

special article

Cost and effectiveness in American Health Care

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Dartmouth College, Hanover, New Hampshire, 03755, USA**ABSTRACT**

The debate on health care reform in the United States needs to focus on four numbers reported in *OECD in Figures 2006* (a pamphlet published by the Organization of European Development and Cooperation with data comparing its 30 industrialized member states):

- a) **U.S. health care costs** per capita each year (**\$45,500**) are 40% greater than the average annual costs of the 30 industrialized nations in the OECD (\$34,100).
- b) **Life expectancy** in the U.S. (**77.8 years**) is 1.1 years less than the average for the OECD's 30 members (**78.9 years**).
- c) **Infant mortality** in the U.S. (**6.9 per 100,000** live births) is one-third greater than the OECD average (**5.2 per 100,000**).
- d) **Obesity**, measured as the percentage of adults with a body-mass index over 30 kg/m³, is observed in **34.3%** of Americans - which is more than twice the frequency of obesity throughout the OECD (**15.4%**).

Despite paying almost twice the cost of health care in other contemporary industrialized nations, Americans have lower life expectancy, higher infant mortality, and higher obesity than comparable populations. Obviously these numbers are relevant to the current debate about how to pay America's bill for healthcare: the evidence suggests that increasing the publically financed share of health cost would be desirable. Given political opposition to "socialized medicine" in the U.S., however, is there an immediate action that could lower costs and improve outcomes pending what seems an inevitable change in health care financing? Paradoxically, the best way to make an immediate contribution to lower cost and better outcomes would be to focus on the health effects of environmental pollution. To lower cost, we need to lower rates of disease. And virtually no one in the debate seems to realize that exposures to several toxic chemicals which contribute to many diseases would be - to a degree - absurdly easy to reduce. One step that's possible - at virtually no cost - is to stop treating our public water supplies with two silicofluoride compounds that have never been studied for safety by the CDC (even after this was recommended by the National Toxicology Program). These chemicals increase the blood levels of lead and manganese as well as directly damaging normal brain chemistry (see <<http://www.dartmouth.edu/>

<~rmasters/>). Since silicofluorides aren't used in other countries and are associated with a significant increase in the frequency of seven different diseases, stopping their use should be combined with screening and treating children for high body burdens of other toxins. As this suggestion indicates, Americans urgently need to focus on national health policy, can improve health at virtually no cost by ending silicofluoride use, and - as soon as possible - consider ways to increase public financing of medical care.

Keywords: Health care costs, outcome assessment (Health Care), public financing, silicon fluoride, United States.

INTRODUCTION

Debates over how to pay for Health Care in America are bound to continue through the Congressional recess this summer. Conventional political arguments generate more heat than light. To determine whether it's important to take action, - and if so how - every Congressman and all informed citizens should focus on factual information about the cost and effectiveness of U.S. health care as compared to other industrialized countries. For this, we can consider statistics from 30 industrial countries, which provide a reasonable basis for comparison (Table 1). These numbers come from pages 8-11 of the booklet "OECD IN FIGURES 2008" (Paris: OECD Publications, 2008), which is accessible online at <<http://www.oecd.org/infigures>>. Since these statistics were compiled by an international organization before the American health care debate started, there's every reason to treat them as an unbiased look at the facts of health care.

Most Americans seem afraid of statistics. The problem is that, used appropriately, numbers have an advantage over words. It's easy to figure out that TWO (the number "2") is bigger than ONE (the number "1"). More important, it's not hard to see that the difference between 50 and 10 (which amounts to 40) is twice as big as the difference between 40 and 20 (which amounts to 20). Imagine, however, if you and a friend are choosing between two art books on sale at the local museum shop, and the first of each pair of numbers (\$50 or \$40) represents the **value** of a book while the second of each pair (\$10 or \$20) is the corresponding **price**. Would you think you were getting the best choice if you paid \$20 (anticipating the \$40 benefit is a good deal) while your friend bought the book on sale for \$10? Reread the sentence beginning the word "Imagine": it means you'd be paying more and getting less than if you chose the \$10 book and took home an art book worth five times as much (for a net benefit of \$40). So, if you studied the numbers for a couple of minutes, you'd see that *paying less you could gain twice as much*.

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Table 1 - Health Care Costs and Outcomes - 30 OECD Member Countries

	Health Care Costs 2006	Ratio \$ Col.1 to OECD ave	Life Expectancy 2005	\$ per year of life	Infant mortality per 1,000births	fMRI per million pop. 2006	Practicing Physicians
OECD Ave.	\$2,824		78.9	\$35.79	5.2	10.2	3.1
United States	\$6,714	2.38	77.8	\$86.30	6.9	26.5	2.4
United Kingdom	\$2,760	0.98	79.1	\$34.89	6.2	5.6	2.5
Switzerland	\$4,311	1.53	87.1	\$49.49	4.4	14	3.8
Norway	\$4,520	1.60	80.6	\$56.08	3.2	NA	3.7
France	\$3,449	1.22	80.9	\$42.63	3.8	5.3	3.4

Source: OECD in Figures 2008, (Paris: OECD Publications, 2 rue André-Pascal, Paris, France) pp. 8-11.

In order to judge the cost of health care, therefore, we need to look at both the price and the quality - and compare them to price and quality in the health care systems of other countries. We can't do that without looking at numbers. But readers should forget their math anxiety: imagine this is a course where all students are guaranteed an A, and dive into simple numbers about health care. The results have surprised everyone with whom I've shared them: we've all been like a book buyer who paid more and got a less valuable book.¹

Expense of health care

Health care is comparatively very expensive in the U.S. As of 2006, Americans spent an average of \$6,714 per capita a year on health care; the OECD average in 2006 was \$2,824. In general, *American health care thus costs more than twice the average for other industrial countries.* Indeed, in 2006, there were only three other countries where citizens paid over \$4,000 per capita a year: Luxembourg (\$4,303), Norway (\$4,520); and Switzerland (\$4,311) - and in no other country but the U.S. did citizens pay over the \$4,520 paid by Norwegians. That is, in the most expensive health care system outside the U.S., health care still costs only about TWO-THIRDS per citizen as much as it does for Americans.

Is this an artifact of the year chosen? The OECD show that in 1995, a decade earlier, Americans spent an average of \$3,656 per capita compared to the OECD average of \$1,494. For 1995, only 4 countries paid over \$2000 per capita a year: Austria (\$2,259); Canada (\$2,057); Germany (\$2,275); Switzerland (\$2,598) - and no other country paid more than the Swiss, who paid only 71% as much per person as Americans to go to their doctors and hospitals.

In short, the United States has - by far - the most expensive health care system in the industrialized world. To be sure, over the last decade, the average cost per person in the U.S. has gone up 84% whereas average for all 30 OECD countries (including the U.S.) increased by 89%. If anything, this seems to indicate that the 2006 data given above were not biased against the U.S. due to a historic factor of price changes; the overall yearly cost increase was only 5% in the U.S. compared to 5.2% for the OECD. But even if our cost increases didn't quite keep pace with other industrialized systems, the basic picture has remained about the same.

Quality of care

What are we getting for the money? A reasonable measure of

quality of medical care is life expectancy, and the OECD provides comparable data for the same set of industrialized countries. The U.S. ranks number 19 out of the 30 OECD countries in life expectancy at birth. That's right, we're first in the race to pay the most, but 19th on an overall measure of outcome.

Let's consider this outcome measure more closely. The OECD average life expectancy at birth in 2006 was 78.9 years. In the U.S., that year life expectancy was 77.8 years. No less than ten OECD countries had life expectancies over 80 years: Australia (81.1); Canada (80.4); France (80.9); Iceland (81.2); Italy (80.9); Japan (82.4); Norway (80.6); Spain (81.1); Sweden (80.8); and Switzerland (81.7).

Once again, these numbers aren't due to the year chosen. The data show that although life expectancy has improved almost everywhere between 1995 and 2006. Back in 1995, there were also 18 OECD countries with higher average life expectancy than the U.S. The only difference is that in 1995, the U.S. average (75.7) was a lot closer to the OECD AVERAGE (76.0). That is, in the 1990s, our life expectancy lagged the average in the industrialized world by under 4 months, whereas by 2006 that deficit had increased to about 13 months. So we're paying more and, by the measure of life expectancy, getting comparatively less.

To put this conclusion in a single, admittedly artificial statistic, one need merely calculate the ratio of individual expenditures per capita on health care to life expectancy. That provides a crude measure of health care dollars per year associated with each added year of survival. From this admittedly materialistic measure, medical care costs an American over \$85 dollars a year for each added year of life, whereas life extension costs less than half of this in France and England - comparable Western societies with national health care systems. Shouldn't this statistic say something to small business owners and large corporations alike about a feasible way to cut costs and increase labor productivity?

What's the bang for our buck?

Crudely put, it seems that American consumers are behaving in a way not usually predicted in the economics textbooks. To illustrate, imagine that - being relatively wealthy - I went to an imported car dealer and paid cash on the line for a new Mercedes station wagon, to be delivered the coming Monday. On Monday, I went to the dealer and was given the keys and the registration forms for a 1999 used VW bug with rusty fenders. Meekly, I took the keys and the paperwork, and drove

home without a word of complaint (except maybe to comment that my used VW bug was dirty and should have been washed before delivery).

This example illustrates paying a lot more than value received. And if I really did such a thing, you'd doubtless call me 'stupid' (and not have a problem if reporters heard you use the word). But this car example is just a sloppy approximation of the health care numbers. To understand what's really happening, it's important to examine more carefully whether the numbers from the OECD can give us an idea of the reasons that our high cost health system gives us only average results.

First of all, for aspects of the health care system where the U.S. is below average (Table 2), a number of factors can apparently be ruled out as linked to higher per capita expenses. Our higher than average cost can't be traced to smoking behavior, the price of drugs, % of aged citizens, the cost of acute care beds, or the annual growth rate health care costs.

Paradoxically, the only factors in Table 2 that might explain why our health care costs more than double the OECD average are the *lower than average* number of doctors (which could translate to reduced medical access for the urban and rural poor) and the *lower than average* percent of total Health Care costs that are provided by the public purse. The latter number means that a budgetary area often derisively (and falsely) called "*socialized medicine*" is clearly associated with lower cost, more effective health care systems.

Two conclusions suggest themselves. First, since Congress has yet to repeal the law of supply and demand, fewer doctors translates to higher health costs. Could the emphasis on protecting the private sector of our health care system reduce the number of doctors - especially in general practice as distinct from more highly paid specialties? Second, since almost half of our health costs are already paid by the public, the myth of a purely private medical system can apparently be described as a dream of the distant past. In short, focusing on the boogie man of "socialized medicine" seems quite literally reactionary (unless it's seen as a way of expanding the opportunities for lucrative specialization and highly expensive testing as defense against malpractice suits).

Let's see if this view is confirmed by comparison of factors which are more frequent or more expensive in the U.S. than for the OECD average (Table 3). Our high cost health care system isn't merely due to the sheer size of our economy, since we spend on average not quite twice the share of overall economic activity that other industrialized nations spend on health care. Our population growth rate is a little higher than that in Europe, but the difference isn't enough to account for the cost differences observed. But consider the number of functional MRI scanners (a reasonable measure of the investment in high-technology equipment). The fact that we have about 2 1/2 times more MRI scanners than the average for other industrialized countries is on the order of the cost differences between our systems. While there aren't data for other examples of higher expenditures on technology, administration, or costly specialized care, these factors are often alleged to play a big role.

Putting together all the data in Tables 2 and 3, however, it's hard to avoid the conclusion that one of the biggest single factors is the LOW share of our healthcare system that is in the public sector. The figures in Table 2 (only 45.8% of payments for health care coming from the public sector, whereas the

Table 2. Factors where the U.S. is lower than the OECD average

	U. S. ave. 2006	OECD ave, 2006
Smoking (% adults smoke daily)	16.7%	23.7%
Pharmaceutical Expenditure as % total health care	12.6%	17.6%
% Population age 65 and older	12.4%	14.0%
Acute care beds per 1,000 pop.	2.7	3.9
Practicing Physicians per 1,000 pop.	2.4	3.1
Annual Growth rate of cost Public Expenditure as % of Total	5.0%	5.2%
Expenditure	45.8%	73.0%

Table 3. Factors where the U.S. is higher than the OECD average

	U. S. ave. 2006	OECD ave, 2006
Total Expenditure as % of Gross Domestic Product	15.3%	8.9%
MRI scanner units per million pop.	26.5	10.2
Population Growth rate	1.0%	0.7%

OECD average is 73% public financing) could be an indirect measure of an obvious issue: the profits taken by all private firms and their managers in the health care sector. But it shouldn't be a question of complaining about profit margins. What Americans need to do is to cut the consumption of such a high cost services. If the relatively low number of physicians per capita has the effect of increasing prices (limiting supply always increases price for any given level of demand). But cutting the level of demand would be a simple way of lowering prices.

What's to be done? Lowering costs by prevention

The comparative statistics could easily be used to make a case for a single payer, public system (like those in many Western European countries). The charge that such a system entails government bureaucrats who determine each citizen's doctor (that is, provide no choice of medical choice for individuals) is simply not true. That didn't happen when my family lived in rural France, so I can even attest to this point personally. Even so, at present to debate this option is unrealistic and Quixotic.

More important, the charge that a public health care insurance option will increase costs is manifestly contradicted by the statistics presented here. If politicians want to debate me on that topic, I will gladly accept - but they will need some real numbers (like those the OECD collected long before President Obama's health care plans were on the drawing board). In contrast, the claim there's a link between reliance on private insurance and higher costs is not contradicted by the OECD statistics; quite the contrary, the numbers above point in the direction of supporting this link. And this concern is especially reinforced when the poor results in prolonging life expectancy are considered.

In short, the data indicate that President Obama is entirely correct to focus on the necessity for change in the economics of our health care system. What he hasn't stressed, however, is the extent to which the health of our population is a crucial

Table 4 - ANALYSIS OF VARIANCE: Toxins, Silicofluoride and Race as Risk Factors for Disease

	All Cancer	Diabetes Deaths	Liver Disease	Hypertensive Heart Disease	Lung Disease	Major Cardiovascular Heart Disease	All Death
Average. Levels of Diseases in Counties with Above Average Pollution or Over 8.56% Blacks							
All Counties	164	15.3	7.7	10.2	52.3	835	691
Trich SiF	248	23.9	11.2	17.2	80	826	1047
Lead TRI*	853	50.5	30.8	38.6	176.9	3571	2429
Manganese TRI*	189	43.5	25	31.9	152.6	3072	2048
Black>8.6%	286	26.5	14.9	21.8	64.2	814	1228
Significance							
Trich SiF	NS	NS	NS	NS	NS	0.0001	NS
Lead TRI*	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Manganese TRI*	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Black>8.6%	0.0001	0.0001	0.0001	0.0001	0.0001	0.04	0.0001
Pb&Mn	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
SiF & Pb	0.0005	0.0001	0.0034	NS	0.006	0.0001	0.0001
SiF & Mn	N.S.	N.S.	N.S.	N.S.	N.S.	0.0001	N.S.
Pb&%Black	0.0001	0.0001	0.0001	0.0001	0.0001	0.06	0.0001
Mn&%Black	0.001	0.0003	0.0003	0.004	0.0014	0.06	0.0004
Pb,Mn,Black	0.0026	0.0004	0.003	0.005	0.008	0.04	0.001
SiF, Pb, &Mn	N.S.	N.S.	N.S.	N.S.	N.S.	0.0001	N.S.

* "TRI" = EPA's "Toxic Release Inventory" of industrial pollution in each county (n = 3141) present or absent.

"Trich SiF": silicofluoride treated water delivered to < 10% of population, 11% to 79% of population, or >80% of population.

"% Black ": percent of county population dichotomized at national mean (8.57%)

NOTE: a high percentage of population exposed to water treated with silicofluorides (either H₂SiF₆ or Na₂SiF₆) only has a significant main effect on rates of Cardiovascular heart disease whereas its "interaction term" with lead is highly significant (p = .0001) for all categories except rates of hypertensive heart disease. Four other interaction terms are significant for all seven categories, suggesting that it is necessary to think in terms of a "web" of environmental factors influencing disease frequency (rather than the conventional view of environmental "causes").

factor in *national security*. Having healthy children is essential to educational success. Having healthy adults is crucial for economic productivity (and a strong military). And preventing disease among our elderly will obviously save greatly on costly hospital care. And although these principles could be used to justify greater expenditures for public health, focusing on low-cost preventive strategies that effectively cut rates of disease in the U.S. is a more promising way cut health care costs.

Data on the link between industrial pollution and higher rates of disease (Table 3) point to a serious defect in the conventional debate. America pays too little attention to preventive medicine in part because it doesn't sell drugs and pay doctors' bills. Preventing disease is the simplest way to bring down total cost. And there is now ample research showing that toxins in the environment are the most easily controlled factor associated with higher rates of various diseases. In particular, industrial releases of lead and manganese (as measured by the EPA's "Toxic Release Inventory") are strongly associated with higher rates of disease. More important, peer reviewed data over the last decade reveal that these effects are substantially exacerbated by the practice of adding hydrofluorosilicic acid or sodium silicofluoride to our public water supplies delivered to 160 million Americans.

It will seem fantastic to suggest that turning off the valves that add an untested toxic chemical to public water supplies is

the most important, least expensive way to cut health care costs. A full presentation of the data behind this claim is available in published data in such peer reviewed journals as *Neurotoxicology* and is summarized on the web at <<http://www.dartmouth.edu/~rmasters/>>. But even if these findings are not a magic bullet, other means of reducing disease clearly exist - most notably in the domain of proper diet and exercise.

Of all the statistics from the OECD, two that were not cited above - infant mortality and obesity - tell us several areas where attention is needed. The rate of infant mortality in the U.S. reported for 2007 was 6.9 deaths per 1,000 live births. For comparison, the OECD rate in 2006 was 5.2 deaths per 1,000 live births. These numbers show great improvement over the last decade. For 1995, this rate of infant death was 7.6 in the U.S. while 8.4 was the average for the 30 OECD countries. That is, in recent years, the overall reduction infant death for the OECD member states was about 38% whereas for the U.S. this reduction was a little under 10%. Relatively speaking, therefore, the U.S. has failed to gain potential benefits from improved medical knowledge and treatment in the vital area of infant survival. More evidence we need to improve the value received from our high cost health system.

Better prenatal care and maternal diet alone could contribute to lower infant death rates. Concern should be espe-

cially focused on the first trimester of pregnancy, during which fetal damage is most likely to have lasting if not fatal effects. And these steps don't involve the delivery of hospital care in the traditional sense. Rather, they involve the level of communal as well as familial attention to the living conditions of young women and the availability of prenatal medical and social services. For no group is this more important than the poor, and especially minority poor.

Obesity is an even more flagrant problem. The OECD has reported the percent of adults whose body mass index is greater than 30 kilograms per square meter. On this measure, 34.3% of American adults are obese, whereas the average for the 30 OECD countries is only 15.4%. And the only countries with over 20% of adults obese by this measure were: New Zealand (20.9%), Greece (21.9%), United Kingdom (24%), Mexico (30%).

Like health care cost, obesity in the U.S. ranks #1 in the 30 OECD countries and is more than twice as high as their average. The only country even close to the U.S. in this measure of health is Mexico. In contrast, only 3.5% of Koreans, 3.9% of Japanese, and 9% of Norwegians are this obese. What's more, there's perhaps a link between low rates of obesity and a lower percent of Gross Domestic Product spent on health care. The % of GDP spent on health care by Koreans is 6.4%, the Japanese is 8.2%, and the Norwegians is 8.7%. The U.S. expenditure of 15.3% of GDP on health might well be in part due to our high rates of obesity - except that the Mexicans (whose rate of obesity is the closest to that in the U.S.) only spend 6.6% of GDP on health care. The point: for many sources of high cost in this area, although life style may count more than the design of our health care system, there's no magic bullet.

CONCLUSION

The debate on health care reform needs to focus on four numbers reported by the Organization of European Development and Cooperation that compare the average for its thirty member states to the rates in the U.S.:

- a) **health care costs per capita (U.S. = \$45,500; OECD ave. = \$34,100).**
- b) **Life expectancy (U.S. = 77.8 years; OECD ave. = 78.9 years).**
- c) **Infant mortality (U.S. = 6.9 per 1,000 live births; OECD ave. = 5.2 per 1,000).**
- d) **Obesity, measured as the percentage of adults with a body-mass index over 30 kg/m³ (U.S. = 34.3%; OECD = 15.4%).**

In summary, despite paying almost 50% more for health care than other contemporary industrialized nations, Americans have lower life expectancy, higher infant mortality, and higher obesity than comparable populations.

Consider again the example of paying cash for the full purchase price of a 2009 Mercedes sedan, and accepting delivery of a 1999 used VW bug with rusty fenders. How did Americans end up paying for health care as if we were buying a used VW for the price of a new Mercedes? Answer: we buy health insurance (and health care) in a market economy, as if we were buying a car. No other country has fallen for this scam. Ten years ago, I had surgery for a life-threatening cancer. The operation, which lasted seven hours and saved my

life, cost thousands of dollars. Did I buy that operation the way you bought your last car? Of course not.

Industrialized countries like France and England have single payer systems. President Obama's modest proposal for a nationally owned insurance option, to compete with private insurance companies, has some politicians scared. How would they finance their future election campaigns without \$2 million contributions from insurance executives whose salaries are as much as \$17 million a year (figure tossed out on TV the other night)? Critics of "socialized" medicine say the President's proposal will raise costs, ignoring the high cost of our current health care system.

Medical care shouldn't be a product we buy like cars or clothes (where the less fortunate make do with used goods). Good health for our population is a matter of national security as well as economic well-being. A specialist in African economics has found that disease is one of the major factors in that continent's underdeveloped economies. To deal with our public's health, a nationally funded OPTION for health insurance isn't the main need: what's most needed is a more realistic view of what health care already costs - and demand we get better results from spending over twice as much as other industrialized countries. Besides, since the U.S. government already finances around 45% of our total health care expenditure, critics who claim Pres. Obama's proposal will create "socialized medicine" forget our government already pays almost half of American health expenses and runs VA hospitals. Charges that "socialized medicine" will destroy health care are like an expectant mother claiming that she is only a "little bit" pregnant and hence doesn't need to plan for a child. With national health insurance, you can still choose your own doctor: I did when living in France. Want competition? In reporting this issue, the media should consider evidence that the giants who dominate American health insurance engage in business practices that may violate the Sherman Antitrust Act.

There's ample reason to conclude that extending health care insurance to all Americans is an urgent necessity: our high infant death rate should suffice as evidence. Can anyone seriously accept the status quo, in which our infant death rate is about 1/3 higher than the OECD average? Where is the outrage from the "pro-life" movement - OR from the left of the political spectrum? But the means to this end are not so evident because in addition to effective prenatal medical care, other support is needed for pregnant women who are unwed, poverty stricken, minority, or rural.

Of course, social conservatives will trumpet "abstention" as the solution to unwed mothers and high birth rates among the poor and uninsured. Alas, a dose of reality comes from a recent statistic. Currently, over 90% of Americans have had sexual intercourse before their wedding night. When I was growing up in the 1940s and 1950s, that was far from the case. Today, given birth control pills, the changes in behavior over the last century seem more or less impossible to reverse. Young College and even high school students will continue to engage in sexual behavior before or outside marriage unless social conservatives find a way to repeal original sin (a proposal which even most orthodox theologians among either Jews or Christians seem to consider neither possible nor theologically sound).

Just as many factors limit access to health care and

increase exposure to potential harm during pregnancy, similar complexity attends virtually all other areas of medicine and health. Instead of dry statistics, like those above, we need greater experimentation on ways to improve outcomes without traditional medical care. If this is so, the focus in the current debate on health care may be far from the central need in coming years. Whether in cancer and heart disease among those past 50 or teen age sexuality, limiting harm is of greater importance than ever. Precisely because medical treatment must be available to meet health needs, to cut costs we'll need to reduce rates of disease. ***That is, prevention rather than medical treatment should become our highest priority.***

It's often assumed that preventing disease is impossible without costly measures that change patterns of social behavior and the delivery of medical services. Paradoxically, ending the use of silicofluoride compounds to treat the public water supplies of over 160 million Americans - while hardly a panacea - would appear to contribute to lower rates of disease by reducing blood lead levels. To be sure, this step has not

been extensively tested apart from Westendorf's experiments showing acetylcholinesterase inhibition and our data on higher lead absorption. But in this case, the use of fluorosilicic acid or sodium silicofluoride as substitutes for sodium fluoride in water treatment was an untested use of toxic compounds for presumed public health benefits. Moreover, this policy was based on the assumption of complete dissociation subsequently disproved by Westendorf, and ignored harmful side effects on behavior as well as health. It follows that immediate action to establish a moratorium on silicofluoride pending tests that unambiguously show their safety is prudent as a health measure and would initiate public awareness of the urgent priority to focus on ***health prevention.***

Conflict of interest: None declared

REFERENCE

1. For a journalist's introduction to this issue, see Ceci Connolly, "Focus on Health Savings Obscures Other Issues," Washington Post, Sun 7/26/09.