

## The Employer's Perspective

Donald S. Shepard, PhD

### ... THE CHOICE OF PERSPECTIVE ...

Texts on cost-effectiveness analysis, such as that by Gold et al,<sup>1</sup> remind researchers to specify clearly the viewpoint or perspective. They should select the perspective of the decision maker who will use the analysis. The admonition is an outgrowth of the purpose for analyses of cost of illness, cost effectiveness, and cost benefit: a tool to improve resource allocation.

In the 4 decades since analyses have been used in the health sector, the perspective almost invariably has been government or society. For many decisions, government and societal perspectives fit well. Decisions about investment in research and development, such as the classic analysis of the development of the polio vaccine, or choices of new childhood vaccines<sup>2</sup> involve public goods. Studies on the cost of illness, initiated by Weisbrod,<sup>3</sup> demonstrate the substantial economic burden of illness on American society. Proponents often draw on these studies to urge government to devote more resources to treatment, prevention, or research.

The study by Guico-Pabia and colleagues<sup>4</sup> represents a fresh, new perspective: the private employer. Its origin lies in the employer's pivotal role in structuring most group health insurance plans. Typically, the employer *directly* decides which services to cover, the degree and types of controls on their use, and sharing of insurance premiums between the employer and the worker. *Indirectly*, the employer determines the types of managed care arrangements and the level of control it permits (eg, choice of provider, utilization review, and incentives), through the selection of the managed care organization and managed care product.

Increasingly, a key element of managed care is the type of pharmaceutical benefit. Drugs and other medical nondurables represented 10.1% of expenditures on personal healthcare in 1996—virtually unchanged from 10.0% 16 years earlier. In the 4 years from 1996 to 2000, however, the share

increased to about 11.1%.<sup>5</sup> Greater utilization of pharmaceuticals, rising prices, and a shift toward newer drugs all contributed to this increase.

The employer's choice of and directions to the pharmacy benefits manager will affect the level and rate of increase of *its* workers' pharmaceutical costs. Aggressive approaches to pharmaceutical cost control include restrictive formularies and a limited number of dispensing outlets that grant favorable prices. The danger of such aggressive policies, of course, is that access to appropriate pharmaceuticals might be impeded. Ultimately, employers (and, indirectly, their workers) must balance the value of easier access to pharmaceuticals against their cost.

Analyses from the employer's perspective, such as the study by Guico-Pabia and colleagues,<sup>4</sup> are motivated by the need to help employers balance the value from unconstrained access to medical care and pharmaceuticals against higher cost.

### ... THE BENEFIT-COST FRAMEWORK ...

The employer's decision can be framed as a benefit-cost analysis. The net benefit (NB) from the employer's perspective of removing restrictions on use of medical services or pharmaceuticals is calculated as  $NB = \Delta \text{Benefit} - \Delta \text{Cost}$ .

If NB is positive, the change is economically valuable. The terms  $\Delta \text{Benefit}$  and  $\Delta \text{Cost}$  represent the changes in the economic benefit and cost to the employer, respectively. The cost-of-illness study by Guico-Pabia et al<sup>4</sup> helps an analyst calculate  $\Delta \text{Benefit}$ . These authors have performed a valuable calculation for one class of illness, ischemic heart disease.

From the Schneider Institute for Health Policy, Heller School, MS 035, Brandeis University, Waltham, MA 02454-9110. E-mail: shepard@brandeis.edu.

Dr. Shepard's research on cost-effectiveness methods was supported in part by NIDA grant R01DA 08739.

In cost-of-illness studies, the benefit-cost decision is implicit rather than explicit. The specific policy to reduce illness has not been identified, so its cost is unknown. Cost-of-illness studies are useful in an exploratory stage, however, to determine the level of expenditures that would be economically justified. Guico-Pabia et al<sup>4</sup> found that the cost of ischemic heart disease from the employer's perspective in the United States was \$565.31 per enrollee. This means, technically, that if employers could completely, immediately, surely, and permanently eliminate this disease with no adverse consequences for less than that amount per year, they would be economically better off. Similarly, if they could immediately, surely, and permanently reduce the burden by 10%, they would be economically justified in spending \$56.53 per enrollee (10% of \$565.31). The seller of a new drug, eg, can capture some of that gain in the price of the product.

---

... METHODOLOGIC CHALLENGES ...

The study by Guico-Pabia et al<sup>4</sup> may well initiate a trend of performing cost analyses from the private employer's perspective. Thus, it is useful to set forth 2 methodologic challenges that future studies might address.

The first challenge concerns the factor  $f$  of 1.86. This factor incorporates the loss due to idle assets when labor is unavailable because of illness. As the authors point out, the value of 1.86 represents a worst-case analysis. Implicitly, that value assumes that each asset is uniquely tied to a single worker. If that worker is absent, no one else can use his capital. This case corresponds to the greatest cost of illness, and hence the most favorable value of NB from expanding treatment.

Economic theory suggests, however, that a company or a productive unit will try to adapt to a shortage of one input by using other available inputs. For example, suppose the absent worker were a truck driver. The worst-case analysis assumes that the driver's absence idles the truck and transportation services are lost. The adaptation, however, might involve a temporary or assistant driver filling in. If, eg, the temporary driver, being unfamiliar with the route, took 10% longer but received the same hourly wage, then his factor  $f$  would be 1.10, not 1.86. If the assistant driver were otherwise unneeded, the factor  $f$  would be virtually zero. In the future, this challenge might be addressed by links to the literature in labor

economics on the marginal changes in output from short-run fluctuations in labor availability.

The second challenge concerns distinguishing the disease burden on dependents compared with that on workers. In 1999, 71% of Americans were covered by any type of private insurance and 63% were insured through employment-based insurance.<sup>6</sup> For almost all children and many adults, however, the insured person is not an employee, but a dependent or a retiree. In these cases, the employer would benefit from savings in direct costs (medical care costs) but for only part (mostly the worker's) of indirect costs (eg, productivity). In the case of ischemic heart disease, the subject of the study by Guico-Pabia et al,<sup>4</sup> few children are likely to be involved, but spouses and retirees are. Future analyses could suggest the portion of benefits that employers would reap. The National Health Interview Survey of the National Center for Health Statistics provides a rich data source on the Internet for examining these relationships.<sup>7</sup>

In summary, the study by Guico-Pabia et al<sup>4</sup> has described an important perspective by analyzing the cost of coronary heart disease from the employer's perspective. The study provides a valuable framework but contains implicit assumptions that might give worst-case estimates of the cost to employers. By examining the ability of enterprises to substitute for absent labor, refining the allocation of private insurance between workers and dependents, future researchers can build on this important line of work.

---

... REFERENCES ...

1. Gold MR, Siegel JE, Russell LB, Weinstein MC, eds. *Cost-effectiveness in Health and Medicine*. New York, NY: Oxford University Press; 1996.
2. Shepard DS, Walsh JA, Kleinau E, Stansfield, S, Bhalotra S. Setting priorities for the Children's Vaccine Initiative: A cost-effectiveness approach. *Vaccine* 1995;13:707-714.
3. Weisbrod B. *Economics of Public Health: Measuring the Economic Impact of Diseases*. Philadelphia, PA: University of Pennsylvania Press; 1961.
4. Guico-Pabia CJ, Murray JF, Teutsch SM, Wertheimer AI, Berger ML. Indirect cost of ischemic heart disease to employers. *Am J Manag Care* 2001;7:25-32.
5. *Statistical Abstract of the United States, 1999*. Washington, DC: US Census Bureau; October 1999.
6. Mills RJ. *Health Insurance Coverage: Current Population Reports P60-211*. Washington, DC: US Census Bureau; September 2000.
7. National Health Interview Survey. National Center for Health Statistics Web site. Available at: <http://www.cdc.gov/nchs/nhis.htm>. Accessed October 23, 2000.