replacing wages lost because the worker was unable to work, not medical expenses.

Before the development of medical expense insurance, patients were expected to pay all other health-care costs out of their own pockets, under what is known as the fee-for-service business model. During the middle to late 20th century, traditional disability insurance evolved into modern health insurance programs. Today, most comprehensive private health insurance programs cover the cost of routine, preventive, and emergency health-care procedures, and also most prescription drugs, but this was not always the case. The rise of private insurance was

accompanied by the gradual expansion of public insurance programs for those who could not acquire coverage through the market.

Hospital and medical expense policies were introduced during the first half of the 20th century. During the 1920s, individual hospitals began offering services to individuals on a pre-paid basis, eventually leading to the development of Blue Cross organizations in the 1930s. The first employer-sponsored hospitalization plan was created by teachers in Dallas, Texas in 1929. Because the plan only covered members' expenses at a single hospital, it is also the forerunner of today's health maintenance organizations (HMOs).

In the 1930s, The Roosevelt Administration explored possibilities for creating a national health insurance program, while it was designing the Social Security system. But it abandoned the project because the American Medical Association (AMA) fiercely opposed it, along with all forms of health insurance at that time.

The rise of employer-sponsored coverage

Employer-sponsored health insurance plans dramatically expanded as a direct result of wage controls imposed by the federal government during World War II. The labor market was tight because of the increased demand for goods and decreased supply of workers during the war. Federally imposed wage and price controls prohibited manufacturers and other employers from raising wages enough to attract workers. When the War Labor Board declared that fringe benefits, such as sick leave and health insurance, did not count as wages for the purpose of wage controls, employers responded with significantly increased offers of fringe benefits, especially health-care coverage, to attract workers.

President Harry S. Truman proposed a system of public health insurance in his November 19, 1945, address. He envisioned a national system that would be open to all Americans, but would remain optional. Participants

would pay monthly fees into the plan, which would cover the cost of any and all medical expenses that arose in a time of need. The government would pay for the cost of services rendered by any doctor who chose to join the program. In addition, the insurance plan would give cash to the policy holder to replace wages lost because of illness or injury. The proposal was quite popular with the public, but it was fiercely opposed by the Chamber of Commerce, the American Hospital Association, and the AMA, which denounced it as "socialism".

Foreseeing a long and costly political battle, many labor unions chose to campaign for employer-sponsored coverage, which they saw as a less desirable but more achievable goal, and as coverage expanded the national insurance system lost political momentum and ultimately failed to pass. Using health care and other fringe benefits to attract the best employees, private sector, white-collar employers nationwide expanded the U.S. health-care system. Public sector employers followed suit in an effort to compete. Between 1940 and 1960, the total number of people enrolled in health insurance plans grew seven-fold, from 20,662,000 to 142,334,000, and by 1958, 75% of Americans had some form of health coverage.

[End of Wikipedia extract.]

Annex 2. Summary of Benefits of the Proposed New Health-Care System

A list of reasons was presented for why US health care is so expensive, compared to that of other developed countries. Here follows that list, with a comment on the status of each item, under the proposed new health-care system:

1. As discussed above, the cost of health-care services and products – hospitals, physicians, pharmaceuticals and others – is generally

higher, and often much higher, than in other countries. *Under the proposed new system, the cost to patients for these services and products, for basic health-care services, would be zero. The cost to the government would be much less, because the total level of services and products would be set at a lower level (e.g., five percent of GDP). The quality of service would increase, because the primary goal of the health-care system would be to deliver high-quality services at low cost. The system would be optimized to do this, using established principles of quality management and system optimization.*

2. Other governments exercise more control in cost containment, such as setting prices that hospitals can charge, or providing rankings of hospitals from most expensive to least expensive. Americans take more drugs than people in other developed countries. In many countries, government agencies set the prices of drugs, or the amount they will reimburse. In the US, insurers typically accept the price set by the drug companies. *Under the new system, access to basic health-care services is under the full control of the government, as in the case of national defense or education.*

3. The US has been slow to embrace information and communications technology to improve administration and reduce waste and fraud. *Under the new system, artificial intelligence would be used to assist diagnosis and treatment, and the patient's complete medical history would be available to every clinic and hospital he might visit.*

4. The US uses more expensive diagnostic procedures than other OECD countries. *Modern science would be used to determine the optimal selection of diagnostic procedures ("clinical guidelines").*

5. The US does more testing than other OECD countries. *Modern science would be used to determine the optimal selection of testing procedures.*

6. The US is more litigious than other OECD countries. *Under the new system, there would be no extra-system litigation (the*

government operates the system, and may be sued only with its permission). Malpractice by doctors and other health professionals would be addressed by within-system arbitration.

7. There is a financial incentive for physicians to do more interventions, regardless of medical necessity. *Under the new system, health-care personnel are salaried workers, such as military personnel and teachers. No such financial incentive would exist.*
8. Many services are covered by insurance, so that the immediate cost of treatment is zero or low to the patient, so the patient has no immediate incentive to constrain costs. *While the patient has the right to refuse service, he does not have the ability to select inappropriate treatment.*
9. Waiting times for elective surgery are lower in the US than in other OECD countries. There is no need for this. *Queueing theory may be used to set expected waiting times at any desired level.*
10. The US spends more on health-care research (e.g., in 2012 the National Institutes of Health registered about 120,000 clinical trials underway, far more than any other OECD country). *The new system does not address this issue. The US may fund whatever level of health-care research it desires.*
11. The US compares poorly to other OECD countries with respect to healthy lifestyles (e.g., obesity and overweightness, diet, exercise, alcohol and tobacco use) and management of chronic conditions such as asthma (the hospital admission rates for asthma and chronic obstructive pulmonary disease (COPD) are over twice the OECD average). *The new system does not necessarily address this issue directly, but could be used as a local instrument to address it.*
12. Opportunities for fraud and abuse are substantially greater in the US than in other countries. *There is no insurance intermediary. Health-care services are provided directly. A hypochondriac might feign symptoms and obtain unnecessary services, but financial fraud on a massive scale, such as the*

present system lends itself to, will cease. No resources are spent on determination of eligibility, since all US residents are eligible for services.

Annex 3. Wall Street's Strategy: Socialize the Costs and Privatize the Profits

Wall Street Creates Economic Crises, and the US Government Covers Its Losses with Taxpayer Money

Through lack of attention, the American public has allowed its health-care system to be hijacked by Wall Street (insurance companies) and the medical establishment. The citizens are no longer in charge. Wall Street is in charge, and it is a very worthy opponent. To see this, it is useful to recall how it operated, and how it fared, through the economic collapse of 2007-2008.

The economic collapse of 2007-2008 was caused mainly by two factors. The first was the growth of the unregulated financial derivatives market to such a massive size that when it collapsed, it jeopardized the nation's financial system. The second was repeal of the Glass-Steagall Act of 1933, which separated commercial and investment banking. Repeal of the Glass-Steagall Act and prevention of regulation of the derivatives market were promoted and accomplished by Wall Street (banks, insurance companies, securities firms).

Through its high-stakes, high-risk ventures, Wall Street caused the economic meltdown of 2007-2008. It masked the risk of its dangerous, high-risk ventures in the mathematics of Black-Scholes asset pricing models, all the while driving the risk of collapse and the eventual size of the collapse to higher and higher levels. In the 1990s, at the urging of Wall Street, the government repealed the Glass-Steagall Act, which separated commercial banking from investment banking. As long as the

Glass -Steagall Act was in place, commercial banks were prohibited from derivatives gambling. Conventional investments and savings in commercial banks were secure. Repealing Glass-Steagall ensured that when the derivatives con-game collapsed, commercial banks would collapse along with investment banks and securities firms. As a result, millions of Americans lost their homes and savings. The final indignity was that the government then used taxpayer money to cover the losses of the Wall Street gamblers, and bail them out ("too big to allow to fail").

The financial meltdown of 2007-2008 shows just how far Wall Street will go to protect and preserve its interests. It is quite willing to risk the entire economy to further its interests. It is a striking example of the Politics of Envy – if the wealthy are not allowed to continue to accumulate their wealth, they are quite willing for everyone – themselves included – to incur disaster. (The Politics of Envy is far more harmful than the Politics of Greed. The Politics of Greed motivates many people, is easier to understand and control, and is less dangerous. Under the Politics of Greed, a person uses his political power to increase his wealth. Under the Politics of Envy, if he cannot have wealth, then he would prefer that no one have it.) In the fight to gain control of its national health system, the American people will be up against the Politics of Envy. Do they recognize this? Will they be up to it?

In the 1990s, Brooksley Born was head of the Commodity Futures Trading Commission (CFTC). She perceived the tremendous threat of a large, unregulated derivatives market, and called for its regulation. But regulation of the derivatives market would have meant less profit for Wall Street. The Fundamental Theorem of Finance asserts that higher return is possible only through higher risk, and Wall Street wanted full freedom to engage in as risky ventures as possible. Wall Street asserted that modern financial instruments, such as "sliced and diced" mortgage-backed securities and complex derivatives could control risk. This assertion was totally false. A key assumption is that the set of

investments over which the game is being played are statistically independent, and it is common knowledge that this is not true. The financial system is tightly interconnected; it is characterized as much by correlated risk as by independent risk. Because of correlated risk, a derivatives market is susceptible to catastrophic collapse, rather than graceful decline.

Wall Street's response to Brooksley Born's warning was swift and forceful. It was led by the three most powerful financial leaders of government, Alan Greenspan, Chairman of the Federal Reserve, Robert Rubin, Secretary of the Treasury (in the Clinton administration) and his deputy, Lawrence Summers. Rubin and Summers were key players in the effort to repeal the Glass-Steagall Act. These three men publicly railed against Born's efforts to control the derivatives market. They completely suppressed her. They even went so far as to assert that her actions could cause serious harm to the US financial system. Politicians do not know much about the mathematics of finance. These men were respected economists, and President Clinton and other political leaders listened to them.

Greenspan, Rubin and Summers completely squashed Brooksley Born's efforts to regulate the derivatives market. Born's efforts would have averted the 2007-2008 economic meltdown; Greenspan's, Rubin's and Summers' actions ensured that it would happen. These men were quite willing to risk the nation's economy simply to perpetuate the existence of the derivatives money machine. As a direct result of their actions, the financial security of millions of Americans was destroyed.

The Black-Scholes model used to price derivatives works well only if applied over a large population of independent contracts. In the presence of correlated ("systemic") risk, derivatives do not reduce risk, they amplify it. Because of their education and experience, it is impossible to imagine that Greenspan, Rubin and Summers were not fully aware of the risk associated with a large unregulated derivatives

market, operating outside of Glass-Steagall constraints. They had to know, and yet they proceeded to risk America's financial security. Because of their greed-motivated actions, millions of Americans lost their homes and savings. A documentary on this episode was written and directed by Michael Kirk and produced jointly by Kirk and Frontline: *The Warning* (Frontline and Kirk Documentary Group, 2009). It is posted free at Internet website http://www.pbs.org/wgbh/pages/frontline/warning/. Summary information about the episode is provided at the Wikipedia articles on Brooksley Born, at Internet website https://en.wikipedia.org/wiki/Brooksley_Born and Robert Rubin, at https://en.wikipedia.org/wiki/Robert_Rubin.

The derivatives market is pure gambling, with massive leverage and stakes. Brooksley Born perceived the threat of this massive, unregulated market, and attempted to take steps to regulate it and protect the American consumer from massive harm. As primary agents for the greed-based Wall Street money game, Greenspan, Rubin and Summers conspired to silence her, although it meant exposing the American public to massive risk and eventual financial disaster. To perpetuate the money machine of derivatives and mortgage-backed securities, these educated men moved forcefully to neutralize Born, and knowingly destroyed the financial lives of millions of Americans. The unmitigated evil of their motivation and actions is an example of how ferociously Wall Street will fight to protect and perpetuate its money machines. It will willingly gamble the financial security of the American people; it will suck them dry, to funnel money to themselves and their patrons. This is done with the willing consent and encouragement of the US government, which is in thrall to Wall Street and benefits from its nefarious activities.

The experience of the derivatives-caused collapse of 2007-2008 show how forcefully and effectively Wall Street will fight when its interests are threatened. It will employ political clout. It will deceive and dissimulate, masking the true nature of things in complex mathematics.

It will threaten financial harm if its models are not accepted and its advice not followed.

In the fight to reform health care, Wall Street may again prove to be too strong an opponent for the American public. It will not readily give up the two trillion dollars that it extracts from the health-care system each year. Americans will acquire a good health care system only if it reins in Wall Street. This will be a daunting challenge, since Wall Street, with the full backing of Congress and the administration, is now in complete control. It will be interesting to see whether the American people have the will and the ability to wrest control of health care from Wall Street.

In the Fight for an Improved Health-Care System, the US Government Will Side with Wall Street and the Medical Establishment, Not with the American People

The preceding section discussed how strong Wall Street is, and how intense the fight to wrest control of health care from it will be. This section discusses why, in this fight to establish an improved health-care system, the US government will side with Wall Street and the medical establishment, not with the American people. It will side with the lobbyists. The government is beholden to Wall Street, and it will take strong steps to ensure that the present private, insurance-based health-care system will continue.

What happened in the economic meltdown of 2007-2008 is a good indicator of what will happen in any attempt to destroy the money machine that is our present national health-care system, and what the government's role will be. The fraudulent derivatives market was backed by the full faith and credit of the US government. The Wall Street fraudsters – banks, securities firms and insurance companies – gambled with America's future, lost big-time, and the US government, with taxpayer money, covered their loss.

The big-money game in town is now the US health-care system. It is owned and operated by Wall Street, and it, too, is backed by the full faith and credit of the US government. It will be as difficult to reform the US health-service system as it was the derivatives system. Actually, it was not possible to reform the derivatives system, despite the valiant efforts of Brooksley Born. Predictably, without reform, that system collapsed, with massive harm to the US public.

The massive bailout of banks and investment firms in the economic collapse of 2007-2008 is not an isolated incident. The government did the same thing in the savings and loan crisis of the 1980s (see the Wikipedia article, *Savings and loan crisis*, for background, posted at Internet website https://en.wikipedia.org/wiki/Savings_and_loan_crisis). In that scandal, the US government covered the bad or fraudulent practices of S&Ls to the tune of $125 billion – a pittance compared to the losses of the economic meltdown of 2007-2008 or today's estimated loss of $272 billion per year in health-care fraud.

The US government now serves mainly Wall Street, and its basic approach is to let Wall Street make all the money that it can through high-risk ventures, and periodically bail them out with taxpayer money when these high-risk schemes collapse. In the economic collapse of 2007-2008, millions of US citizens lost their homes and savings, yet no banks or investment houses or their owners or managers were punished. Wall Street will always be looking for high-risk ventures, such ventures will continue to collapse, and the US government will continue to bail them out.

It was recently announced that Blackstone Group and Starwood Waypoint Homes planned to merge, to form the nation's largest rental-home firm. The merged firm owns about 80,000 rental homes. These firms were part of a wave of investors who bought homes that had been foreclosed in the wake of the 2007-2008 collapse of the housing market. Their 80,000 homes were once part of the American dream for 80,000

families – the dream of owning their own home. They are now commercialized properties. Because of government action, these homes have been transferred from private homeowners to Wall Street investors. This is great for capitalism – each and every home is now generating a profit.

Because of Wall Street's strength, it successfully resisted Brooksley Born's efforts to reform the derivatives market. President Bill Clinton and Congress listened to Greenspan, Rubin and Summers – the silver-tongued voices of greed – instead of to Brooksley Born, the voice of reason. Because of Wall Street's strength, none of the financial con-men who knowingly and willfully caused the collapse were punished. The federal government aided and abetted the derivatives fraud, yet no government official – in Congress, in the Executive Branch, in Fannie Mae or in Freddie Mac, in the Securities and Exchange Commission – who enabled, aided and abetted this massive economic crime, was punished. No leader in the banks and securities firms who conceived and perpetrated this massive fraud was punished. Instead, they were rewarded with massive bonuses and golden parachutes. Even culpable officials in government agencies charged with protecting home mortgages, but failing completely to do their jobs, were given massive salaries, bonuses and severance packages.

Wall Street played high-risk, high-stakes financial games knowing that if its risky ventures collapsed, the US government would bail it out with taxpayer money. Precedence had been established: It had done so in the Savings and Loan scandal of the 1980s and in the collapse of the Long-Term Capital Management hedge fund in 1998. The US financial system, operating in concert with the US government, socializes costs and privatizes benefits. With respect to its relationship to the financial system and the US taxpayer, the US government sides with finance.

Another example of the principle of socializing costs and privatizing profits occurs – on a much smaller scale – in American sports. The US

government grants franchises to private owners for major sports, such as football and basketball. US cities build massive sports stadia to hold sporting events. The strange feature of this arrangement is that although the public pays for the stadia, the franchised teams reap the profits. The US sports franchising arrangement is why tickets to major sporting events in the US cost $100, whereas in the United Kingdom (which does not follow the sports-franchise model) they are $25.

In the derivatives-caused collapse of 2007-2008, the American public lost its fight with Wall Street. It lost big time. Despite Brooksley Born's warnings and several spectacular derivatives-based collapses in the 1990s, the US government took no action to address the problem or avoid the collapse, which finally occurred in 2007. Although Wall Street greed caused the collapse, the US taxpayer was billed for the losses. (When I use the term "US government," I am referring generally to the Executive Branch (a President and his administration) and the Legislative Branch ("Congress"), not to the civil service. Not everyone in government is to blame for its decisions and actions; for example, Brooksley Born was a political appointment (to the head the CFTC), and her voice was totally counter to that of Greenspan, Summers and Rubin, which prevailed.)

When asked before a Senate committee to comment on his role in causing the financial meltdown that destroyed the lives of so many, Alan Greenspan proclaimed, in the height of arrogance, that "there was evidently a flaw in the model." There was no flaw in the model. The flaw was in Alan Greenspan. And it was not the flaw of not recognizing the inappropriateness of the model; it was the flaw of avarice. A mathematical model is based on assumptions, and those assumptions were not satisfied. Greenspan, of all people (a respected economist), would have been totally aware of the inappropriateness of the model. Despite the fact that he had, along with Summers and Rubin, virtually destroyed the American economy and caused the longest, deepest economic recession since the Great Depression, he would not accept any

personal responsibility. It was the model's fault, not his, he would speciously assert. He would not allow himself to admit that he was the primary cause of the meltdown. Brooksley Born had warned of it years in advance, and he willfully silenced her, in full knowledge of what he was doing. Greenspan, Summers, and Rubin were profoundly evil men who, motivated by greed and power, deliberately, intentionally, knowingly and willfully risked the wealth of all Americans, and destroyed the lives of many.

What happened with Born's attempt to harness derivatives is exactly what will happen when the debate begins over the new health-care system. Wall Street is not about to lose the Golden Goose of insurance-based health care.

In the economic collapse of 2007-2008, the US government did not protect the public's interests. Worse than that, the public was made a scapegoat – Wall Street caused the collapse, but the US taxpayer was forced to cover the losses. The US government did not punish anyone responsible for the fiasco, either in government or in Wall Street. How could it, when it was part of the scheme? Instead, it punished the victim. It made the victim – the American taxpayer – cover the criminals' losses. History shows that the alliance of the US government with Wall Street and the medical establishment is very strong. In the fight over health care, the US government will side with Wall Street and the medical establishment, not with the American public.

Annex 4. Related Work by the Author

Over the years, I have published a number of books and articles on social, economic, political and environmental issues. These works are posted at Internet website http://www.foundationwebsite.org. Although my record in causing social and economic change is not remarkable, I have exhibited substantial ability to anticipate social and economic

trends. Examples of my works include *The Value-Added Tax: A New Tax System for the United States (1987)*; *Can America Survive? (1999)*; *The Late Great United States (2008)*. When I published the book on the VAT in 1987, just 39 countries had a VAT; now 175 do. The environmental destruction predicted in *Can America Survive?* has continued. I developed the first commercially available general-purpose Box-Jenkins forecasting program, prior to publication of the seminal work, *Time Series Analysis, Forecasting and Control* by George E. P. Box and Gwilym Jenkins (1970). The methodologies developed by Box and Jenkins (autoregressive integrated moving average (ARIMA) models and transfer-function models) are now the most widely used forecasting methods in the world.

The views presented in this article are an expansion of ideas set forth in 2001 and presented at Internet website http://www.foundationwebsite.org/Platform.htm. Internet links to the other works cited are:
http://www.foundationwebsite.org/VAT.htm
http://www.foundationwebsite.org/TheLateGreatUnitedStates.htm
http://www.foundationwebsite.org/CanAmericaSurvive.htm.

During my career as a consulting statistician, I designed sampling plans and sample surveys for monitoring and evaluation of a number of health and welfare programs, and conducted a number of cost-benefit studies of health, social and economic programs. I developed national management information systems for the Zambia Ministry of Education and the Malawi Civil Service, and served as Director of Management Systems for the Bank of Botswana (Botswana's central bank, which functions as the US Federal Reserve). Earlier this year (2017) I developed cost-benefit models for analysis of tax-policy alternatives in Barbados.

Much of my management and system development work has been done in compliance with international quality standards. The Zambia and

Malawi management information systems were developed in compliance with the DOD 2167A Defense System Software Development Standard, the ISO/IEC 12207 Systems and Software Engineering Standard, and the Carnegie Mellon University Software Engineering Institute Capability Maturity Model. The management systems I developed at the Bank of Botswana were developed in accordance with the standards-based quality management principles of the ISO 9000 Quality Management Standard.

A substantial portion of my career was spent in the field of Lagrangian optimization. The following is an example of this methodology applied to the field of banking: http://www.foundationwebsite.org/LagrangianApproachToCRM.htm. This same methodology can be applied to the problem of determining an optimal health-care system for the United States. Another example of the application of Lagrangian optimization is presented at Internet website http://www.foundationwebsite.org/SubtractiveOverlappingIslandDefense.htm.

A résumé is posted at http://www.foundationwebsite.org/jgcCV.htm ; a curriculum vitae at http://www.foundationwebsite.org/BioJGC.htm.

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