

**A National Health Service for those without Health Insurance in the
United States**

The National Health Service for the Uninsured

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Abstract

The United States health care system has the world's highest per capita expenditure but performs poorly in measures of quality of health care, efficiency and public satisfaction. Nearly 50 million people in the United States are without health insurance and receive care only through hospital emergency departments. The per capita health care expenditure for the medically indigent (including Medicaid, cost-shifting to insurance premiums, and free care provided by public hospitals and medical schools) probably exceeds the per capita costs of the insured. This paper proposes a National Health Service for the Uninsured (NHSU) that would save the country money while improving health care outcomes. This proposal is based upon a business model involving direct compensation for public hospitals, out-patient clinics and medical schools, and a salaried service for primary and specialist physicians in a network integrated with these facilities. The NHSU would provide model systems for improving efficiency and reducing utilization for the insurance-based health care system.

[Key Words. Health policy. Medically uninsured. National health service. Cost containment.]

Introduction

The United States (US) invests the highest proportion of gross domestic product (GDP) on health care of all countries of the world, despite which people in the US suffer poorer access, a higher individual financial burden, inefficient care and a higher medical error rate than people in most other developed countries. The US has a complex system of medical care that is not integrated. Seventy percent of the population (about 195 million people) has health insurance through either Medicare or commercial health insurance. About 52 million people are enrolled in Medicaid. Another 50 million people (the medically indigent or uninsured) lack health insurance and have only charity emergency care available to them. The current system of health care for the medically indigent is fragmented, expensive and inefficient.

This paper offers a way in which those without health insurance could be provided with a comprehensive cost-effective system of medical care -- the National Health Service for the Uninsured (NHSU). This would be an integrated health care system for the uninsured based upon a new primary care physician network, outpatient clinics similar to the Community Health Centers currently operating in a few locations around the country, the staff and facilities of the medical schools and their affiliated public hospitals. The NHSU would be similar in many ways to the Veterans' Health Administration (VHA) system.

National expenditure to develop the NHSU would be revenue-neutral, but it would require the redirection to the federal government of monies currently going to provide health care for the medically indigent from state and local funding, and commercial insurance. The creation of the NHSU would not immediately address the many ills of the current reimbursement-based system of health care for those with commercial insurance and Medicare. However, the NHSU would introduce cost-saving programs that might later be adopted by the overall US health care system.

The United States Health Care System is in Trouble.

The rising cost of health care in the United States. The US spent 14.1% (\$1.4 trillion total and \$4,914 per capita) of the GDP on health care in 2001. It is forecast that health care expenditure in the United States will rise to \$2.08 trillion (16% of GDP) by 2006, and to 18.7% of GDP by 2014 (Centers for Medicare and Medicaid Services 2006). The annual rate of inflation of expenditure on health care 2002-2004 was about 8.4%, which far exceeds the rate of inflation for all other items in the US economy (Gabel et al. 2004; Centers for Medicare and Medicaid Services 2006). By comparison, in 2001 the countries with the next highest percent of the GDP spent on health care were Switzerland (11.1%), Germany (10.7%) and Canada (9.7%), while United Kingdom spent only 7.6% (Reinhardt et al. 2004).

The declining quality of health care in the United States. The 2005 Commonwealth Fund International Health Policy Survey of sicker adults from six countries, Australia, Canada, Germany, New Zealand, the United Kingdom and the US reported that “(t)he United States often stands out with high medical errors and inefficient care and has the worst performance for access/cost barriers and financial burdens” (Schoen et al. 2005). The US lags behind many other countries in indices of quality of care. In 2005 the US ranked 42nd among the world’s nations in infant mortality, with 6.50 infant deaths per 1,000 live births, behind the top nations such as Singapore (2.29), Sweden (2.77), France (4.26), Canada (4.75) and United Kingdom (5.16) (United Nations Statistics Division 2005; Central Intelligence Agency 2005), and was 29th among developed countries in maternal mortality (Centers for Disease Control 2005).

The increasing size of the medically indigent population of the United States. In 2004, 46 million people in the US (15.7% of the population) were without any form of health insurance (about a fifth of them children) (DeNavas-Walt et al. 2004; United States Census Bureau 2004). In 2005, 41% of those with annual incomes between \$20,000 and \$40,000 were without medical insurance for at least part of the year, a dramatic increase from the 28% in 2001 (Collins et al. 2006). Additionally, there may be an additional 50 million people in the US who are *under-insured* (i.e. who would be potentially bankrupted by a major medical problem). About half of the families filing for bankruptcy in the US in 2001 did so because of illness or injury, two-thirds of whom had insurance at the beginning of the illness (Himmelstein et al. 2005).

The declining proportion of the population with employment-based health

insurance. The US is the only developed country that does not provide universal health insurance or free health care for its people, though it does provide Medicare as universal insurance for those 65 and older. The other developed countries provide either universal health insurance which reimburses physicians and medical facilities for services, or universal health care like the British National Health Service which provides free care through salaried physicians and government-owned hospitals and clinics. US Presidents of both parties have advocated for universal health care -- from Theodore Roosevelt (1912), Franklin D. Roosevelt (1938), Harry S. Truman (1945), Richard M. Nixon (1974), Gerald Ford (1975), Jimmy Carter (1979), to most recently Bill Clinton (1993) (Mayes 2004; Morone and Jacobs 2005).

For many years, organized labor in the US was in step with its counterparts abroad in calling for universal health care. Two Acts of Congress (Taft-Hartley Act of 1947 and the Employee Retirement and Income Security Act [ERISA] of 1975) persuaded the unions to reverse their stand from 1978 on to embrace employment-based health insurance (Gottschalk 2005).

Health insurance premiums are skyrocketing. In 2004, the annual premium in an employment-based group plan for a family of four averaged \$9,950; that for a single person was \$3,695 (Kaiser Family Foundation 2004; Center on Budget and Policy Priorities 2005). In 2005 an individual premium was estimated to be \$4,065 per annum (Families USA 2005). In 2004, workers contributed 10% more to health insurance premiums than they did in 2003. High health care costs are hurting the competitiveness of US businesses. It is reported that \$1,500 of the price of every GM car goes to health insurance premiums; this is more than the cost of the steel, and \$1,000 more than Toyota spends per car assembled in Japan (Hakim et al. 2005). US businesses have responded by reducing the number of people with employment-based health insurance from 70% in 1987 to 61% in 2004 (Kaiser Family Foundation 2004; Center on Budget and Policy Priorities 2005) and the percent is dropping rapidly.

Inefficiency of the United States health care system. Three elements of the current US health care system are widely accepted as being responsible for most of its high cost: over-utilization; administration; and malpractice insurance and defensive medicine.

Cost of over-utilization. The current US health care system is an entrepreneurial reimbursement-based business model. However, by its very nature health care does not conform to the market-based principle of competition. Though there is competition between doctors and between hospitals, this competition does not operate to keep prices down, *Rather, the consumer (the patient) believes that more care (laboratory tests, imaging studies, surgical operations and medications) is better and the provider (doctors and hospitals) benefit financially from providing more care.* The net result is the provision of considerably more services to patients in the US than to those in any other country in the world.

The failure of the US to recognize that the present health care system leads to over-utilization and the history leading up to the current troubled state of the US health care system are well-described in the 2005 book, “The Health Care Mess”, by Richmond and Fein. The health maintenance organization (HMO) movement failed to correct the basic flaw in the business model precisely because patients became dissatisfied with the restraints imposed on them. Studies of small regional variations in a number of high-cost surgical procedures have demonstrated that provision of services do not translate into better health care (Wennberg 2002; Wennberg et al. 2002). This supports the contention that the US would derive considerable savings from the reduction in utilization that would derive from introduction of evidence-based clinical management guidelines.

Cost of administration. Attempts by government and insurance companies to limit health care costs have resulted in ever-increasing layers of administrative bureaucracy. Administrative costs absorbed 31% of total health care expenditures in the US (\$1,059 per capita, or \$294 billion total per annum) compared to 16.7% (\$307 per capita) in Canada (Woolhandler et al. 2003). The average overhead of commercial insurance companies in 1999 was 11.7% of total premiums, compared to Medicare 3.6% and Medicaid 6.8% (Woolhandler et al. 2003). This suggests that changes in the organization of insurance-based health care in the US would greatly reduce overall expenditures.

Cost of malpractice premiums and defensive medicine. Medical malpractice premiums have increased greatly in the last two decades and the direct cost of malpractice losses incurred in the US amounted to \$6.5 billion in 2001 (Government Accountability Office 2003). The cost of the resultant practice of defensive medicine is very considerable. Studdert et al. (2005) found that 92% of practitioners in high-risk specialties practiced defensive medicine. Extrapolation from their data suggests that defensive medicine increases total health care expenditure by at least 30%.

Failure of cost-containment efforts in the United States health care system. There have been many efforts to restrain growth of health care costs in the US, but the fact that health care consumes escalating proportions of the GDP makes it clear that these have not achieved success.

Cost-containment efforts in the Medicare system. Medicare was introduced in 1965 to provide health insurance for those aged 65 and older. It was intended to be revenue-neutral, with hospitals originally to be paid at cost of the service plus 2% (Part A), and physicians at 80% of “the usual and customary” rate of payment (Part B). However, the cost of Medicare rose rapidly in the next 15 years. To control Medicare payments to hospitals, in 1983 the government introduced the system of prospective payments based on disease-related groups (DRGs) (American Hospital Directory 2005), and thereafter progressively lowered rates of reimbursement. Part B payments for physicians were reorganized into resource-based relative value units (Scott 1990; American Medical Association 2005), and payments have been further reduced by a “Sustainable Growth Rate” factor (Steinwald 2005). Nevertheless, the total cost of Medicare has risen from \$7.3 billion (0.7% of GDP) in 1970 to \$309 billion (2.6% of GDP) in 2004 (Centers for Medicare and Medicaid Services 2006).

Cost-containment efforts in the Medicaid system. Medicaid was introduced in 1965 to provide a health insurance scheme for the poor. The original purely federal scheme is now jointly funded by federal and state governments. The means-test basis of Medicaid was intended to restrain spending but the system has grown enormously as a result of the introduction of additional mandates. For instance, Medicaid is now responsible for 46% of the total cost of nursing home placement of patients in the United States (Centers for Medicare and Medicaid Services 2006). In 1970, Medicaid cost 0.5% of GDP, while in 2004 it was 2.5% of GDP (\$293 billion) (Centers for Medicare and Medicaid Services 2006).

Cost-containment efforts in the health insurance industry. It is worth noting that traditional health insurance companies adopted the cost-containment tools introduced by Medicare, despite which health insurance premiums continue to rise rapidly (Jones 2001; Weeks and Wallace 2002; Dyckman and Hess 2003).

Increasing public dissatisfaction with the United States health care system. The “have-nots” in the US health care system (those without medical insurance) live on health care hand-outs from government at all levels. They have no unified voice to influence Congress that that makes directs the use of the 16% of GDP currently going to health care. The “haves” of health insurance (the insured members of the US public) have until recently been prepared to accept the hassles, frustrations and inefficiencies of the health care system because of their concern that health policy reform might introduce “rationing.” Limitation of access to health care has been widely believed to characterize countries with universal health insurance or a national health service (Blendon and Benson 2001; Kluge and Tomasson 2002; Wilson and Rosenberg 2004).

However, the “haves” are now becoming increasingly concerned about the quality of health care and the rising proportion of premiums that they have to pay for employment-based health benefits (Kaiser Family Foundation 2005a and b). They are increasingly aware that the US health care system performs poorly in comparison to other countries with universal health coverage, particularly in the areas of timely access to urgent care, availability of physicians, financial burden placed on the patient, and rate of medical errors (Schoen et al. 2005). Of greatest importance is the fact that the “haves” of health care in the US are becoming increasingly fearful of losing health insurance benefits altogether and joining the ranks of the “have-nots”. This may persuade the voting public to consider a federal program to provide health care for the uninsured.

The Current Plight of Medical Schools in the United States Health Care System.

Medical schools in the US play a major role in providing health care to those without health insurance. Many supply the medical staff to public hospitals that provide care for the medically indigent. If medical schools were to withdraw from providing care of the indigent and Medicaid patients, health care in the US would collapse.

It is important to realize that many US medical schools are in financial difficulty. To understand the reasons for this, we have to examine how medical schools today differ from those of forty years ago. Since 1965, the number of new doctors being trained has approximately doubled, while the number of medical school faculty involved in research and patient care has risen more than six-fold (Association of American Medical Colleges 2005a). In large part this

expansion was driven by increased funding for patient care and bio-medical research, which has proved to be detrimental to the long-term financial health of medical schools.

The problems of educational and research programs in United States medical schools today. Medical schools and their full-time faculty are essential for training new doctors and for cutting-edge bio-medical research. However, the cost of medical school tuition continues to rise faster than the rate of inflation of all other items in the US economy, with the exception of health care. Despite doubling of the research budget of the National Institutes of Health, research grants are increasingly difficult to obtain. The fiscal health of medical schools has deteriorated in the last twenty years. Medical schools used to rely on philanthropy to build physical plant and programs, but they now have to rely on philanthropy simply to balance the budget.

Changes in the role of medical school faculty as health care providers. The main reason for the financial plight of the United States medical schools is to be found in changes related to the care of patients. Medical school physicians and the hospitals in which they practice have always provided tertiary care for patients with the most complex medical problems who are referred by non-academic private physicians (Eisenberg 1999; Santana 2002; Mello et al. 2003). However, since the introduction of Medicare and Medicaid in 1965, the clinical faculty of medical schools has grown greatly, fueled by the fee-for-service business model of reimbursement for medical care (Porter and Teisbert 2004; Ozuah and Stick 2004). In the period 1965 to 1975, the number of full-time clinical faculty increased by 207%, while that of medical students increased by 80% (Association of American Medical Colleges 2005a). Between 1976 and 2004, the number of academic clinicians increased by 226%, while that of medical students increased by only 16% (Association of American Medical Colleges 2005a).

Parenthetically, during the period from 1965 to 2004, the number of research faculty in US medical schools similarly rose considerably with the increase in government funding for research but by only about a half the increase in the number of clinical faculty (Association of American Medical Colleges 2005a).

It was the potential for increased clinical revenue that drove medical school to increase the number of academic physicians. In the period 1965 to 1975 revenue from medical services provided by clinical faculty increased 6.7-fold compared to the 1.6-fold increase in revenue from medical student tuition; between 1975 and 2003 clinical revenue rose 13-fold, while revenue from tuition rose 3-fold (corrected for inflation) (Association of American Medical Colleges 2005a).

During the first two decades of the Medicare era (1965-1985), academic physicians, who are paid about half the salary of comparable physicians in private practice (Weeks and Wallace 2002), were able to generate enough revenue to cover their salaries by seeing patients for about *half their time*, which still left them time to teach and do research.

Changes in reimbursement for clinical services provided by medical school faculty. Over the second two decades of the Medicare era (1986-2005), as cost-containment measures were introduced by the government and by HMOs the collection ratio (cash collections as a percent of charges for services provided) for all physicians, including those in medical schools, dropped dramatically. For example, the current collection ratio for the Department of Neurology in the Miller School of Medicine at the University of Miami is about 48%, but it was as low as 32% at the height of the managed care era when HMOs were negotiating contracts at 75% of Medicare rates. For the Miller School of Medicine as a whole the overall collection ratio is now about 36%, while that for Medicare patients is only 28% and for Medicaid patients less than 19%. It is no wonder that medical school physicians now have to spend *all their time* seeing patients in order to cover their salary and have essentially no time left for research or teaching. Now, instead of medical school faculty practice subsidizing research and teaching, the cost-shifting goes in the reverse direction. Research grants and philanthropy now subsidize the cost of patient care. This has put considerable strain on faculty who are still committed to research and teaching.

Changes produced by increasing bureaucratic regulations. At the same time as collection ratios have been dropping, government regulations for reimbursement of teaching physicians and government audits of medical schools (Physicians at Teaching Hospitals audits) have become increasingly punitive (Association of American Medical Colleges 2005b). These regulations were designed to ensure that academic physicians complied with the reimbursement business model of medical care, notwithstanding the totally different situation in the teaching environment. Previously, teaching physicians would care for patients while teaching medical students and residents. They would simply co-sign notes of the trainees, writing brief addenda as necessary for their education. Current regulations require that medical school physicians write full notes on patients to justify submitting bills for reimbursement. Teaching physicians now spend as much time writing notes as do physicians in private practice, while continuing to be responsible for teaching medical students and residents (Relman 1999; Association of American Medical Colleges 2005c). Compliance with these regulations has eroded time for teaching and research.

Current state of medical school finances in the United States. Many medical schools and their affiliated hospitals provide a disproportionate amount of care to the medically indigent, and are being hit harder by the malpractice premium crisis than private physicians and hospitals (Santana 2002). For example, in the Miller School of Medicine of the University of Miami, approximately 15% of faculty practice revenue is allocated to a self-insurance fund against malpractice claims, despite which the School still has a \$30 million shortfall in this fund.

Medical school faculty practices in 2002-2003 earned a total of \$20.4 billion, 36% of the total revenues of the medical schools, with an additional \$6.9 billion (12%) earned by medical school hospitals (Association of American Medical Colleges 2005a). Nevertheless, since faculty clinical practice no longer covers its costs for the reasons outlined above, medical schools across the country are financially stressed and some are bordering on bankruptcy. As clinical earnings of academic medical faculty have fallen, income from other sources has not replaced them. The cost of teaching medical students has risen, and though tuition rates have also risen these have not kept up with costs. Research funding has gone up greatly since the 1960s, but few medical schools can run their business enterprise on research grants. All medical schools are scrabbling for ever-diminishing philanthropic dollars. The morale of medical school faculty and deans is at an all-time low (Eisenberg 1999; Bickel and Brown 2005). Most medical school physicians and deans would elect to accept a system of funding that was not based on fee-for-service reimbursement with its attendant bureaucratic regulations.

Development of a Proposal for Reform of the United States Health Care System for the Uninsured in the United States.

Lessons from comparison of the US health care system with that in other developed countries. Though health care in the US costs top dollars, it certainly does not deliver top quality results. Though no nation in the world can boast having an ideal health care system, the US has a system that is far from satisfactory at all levels.

The British National Health Service has many good features, not the least of which is universal free access. However, it also has many problems, which have led to an increase in the number of people in Britain investing in private health insurance (Kmietowicz 2001; Kmietowicz 2005a-c).

The Canadian universal free health service imposes many restrictions on access to care that engender considerable dissatisfaction (Kluge 1999; Chen and Hou 2002; Anonymous 2005). Canada currently has a *de facto* two-tier system, in which the rich go to the US for the services they cannot get at home and the less rich have to wait for more limited services. Canada is considering instituting an *official* two-tier system, allowing people to pay for insurance to fill gaps in the current free (to the patient) national/provincial health service (Wolfish 2005).

France has an employment-based government-run national health insurance system that achieves considerably higher ranking in health outcomes than the US with lower expenditure in terms of GDP. Even so, the French health care system is recognized as being far from ideal (Rodwin 2003).

Germany has a statutory health insurance system that covers 90% of the population, but it has been going through cost-containment reforms since the 1990's (Wörz and Busse 2005).

For a review of the health care systems in the individual countries of Europe, the reader is referred to the website of the World Health Organization Regional Office for Europe <http://www.who.dk/>.

Should the United States provide universal health insurance for its people?

Massachusetts recently enacted a law requiring near-universal health insurance and a poll suggests that the majority of the US public would support a similar health care law in their own state (Leblanc 2006). While this law will provide universal health coverage in the Commonwealth of Massachusetts, it does not appear likely to approach the problem of the overall high cost of health care in the US. Moreover, it would take many years for other states to enact similar laws, and many would be unlikely to do so. Therefore, the need remains for a federal program to provide health care for the uninsured.

Experience of the most aggressive forms of cost-containment during the height of the HMO period caused the US public to be concerned that attempts to lower costs would yet further limit access and increase bureaucratic hassles. However, reduction of the cost of health care will inevitably require introduction of potentially unpopular cost-containment programs aimed at restricting over-utilization; reducing administration; reducing malpractice premiums and defensive medicine; and contracting for the lowest price for medications, goods and services.

Up till now, the US public and its federal legislators have been unwilling to adopt universal health insurance (Heritage Foundation 2005). The reasons include the massive cost for

the government to provide a single payer system, even though the current multi-payer system is costing trillions of dollars in aggregate and more than any other country in the world (Centers for Medicare and Medicaid Services 2006)); dislike of government-run programs in general; the resistance of organized medicine; and the dependence of organized labor on employment-based health insurance benefits. However, the political climate appears to be changing. While it may be too huge a task to try to reorganize the health care system completely, a smaller federal program to provide health care for the uninsured seem more likely to achieve success.

The current multi-tier system of health care in the United States. The US currently has a complex multi-tier system of medical care. The first tier is the Medicare- and insurance-based fee-for-service system that in fact consists of as many different tiers as there are insurance plans. The second tier is the Medicaid system that provides a safety net for medical care for the poor. The third tier provides for special segments of the population, particularly health services provided by the Veterans' Health Administration (VHA) and the Indian Health Services. The fourth tier is the rapidly expanding "concierge" medicine, where practitioners charge an annual "retainer" of \$1,500 to \$10,000 to provide additional services for the rich (Zuger 2005). The fifth tier is comprised of the patchwork quilt of services currently provided for the medically uninsured.

This paper proposes a National Health Service for the Uninsured (NHSU) that would replace the current fragmented "non-system" for the more than 15% of the United States population that is currently without health insurance. This proposal would not directly affect the other tiers of medical care. Commercial insurance, Medicare, Medicaid, the VHA and Indian Medical Services would continue to provide for more than 80% of the population.

An Integrated System of Health Care for the Medically Indigent in the United States, the National Health Service for the Uninsured.

Estimating the current cost of indigent health care in the United States. Nearly 50 million people in the US are without health insurance and are unable to get care until their illness become sufficiently acute to take them to a hospital emergency department. The US is spending a surprising amount on health care for the indigent, though much of this is hidden by fragmentation of sources (Hadley and Holahan, 2003a; Centers for Medicare and Medicaid Services 2006). The

cost of indigent health care is provided in part by federal governmental sources, including Medicare, Medicaid, disproportional share hospital payments and upper payment limit mechanisms. Indigent care is also funded by state and local governments, mainly through payments to support public hospitals. Additionally, support for indigent care is provided from private funding of hospitals' uncompensated care, including from philanthropy and reduction of profit. Yet further funding for indigent health care comes from free care donated by physicians and by cost-shifting from health insurance premiums of the insured public.

Because of these multiple sources of funds that provide health care for the uninsured, it is very difficult to determine the total cost for the US as a whole. Hadley and Holahan (2003a) performed two separate detailed estimates of the total cost of uncompensated health care provided for all individuals without health care insurance in the US in 2001. These estimates were between \$35 billion and \$40 billion. In 2006 dollars these estimates amount to \$51-59 billion, allowing for an average annual inflation rate of health care costs over 2001-2006 of 8%.

Considering cost-shifting for indigent medical care to employment-based health insurance programs, Families USA (2005) estimated that the increase in annual premium paid for an individual was \$341 and for a family by \$922. Since there are about 200 million persons with health insurance in the US, this estimate indicates that the total subsidy provided for indigent care through cost-shifting from insurance premiums alone is about \$68 billion.

Forecasting the incremental cost of the National Health Service for the Uninsured.

In trying to estimate the *incremental* cost of the NHSU, we first need to look at per capita *total* cost of providing care in the various segments of the current US health care systems.

Medicare expenditure in 2004 was \$309 billion (Centers for Medicare and Medicaid Services 2006) for 35.9 million people age 65 and older (United States Census Bureau 2005). The per capita cost was \$8,607 per annum. This does not include the cost of long-term (nursing home) care.

Medicaid expenditure in 2004 was \$293 billion, which covered 52 million people, at an annual per capita cost of \$5,635 (Centers for Medicare and Medicaid Services 2006). Medicaid provides several programs that would not be needed for the NHSU, including children in families below an income cut-off related to the federal poverty level, children in foster care, and pregnant women. In aggregate, these already-covered programs cost about \$30 billion, and therefore the annual per capita rate of Medicaid for the remaining 45.9 million covered individuals is about \$4,500.

Employment-based health insurance premiums for an individual are an average of \$4,065 per annum (Families USA 2005). Employment-based health insurance programs usually do not cover all the costs of prescription medications and do not include long-term care, which might increase the annual per capita comprehensive premium to about \$6,000.

Veterans' Health Administration FY2005 annual expenditure was estimated to be \$28 billion and to provide services for 7.4 million enrollees (Congressional Budget Office 2005). Though the VHA's expenditures include the costs of research and graduate medical education, these are offset by the fact that the VHA's expenditures do not include the cost of long-term care. Moreover, the VHA recoups about \$1 billion per annum from third party collections (Government Accountability Office 2004). Therefore, the annual per capita cost per enrollee in 2005 was about \$3,700. It is worth noting that VHA per capita costs are based on *actual treated patients* and not *potential enrollees*. There are about 25 million military veterans in the USA (United States Census Bureau 2004), who might potentially use the VHA services but do not. Most of these potential enrollees are probably receiving health coverage through employment-based health insurance, Medicare and perhaps Medicaid. It is not possible to calculate the per capita rate of health care costs for all veterans.

Scenarios for forecasting the cost of the National Health Service for the Uninsured. If the medically indigent cost the federal government the same per capita rate as individuals with employment-based health insurance, the *total* cost for 50 million medically indigent individuals at \$4,065 per annum would be \$203 billion. Alternatively, if the NHSU were based on the VHA health care system model the *total* annual cost would be about \$185 billion, calculated on the basis of actual treated patients.

Using these two scenarios and the estimates of Hadley and Holahan (2003a), the *incremental* cost of the NHSU might be \$125 billion to \$150 billion, depending on the details of the system adopted.

Hadley and Holahan (2003b) performed a much more detailed analysis of the *incremental* cost of providing health care for the medically uninsured to the level of that provided by insurance-based and government-based coverage. They estimated the incremental cost for the federal government would be \$34 billion to \$69 billion, or \$50 billion to \$100 billion in 2006 dollars.

To be set against these estimates of the incremental cost of providing health care for the medically indigent is the annual cost to society of having nearly 50 million people without health

insurance. When calculated in terms of shorter lives and poorer productivity and health, Miller et al. (2004) estimated that the US loses \$65 to \$130 billion per annum. Therefore, it appears that the introduction of a federal program of health care for the medically uninsured would be revenue-neutral for the country as a whole.

A national experiment of introducing universal health insurance. Taiwan's experience is relevant to estimating the cost of the NHSU for the United States. In 1995, Taiwan introduced a National Health Insurance program, which provided universal health insurance that previously only covered 57% of the population. In the following two years there was a spike in national health care expenditure, but after that the annual expenditure returned to the same or lower level of expenditure (Lu and Hsiao 2003). This was the result of the introduction of cost-containment programs, despite which the program achieved a 64-71% satisfaction rating (Lu and Hsiao 2003). This experience suggests that if similar cost-containment programs were introduced into the NHSU, it would *reduce rather than increase* the total cost of US health care.

Essential Elements of the National Health Service for the Uninsured.

The NHSU would be an integrated, comprehensive, cost-effective federal program. It would be based on a new network of primary care physicians and clinics integrated with the various services currently provided for the medically indigent by public hospitals and medical schools. The NHSU would provide medical services from the family practitioner to the specialist, from ambulatory care and home health to hospital and nursing home services. It would provide medications, durable medical equipment, and the services of allied health professionals for all covered patients.

A business model based on direct compensation. As discussed above, the current US fee-for-service reimbursement business model of health care has serious drawbacks, both for the country in terms of cost, and for the participants in the system (patients and providers) in terms of bureaucratic restrictions. A direct compensation business model would be required for the NHSU to be cost-effective.

Primary care and academic physicians would be salaried professionals working in the NHSU and freed from current bureaucratic regulations of the fee-for-service model. Academic physicians would provide secondary and tertiary services for the medically indigent and would receive a salary for these functions. The academic physicians would be able to return to their original mission of teaching and research.

The medical schools and public hospitals providing services for the NHSU would be directly compensated for the services they provide to the NHSU. The medical schools would retain their autonomy and independence to concentrate on their mission of teaching and research.

An annual direct budgetary allocation would be required for public hospitals, medical schools and health centers providing care in the NHSU, and for the salaried employment of medical and allied health providers. The direct compensation model for the NHSU might resemble the current Veterans' Health Administration system.

Reduction of the costs of malpractice premiums and defensive medicine. Physicians, medical schools and public hospitals providing services for the NHSU would be government instrumentalities and would thereby have sovereign immunity like the VHA's facilities and physicians. The total cost of malpractice settlements and litigation for the VHA in 2000 was estimated to be \$90 million, or 0.3% of the total \$28 billion annual expenditure. This compares, for example, with the faculty practice plan of the Miller School of Medicine that spends about 15% of the annual faculty revenue in providing self-insurance.

Further reduction of malpractice costs could be achieved by the introduction of compulsory arbitration programs, and a national insurance scheme for patients suffering medical injury, similar to the Neurological Injury Compensation Act of the State of Florida, the United States National Vaccine Injury Compensation Program, and the New Zealand no-fault compensation program for medical injury, could be instituted (Whetten-Goldstein et al. 1999; Davis 2002; Health Resources and Services Administrations 2005). If the cost of malpractice insurance and defensive medicine is only 25% of total hospital and physician expenditures in the US, their elimination would result in a savings for the NHSU of \$35 billion (Centers for Medicare and Medicaid Services 2006).

The primary care physician base of the NHSU. It has long been recognized that the US needs to train more primary care physicians (Council on Graduate Medical Education 2000), and

there is increasing concern about the overall shortage of doctors in the US (Merrit et al. 2004). The Association of American Medical Colleges recently called for increased medical school enrollment (Association of American Medical Colleges 2005d). The NHSU would add to both of these pressures. It would need to recruit a large number of primary care physicians to provide the general practitioner service that is currently missing for the medically indigent.

Estimates of how many general practitioners would be needed can be based on current experience in the US and elsewhere. The United Kingdom has about 700 family practitioners per million of the population (Royal College of General Practitioners 2005), while Canada has about 1,000 primary care physicians per million (Godwin et al. 2005). The US does not have an integrated primary care network, but the American Academy of Family Practitioners has almost 60,000 members (American Academy of Family Practice 2005), while the American College of Physicians has about 120,000 members of whom perhaps a half provide primary care (American College of Physicians 2005). This suggests that currently the US has about 400 primary care physicians per million of the population. These figures do not include primary care physicians who belong to neither body, nor do they include physician assistants and nurse practitioners who constitute a further 500 non-physician primary care providers per million of the US population (Robert Graham Center 2005).

Based on these figures, the NHSU would probably need at least 500 primary care physicians per million of enrolled individuals, or about 25,000 new primary care physicians for the care of the medically uninsured. This number is 1.6 times the total number of medical students graduating each year from US medical schools, of whom only about a third enter the primary care disciplines of family practice, general internal medicine and general pediatrics.

There are several ways in which this need for additional primary care physicians could be met. The first is to expand the number of medical students graduating each year. Second, the opening of a well-paid salaried primary care career track in the NHSU would undoubtedly attract a higher proportion of medical school graduates to go into primary care disciplines. Newly graduated doctors could be further attracted by a program to forgive student loans in return for two or three years of primary care service in the NHSU, similar to that currently offered through the National Health Service Corps. Finally, the new primary care network of the NHSU would attract qualified foreign medical graduates.

The specialist physician base of the NHSU. The specialists of the NHSU would predominantly be the current clinical faculty of US medical schools, though additional specialists might need to be recruited. Medical school physicians could become full-time salaried employees of the NHSU while retaining their faculty status with concomitant responsibilities for teaching and research. Alternatively, they could have part-time appointments split between the NHSU and their medical school in the same way as current academic physicians can be part-time employees of their medical school and of an affiliated VA Medical Center. This second arrangement would allow an academic physician to continue to provide fee-for-service patient care services through the medical school faculty practice plan.

Salary levels of physicians in the NHSU. Physician salary levels and practice satisfaction in the current US health care system have progressively fallen over the last 15 years. The Massachusetts Medical Society Physician Environment Index, a measurement tool developed to track various financial and other factors that contribute to physicians' practice environment, fell by 20% in the period 1992 to 2004 (Massachusetts Medical Society 2005). If the proposed NHSU is to be successful, both in winning the support of organized medicine and in recruiting physicians, it will be necessary to make it attractive to the medical profession in terms of physician salaries.

The American Medical Association has consistently opposed a universal government-run medical health service. The American Medical Association's objections are based on fear of loss of physician autonomy and the potential deleterious effect of a single government payer on physician income. Similarly, the British Medical Association vigorously resisted the introduction of the British National Health Service for fear of reduction of the already relatively meager incomes of doctors in Britain in 1948. The main turning point that persuaded British doctors to join the National Health Service was that the level of salary offered by the government was about 50% higher than doctors were earning at that time (BBC Online Network 1998).

Clearly, the acceptance of the NHSU by medical schools and organized medicine in the US would require that salaries of academic and primary care physicians in the NHSU be set at considerably higher levels than at present and be comparable to those of physicians in private practice. Physician and clinical services comprise about 21% of the total national health expenditure in 2005 (Centers for Medicare and Medicaid Services 2006). Hence, a 50% increase in the salaries of the primary care and specialist physicians employed by the NHSU might increase the total expenditure of the NHSU by 10%.

Salaries would be negotiated by a body representing the physician employees and the governing body of the NHSU. This would be similar to the way that salaries are negotiated in the VHA and the British National Health Service. The American Medical Association might be the organization representing the physicians in the NHSU. Salaries of physicians in private practice would be the benchmark against which such negotiations would be judged. In this, marketplace economics would be crucial; if practice outside the NHSU became more financially attractive, physicians would leave the NHSU.

The hospital base of the NHSU. In the long run, the primary care physician service of the NHSU should reduce the hospitalization rate of the uninsured. However, in the short run there may be some increase in bed utilization for the uninsured. Currently in the US, though a large part of hospital services for uninsured patients is provided by academic medical centers, a proportion is provided by non-teaching hospitals. The new NHSU could either maintain this arrangement by contracting with non-teaching hospitals and their physicians to provide indigent care, or, alternatively, could set up a network of regionally centralized academic hospitals linked to the geographically distributed primary care base. This would be similar to the VHA system where regional VA Medical Centers provide hospital services for patients whose ambulatory care is provided by decentralized VA primary care sites. This latter model would require some expansion of the capacity and number of public hospitals and medical schools. Such an expansion would also be required to teach the greater number of doctors and primary care physicians already needed by the US.

Cost-containment programs. A number of cost-containment programs will be needed for the NHSU.

Reduction of administrative costs. The current US health care system developed with very little input about its management from physicians. Widespread complaints of physicians are that they are at the mercy of bureaucrats and insurance companies, they have no say in the management of the system and the hospitals, and they could do a much better job if they were allowed to make decisions about prioritization of resource allocation. In part this is true, though physicians as a group have been unwilling to provide the administrative effort to take full responsibility for running the health care system. Involvement of physician-administrators at all levels of the British National Health Service, including Strategic Health Authorities and Trust Boards, is based on the concept that physicians are best able to make priority judgements about allocation of scarce resources (Degeling et al. 2003; Edwards et al. 2003).

The NHSU would be administered by boards comprised of both administrators and physicians. The physicians would define principles and priorities, and the administrators would translate these principles into best business practices. The administrators and government would define the resources to be allocated to the NHSU, and the physicians would provide services within the constraints of these allocations. The NHSU would have a national central office and regional management committees, a structure that would be similar to the current VHA.

The NHSU would be less costly to administer than the current fee-for-service insured tier of health care. If the overall administrative costs of the proposed NHSU were reduced from that of the US (31.0%) to that of Canada (16.7%) the annual savings for the NHSU would be \$50 billion (Woolhandler et al. 2003). Initially, the NHSU would require a one-time administrative investment for developing the integrated comprehensive health care system, but thereafter administrative costs should plummet.

Reduction of over-utilization. It is likely that at present the medically uninsured population has a higher proportion of sick people than the population with medical insurance. Therefore, initially the NHSU would experience a higher utilization rate, particularly in the primary care area. With time, the provision of effective primary care should improve the health of those enrolled in the NHSU and reduce utilization.

The administration of the NHSU by joint teams of physicians and administrators would allow medically appropriate decisions to control utilization rather than profit motive driving those decisions. Medical care guidelines and practice parameters are already in existence for many disorders, and the introduction of the NHSU would stimulate the development of many more to reduce over-utilization. The NHSU would stimulate the development of cost-containment programs based on physician education (Manheim et al. 1990). Finally, joint teams of physicians and administrators would work with fixed annual budgets to develop measures to control utilization and increase efficiency.

Reduction of costs of medications, goods and services. If the savings from bulk purchase of medications, goods and services amounted to only 20% of the cost of those items, the savings for the NHSU would be \$51 billion (Centers for Medicare and Medicaid Services 2006).

Eligibility for the National Health Service for the Uninsured. The NHSU would be available to all without health care coverage through Medicare and employment-based commercial health insurance. Families whose annual income falls below federally established

poverty guidelines would be eligible for Medicaid coverage. Those individuals and families whose income is above Medicaid poverty limits but who do not receive employment-based insurance would be eligible to sign up for the NHSU. It remains to be seen whether the NHSU or Medicaid would be more attractive.

It is legitimate to ask what is to stop employers ending private coverage for their employees and encouraging them to join the NHSU program. To answer this question it is important to examine the type of facilities and services that the NHSU would be able to provide. It is well-recognized that the current VHA and Medicaid facilities and services are more “bare-bones” and expense-limited than those offered by for-profit facilities and physicians. In the same way, the NHSU would be expected to have more restrictions from the patients’ point of view than if they had employment- or Medicare-based health insurance. The NHSU would limit investigations and procedures to those that are medically necessary, and physician-patient interaction time would be less than in the commercial arena. The NHSU would provide a basic level of medical care for all who used it and a safety net for those who otherwise would have no health care. However, it would be a less attractive alternative than employment-based health insurance. Collective bargaining by unions and individual negotiations by prospective employees would still seek health insurance as a preferred fringe benefit.

Conclusions

This proposal for a National Health Service for the Uninsured would not interfere with the health care of the majority of the US public. Limited to only 15% of the population, the NHSU should be politically acceptable to most of the US voting public who currently have health insurance. The proposal for the NHSU would answer many of the current problems of medical schools and academic physicians, and should be acceptable to the American Medical Association. This proposal has the merit of offering a comprehensive integrated health care system for the medically indigent that extends from a new national primary care service to a national system of tertiary referral hospitals and specialists. The US public could feel proud of introducing the NHSU to replace the present embarrassing situation where nearly 50 million Americans are without basic health care. This proposal offers an integrated health care system for the uninsured at a total cost to the country that would be less than is currently being expended through many fragmented programs nationwide. It offers the development of a primary care infrastructure that the US has long needed and of cost-containment programs that in the long run could help reduce

the cost of insurance-based health care in the US. The NHSU might ultimately be instrumental in bringing under control the double-digit rate of inflation of medical expenditure in the US by providing templates for cost-containment that could be adopted by the larger insurance- and Medicare-based part of the health care system.

This proposal for a National Health Service for the Uninsured offers an innovative solution to multiple problems. It would improve the current poor standard and high cost of the fragmented health care of the uninsured. It would relieve many of the current frustrations of academic physicians and allow them to return to their original role in the health care system. It would assist in resolving the current financial difficulties of the medical schools. It would go some way to fulfilling the long-expressed desire of the US government to ensure that all its citizens have basic health care.

Though some may regard the NHSU as the camel's nose under the tent, the goals of the NHSU are considerably different from those of the insurance- and Medicare-based health care system. The NHSU would not be a prelude to the reorganization of the whole of the health care system in the US. Nevertheless, the introduction of the NHSU would raise the overall standard of medical care in the US, and hence its international standing in measures of health care outcomes.

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