

infection is compelling, it is likely that regional initiatives in Latin America<sup>5</sup> will succeed in interrupting vector-borne and transfusion-associated transmission before such a vaccine becomes available. Dr. Focosi correctly points out the shortcomings of current treatments, and better drugs or an effective therapeutic vaccine would indeed bring immeasurable benefit to the million or more persons already infected with *T. cruzi*.

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## The Value of Medical Spending in the United States

**TO THE EDITOR:** Medical care contributed to improvements in life expectancy between 1960 and 2000, as reported by Cutler et al. (Aug. 31 issue).<sup>1</sup> However, when we take a longer look, it is striking how little medical care contributed to life expectancy during the full span of the 20th century. Between 1950 and 2000 (years that coincided with the explosion in medical technology in the United States), life expectancy increased by 8.8 years; however, it increased by 20.9 years from 1900 to 1950, years when medicine often had little to offer in the way of meaningful interventions.<sup>2</sup> Most of the decline in death rates for the infectious diseases that were the principal causes of death during this period occurred before a treatment or vaccine for these diseases had been discovered.<sup>3</sup> A rising standard of living and the associated improvements in housing, sanitation, and nutrition account for many times more years added to our life expectancy than do all aspects of medical care combined. We should keep this fact in mind when we recall that the life expectancy of a black infant born today is still 5.3 years less than that of a white infant.

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**TO THE EDITOR:** Cutler et al. misrepresent the relative inefficiency of the U.S. health care system. It is only in the past 10 years that "medical spending has increased at roughly the same rate in all countries," as ranked by the Organization of Economic Cooperation and Development (OECD). This temporary phenomenon was due to the brief success of managed care in holding down costs in the mid-1990s.<sup>1</sup>

During the period discussed by Cutler et al. (1960–2000), the United States ranked near the bottom internationally in terms of improving health and the relative efficiency of its health care spending.<sup>2</sup> Yes, health care costs are rising everywhere. But the United States required 1.19 percentage points of the national gross domestic product (GDP) for new health care spending for every year of improved life expectancy, the highest ratio in the world. Most other countries hovered around half a percentage point of GDP per year of increased longevity.

Moreover, the United States now ranks 21st out of 30 OECD countries in longevity, despite having the highest health care costs in the world. The country was 16th among the same group in 1960. That's not what I would call value for money.

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**TO THE EDITOR:** Cutler et al. chose to discount medical spending (at a rate of 3%) but not to discount health effects. This decision probably had a great effect on their estimate of the value of medical spending in the United States. Our own work suggests that the incremental cost-effectiveness of medical care between 1950 and 2003 is unfavorable if costs and benefits are both discounted (approximately \$180,000 per life-year), marginal if neither costs nor benefits are discounted (approximately \$100,000 per life-year), and favorable only if costs are discounted but benefits are not (approximately \$28,000 per life-year). The Public Health Service's Panel on Cost-Effectiveness in Health and Medicine<sup>1</sup> advocates discounting costs and benefits in base case analyses. The authors probably would have found a very different answer if they had followed this prescription, with perhaps very different policy implications. It would be policy-relevant and helpful for cross-study comparisons if the authors could report a sensitivity analysis using more standard methodologic assumptions, in particular one that discounts both costs and benefits and one that discounts neither costs nor benefits.

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**THE AUTHORS REPLY:** Barr's observation that health improved more in earlier decades than in recent decades (probably as a result of changing factors that affect health) is certainly true, as Thomas McKeown noted years ago.<sup>1</sup> But at present, many of the most obvious nutritional and public health interventions have already been under-

taken. Both water and air are much cleaner than they were in the past, and caloric intake is, if anything, too high. Thus, medical care has become a larger part of any advances in health.

Goozner notes that medical care in many other countries is likely to be more cost-effective than care in the United States. To our knowledge, there have been no studies comparing medical costs with additional years of longevity in these countries, as we did for the United States. However, if we assume that Goozner's presumption is true (as is likely), it shows only that some of what is done in the United States is not worth the expense. Our results show that even taking this wasted care into account, the U.S. system as a whole is probably worth the cost. The paradox of U.S. medical care is that a high total value of care is combined with a significant amount of waste.

Braithwaite and Roberts raise the issue of discounting years of life and costs. The issue of discounting nonmonetary factors is controversial,<sup>2</sup> particularly when gains in life expectancy are compared across ages and time periods. For example, if we compare the benefits of care for a 40-year-old woman with those for her newborn child in a given year, discounting the health of a newborn implies that the value of a year when that child reaches 40 is perhaps 0.31 year, but the value of a year of the mother's life, also at age 40, is 1 year. Furthermore, if we compare the benefits of care over time, life-years are gained at increasingly older ages with each ensuing decade and are therefore valued less over time. For example, the gain of 1 life-year by a 45-year-old would have been valued at 0.43 year in the 1960–1970 period but at only 0.37 year in the 1990–2000 period. Our goal was to avoid these paradoxes by presenting a fixed quantity: years of life devoid of such intergenerational and intertemporal inconsistencies.

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