



JOINT ECONOMIC COMMITTEE

Senator Sam Brownback, Ranking Republican Member

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Are Health Care Reform Cost Estimates Reliable?

History Shows True Costs Are Often Significantly Understated

Since the end of World War II, major health care reform proposals have generally always cost more—sometimes significantly more—than the highest cost estimates published while the legislation was pending. Consider the following examplesⁱ:

United Kingdom's National Health Service. In 1946, the British government estimated that the first-year cost of its proposed National Health Service, which would provide free health care to all citizens at the point of service, would be £260 million. The actual expenditures of the NHS in its first year of operation (1948-49) were £359 million—38% more than predicted.ⁱⁱ

Britain's official assessment of what happened is typically understated: "Architects of the NHS underestimated the immediate public demand and the consequent costs."ⁱⁱⁱ A more vivid assessment, from the British Health Minister in May 1949 to his Cabinet colleagues:

If the present [budget] estimates are not to be exceeded, services must be withheld which the community has proved it urgently needs—dental treatment and spectacles must be refused, beds must be closed, staff dismissed, and waiting lists already appallingly long must grow even longer. I do not think my colleagues will wish this to happen; I hope they will share my view that the additional money must be found to prevent its happening. But if they do not, I shall need their assistance in determining which services should be withheld and which developments cancelled.^{iv}

Over the past 60 years, British debates about "NHS under-funding" have followed essentially this same pattern: Demand for "free" services is still exceeding available funds; therefore, the government must either increase funding or reduce patients' access to care.

This problem is not exclusive to Britain. Government health care programs in the U.S. have proven just as vulnerable to cost under-projections:

**Table 1: By a Country Mile:
Historical Examples of Erroneous Health Care Cost Estimates
(billions of dollars*)**

Benefit	Estimated cost at time of enactment**	Actual cost	Diff.	Error ratio
UK National Health Service	.260	.359	-.099	1.38 to 1
Medicare hospital insurance	9	67	-58	7.44 to 1
Medicare (entire program)	12	110	-98	9.17 to 1
Medicare ESRD program	.1	.229	-.129	2.29 to 1
Medicaid DSH program	1	17	-16	17.00 to 1
Medicare home care benefit	4	10	-6	2.50 to 1
Medicare catastrophic coverage***	5.7	11.8	-6.1	2.07 to 1
Massachusetts Health Reform	.725	.869	-.144	1.20 to 1

* UK example is in British pounds. **All figures are per-year or for a single specified year, unless otherwise noted. See accompanying text for additional details.

*** Multi-year estimate.

Source: Joint Economic Committee, Republican staff, July 2009.

Medicare (hospital insurance). In 1965, as Congress considered legislation to establish a national Medicare program, the House Ways and Means Committee estimated that the hospital insurance portion of the program, Part A, would cost about \$9 billion annually by 1990.^v Actual Part A spending in 1990 was \$67 billion.^{vi} The actuary who provided the original cost estimates acknowledged in 1994 that, even after conservatively discounting for the unexpectedly high inflation rates of the early ‘70s and other factors, “the actual [Part A] experience was 165% higher than the estimate.”^{vii}

Medicare (entire program). In 1967, the House Ways and Means Committee predicted that the new Medicare program, launched the previous year, would cost about \$12 billion in 1990.^{viii} Actual Medicare spending in 1990 was \$110 billion—off by nearly a factor of 10.^{ix}

ESRD program. In 1972, Congress enacted a universal entitlement to kidney dialysis for patients suffering from end stage renal disease. The program proved twice as expensive as the publicly predicted levels—\$229 million in 1974 instead of the predicted \$100 million. The bill’s authors had seriously underestimated the demand for services, especially among the over-65 population.^x

Medicaid DSH program. In 1987, Congress estimated that Medicaid’s disproportionate share hospital (DSH) payments—which states use to provide relief to hospitals that serve especially large numbers of Medicaid and uninsured patients—would cost less than \$1 billion in 1992^{xi}. The actual cost that year was a staggering \$17 billion. Among other things, federal lawmakers had failed to detect loopholes in the legislation that enabled states to draw significantly more money from the federal treasury than they would otherwise have been entitled to claim under the program’s traditional 50-50 funding scheme.^{xii}

Medicare home care benefit. When Congress debated changes to Medicare’s home care benefit in 1988, the projected 1993 cost of the benefit was \$4 billion. The actual 1993 cost was more than twice that amount, \$10 billion.^{xiii}

Medicare catastrophic coverage benefit. In 1988, Congress added a catastrophic coverage benefit to Medicare, to take effect in 1990. In July 1989, the Congressional Budget Office (CBO) doubled its cost estimate for the program, for the four-year period 1990-1993, from \$5.7 billion to \$11.8 billion. CBO explained that it had received newer data showing it had significantly under-estimated prescription drug cost growth, and it warned Congress that even this revised estimate might be too low. This was a principal reason Congress repealed the program before it could take effect.^{xiv}

SCHIP. In 1997, Congress established the State Children’s Health Insurance Program as a capped grant program to states, and appropriated \$40 billion to be doled out to states over 10 years at a rate of roughly \$5 billion per year, once implemented. In each year, some states exceeded their allotments, requiring shifts of funds from other states that had not done so. By 2006, unspent reserves from prior years were nearly exhausted. To avert mass disenrollments, Congress decided to appropriate an additional \$283 million in FY 2006 and an additional \$650 million in FY 2007.^{xv}

Massachusetts Commonwealth Care. In 2006, the Bay State passed a historic universal-coverage plan, which combined a mandate on all residents to have health coverage with generous subsidies for lower-income uninsured families. At that time, the program was predicted to cost roughly \$472 million in fiscal year 2008. It cost \$628 million that year.^{xvi} In the words of one Democratic state senator, who came to regret his vote for the plan:

The assumption was that, as more people—and, in particular, more young and relatively healthy people—joined the system, premiums would go down across the board. There was also the assumption that as more people became insured, the number of people going to the emergency room would drop dramatically, saving the Commonwealth money. Neither of those things happened—at least not enough to produce the cost savings we were told we would see. In fact, health care reform has cost the Commonwealth much more than expected.^{xvii}

Why So Far Off?

A certain level of error in cost projections is to be expected, especially regarding sectors as complicated as health care. But as Table 1 shows, the foregoing examples represent extreme under-estimates, with error ratios ranging from 1.2:1 to 17:1. What explains this phenomenon? For reasons that may never be entirely understood, health care appears to be an area with great room for overly optimistic assumptions regarding changes in the behavior of patients and providers, technological innovation, the practice of medicine, program take-up rates, future health cost inflation, and the likely success of proposed cost-control mechanisms.

This is not to say the official “scorekeepers” are bad at their jobs. On the contrary, they typically exhibit very high levels of skill, integrity, independence, and professionalism—often working under extremely tight time frames and hectic conditions, and not infrequently amidst a din of interested voices attempting to influence their work.

In some of the above cases—such as the British NHS, the U.S. ESRD entitlement, and the Massachusetts health care reform—initial public estimates appear to have simply underestimated the level of demand for the proposed new benefits, perhaps due to insufficient data or a lack of experience administering benefits of that sort. In other cases, such as Medicare’s creation, the actuaries could not have been expected to factor in future program expansions not actually authorized in the then-pending legislation. And of course, even the best actuary is helpless



against a legislative draftsman who delays a new program's full implementation in order to push a large portion of its costs beyond the last year of the official estimating window.

Whatever the causes, it seems there is a kind of Murphy's Law of health care legislation: "If it *can* cost more than the highest available official estimate, it probably will." The House and Senate are currently considering health care reform bills that would cost in the vicinity of \$1 trillion^{xviii} over the first 10 years and \$2.4 trillion^{xix} over the first 10 years of full implementation. Given the potentially significant fiscal and budgetary consequences, lawmakers will want to keep this variant of Murphy's Law in mind when considering major health reform legislation.

ⁱ All currency figures in this paper are in nominal form, i.e., unadjusted for inflation.

ⁱⁱ £260 million was twice the original 1944 estimate of £132 million. Seymour E. Harris, "The British Health Experiment: The First Two Years of the National Health Service," *The American Economic Review*, Vol. 41, No. 2, May 1951, p. 655.

ⁱⁱⁱ [UK National Archives](#), "The Cabinet Papers, 1915-1978: The NHS under Pressure" (7/24/09).

^{iv} [Aneurin Bevan](#), Cabinet Memorandum, "The National Health Service: Memorandum by the Minister of Health, 6 May 1949," para. 8, at UK National Archives, "The Cabinet Papers, 1915-1978: The NHS under Pressure."

^v Robert J. Myers, "Actuarial Cost Estimates and Summary of Provisions of the Old-Age, Survivors, and Disability Insurance System as Modified by the Social Security Amendments of 1965, and Actuarial Cost Estimates and Summary of Provisions of the Hospital Insurance and Supplementary Medical Insurance Systems Established by such Act," Committee Print, Committee on Ways and Means, House of Representatives, 89th Congress, 1st Session; July 30, 1965, Table 11, p. 33.

^{vi} [1993 Annual Report of the Board of Trustees of the Federal Hospital Insurance Trust Fund](#), Table I.C.2, p. 10.

^{vii} [Robert J. Myers](#), "How Bad were the original actuarial estimates for Medicare's hospital insurance program?" *The Actuary*, February 1994, pp. 6-7. For a detailed discussion of those controversial estimates, see Barkev S. Sanders, "What Would 'Medicare' Cost?: Author's Reply," *The Journal of Risk and Insurance*, Vol. 34, No. 1, March 1967, p. 148: "[T]he [multiple] estimates made [in the seven years] prior to 1965 were made each time so close to the borderline of credulity that in a year's time they could not be defended at all."

^{viii} Robert J. Myers, "Actuarial Cost Estimates for the Old-Age, Survivors, Disability, and Health Insurance System as Modified by the Social Security Amendments of 1967," Committee Print, Committee on Ways and Means, House of Representatives, 90th Congress, 1st Session; December 11, 1967.

^{ix} [Budget of the U.S. Government, Fiscal Year 2010: Historical Tables](#), table 16.1, p. 334.

^x Richard A. Rettig, "Origins of the Medicare Kidney Disease Entitlement: The Social Security Amendments of 1972," in *Biomedical Politics*, National Academy Press, 1991, pp. 195-201.

^{xi} JEC staff calculation based upon information and estimates contained in House Report 100-391(Part I), 1987 CBO Baseline Forecast for Medicaid spending, and historical Medicaid spending, including disproportionate share hospital payments.

^{xii} [Robert E. Mechanic](#), "Medicaid's Disproportionate Share Hospital Program: Complex Structure, Critical Payments," National Health Policy Forum Background Paper, September 14, 2004, p. 4. In 1991, Congress began a process—still on-going—of reforming Medicaid to close loopholes.

^{xiii} Eliot Z. Fishman, Joan D. Penrod, and Bruce C. Vladeck, "Medicare Home Health Utilization in Context," *Health Services Research*, Vol. 38, No. 1, Part 1, February 2003, p. 108.

^{xiv} [CBO](#), Background Material on the Catastrophic Drug Insurance Program, July 1989, table 2, p. 7. Congress repealed the benefit in November 1989.

^{xv} [CHIPCentral.org](#) Reading Room: Federal and State Financing and Policy (7/24/09). In February 2009, Congress renamed the program CHIP and greatly increased its funding, essentially ending its capped nature.

^{xvi} [Massachusetts](#) Commonwealth Connector, "Health Reform Facts & Figures, July 2009 update, p. 6: "[Mass.] enrolled considerably more residents than anticipated in FY08."

^{xvii} State Senator Jamie Eldridge (D-Middlesex), quoted in [Trudy Lieberman](#), "Health Reform Lessons from Massachusetts, Part 1," *Columbia Journalism Review*, March 23, 2009.

^{xviii} [CBO](#), Letter to Hon. Charles B. Rangel re: H.R.3200, July 17, 2009 (cost estimate, p. 6).

^{xix} Projection by Senate Budget Committee Republican staff, using conservative assumptions.