

# **SOURCES OF HEALTH CARE FUNDING THROUGHOUT THE GLOBE**

**Stephen P. Neun**

*Professor of Economics, Utica College of Syracuse University, New York, USA*

**Keywords:** Financing Health Care, Risk Sharing, Third Party Payers

## **Contents**

1. Introduction
  2. A Model for Health Care Financing
  3. Risk Sharing and Payment
  4. The Rationale for Government Intervention
  5. Health Care Funding across Nations
    - 5.1. The Public Funding of Health Care
    - 5.2. The Private Funding of Health Care
  6. Conclusion
- Glossary  
Bibliography  
Biographical Sketch

## **Summary**

Recent data indicate that economies across the globe spend an average of \$500 per person, or 5.4% of gross domestic product, on health care. Of that, approximately half is financed through government sources. Income elasticity estimates also indicate that the percentage of gross domestic product spent on health care, along with the proportion of health care expenditures financed by the government, increase with income. Low-income countries spend an average of 4.2% of gross domestic product on health care and, of that, slightly more than one-third is financed by government authorities. High-income countries spend nearly 10% of gross domestic product on health care, with 62% of the total financed by government authorities. The remaining funds flow primarily from consumers as out-of-pocket payments, with private insurance accounting for only a modest share of health care financing. Funding sources affect both risk sharing and equity. Individuals without health insurance are forced to bear the entire financial risk of any illness. Those with insurance, either private or public, transfer most of that risk to third-party payers. The desire to enhance equity and correct market failures are the primary reasons for governments funding health care expenditures. Unfortunately, the need to address these issues is most pressing for low-income countries yet their ability to do so is severely hampered by limited tax bases.

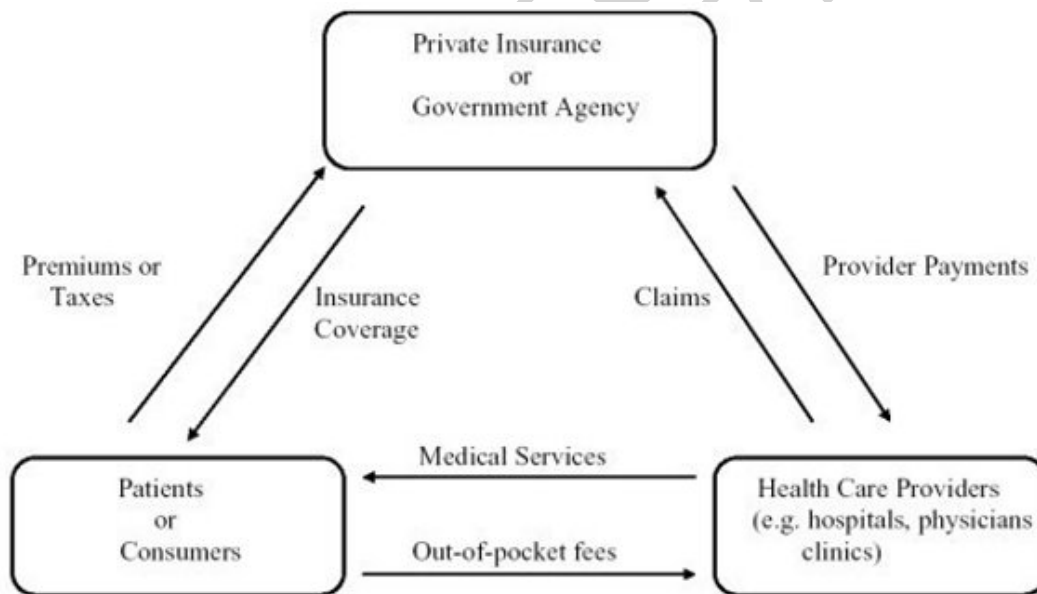
## **1. Introduction**

Rising health care costs have placed tremendous pressure on health care systems around the world. A recurring theme is the need for health care reform to address problems of efficiency, equity, and access to medical care. Critical to the health care reform debate is the role of alternative funding sources. This article provides an overview of funding

sources across the globe. Particular attention is paid to regional disparities and the effect income has on funding sources. The paper begins with a review of the effect of third-party payers on risk sharing. This is followed by an examination of the rationale for government intervention in health care markets. The article closes with an analysis of funding sources across the globe.

## 2. A Model for Health Care Financing

Health care systems differ widely across the globe in terms of their financing and payment schemes. In the most general terms, a health care system is the institutional structure through which a society makes decisions regarding how much medical care to produce, how it is to be produced, who should receive the medical care produced, and how it is to be funded. Due to the global variability in health care systems, many people have trouble understanding how they function. In an attempt to clarify the problem, a general model of a health care system is presented in Figure 1. The shape of this graph is triangular to capture the interaction between the three main participants in any health care system: patients or consumers, the medical care providers, and the third-party payers. Critical to our discussion is the role third-party payers play in financing health care.



Source: Santerre and Neun (2000) and Stahl (1990).

Figure 1. A model for health care financing

Before discussing the role of third-party payers, we need to look at the more typical market transaction, captured along the bottom of Figure 1. In most market transactions, the consumer exchanges directly with the provider and the out-of-pocket price equals the full cost of the services provided. Under a normal market exchange, consumer and provider are fully informed as to the price and quality of the product and an unexpected outcome is unlikely. For example, a consumer goes down to the corner store and

purchases the morning newspaper. An unexpected outcome is not likely to occur and if it does it can be easily remedied. In most cases, however, that does not reflect a typical transaction for medical care. For example, when an individual goes to the doctor with flu-like symptoms, the visit is not anticipated and the price, quantity, and quality of the medical service provided are unknown beforehand because of the uncertainty surrounding diagnosis and treatment.

Given that illness occurs irregularly and unexpectedly and that medical costs are difficult to predict on an individual basis, a third-party payer such as a private insurance company or government agency plays a critical role in financing medical expenditures. Because a third-party payer can pool the risk associated with the consumption of medical care over a large number of individuals, it is in a much better position to manage with greater certainty the financial risk associated with the purchase of medical services. This is primarily because of the law of large numbers, which states that medical costs can be predicted with much greater accuracy across a large population when events are random than they can for an individual. Since most people are risk averse, they prefer the certainty of an insurance premium payment to the uncertainty of financial losses due to illness. Many individuals therefore purchase medical insurance and in return benefit through enhanced financial security. As illustrated in Figure 1, if the third-party payer is a private insurance company then it receives premium payments from consumers in exchange for some type of medical coverage. The private insurance carrier, in turn, compensates medical care providers for medical services provided to individual policyholders. Methods of reimbursement to medical care providers can vary widely, however. For example, medical care providers may be compensated on a variable or fee-for-service basis, in which case health care providers receive individual payments for each medical service provided. Or payments could be made on a fixed basis, and health care providers receive predetermined negotiated payments that are independent of the actual cost or quantity of medical care provided.

Where a government agency acts as a third-party payer, medical care providers are reimbursed by a government authority and health expenditures are funded through either a general tax (i.e. Canada) or some type of payroll tax (i.e. Germany or France). In some instances, government authorities take a much more active role in medical care markets, with public ownership of health care facilities such as hospitals and clinics. This is the situation in the United Kingdom and Hungary.

### **3. Risk Sharing and Payment**

The health care financing scheme adopted by any country has a significant impact on the distribution of financial risk across the population. Individuals without insurance are forced to bear the entire financial risk of any illness. Any risk sharing under these circumstances among a larger group is likely to be limited and generally voluntary. It may include the family or some other type of kinship relationship. Voluntary risk sharing is very common in low-income countries where governments have limited funds and markets for private health insurance are not well developed.

When individuals purchase health insurance from private vendors, much of the financial

risk associated with health care expenditures is transferred to a third-party payer in exchange for fixed premium payments. The insurance premium equals the sum of the expected benefits to be paid out, plus administrative costs, taxes, and profits. The monetary value of expected benefits depends in turn on the health risk characteristics of the group or individual purchasing the insurance. To control the cost of moral hazard, however, the third-party payer generally makes sure that at least some financial risk resides with the policyholders. For example, individual policyholders may be forced to pay deductibles or copayments. When individual subscribers are forced to shoulder some of the financial risk, they are less inclined to acquire medical care.

The capacity of a private insurance company to pool financial risk also hinges on its ability to categorize policyholders into different groups. If the insurance premium is determined on a community-rated basis, then the risk premium is based on the risk characteristics of the entire membership. On the other hand, when the premium is calculated using an experienced-rated basis, then the insurer places individuals, or groups of individuals, into different risk categories based on health risk factors such as age and gender. In the former case, the financial risk for subscribers is shared equally across the entire membership because everyone pays the same for health care insurance. In the latter case, the financial risk is pooled across much smaller groups or individuals because premiums are directly linked to individual health risks. As a result, those groups or individuals who are deemed less healthy, and therefore more likely to consume large amounts of health care, pay higher premiums.

In an attempt to improve access to private health insurance, some governments force health insurance companies to adopt a community-based rating system for all individuals. Proponents argue that when such legislation is in place insurance companies no longer have the incentive to exclude individuals or groups of individuals that may be considered bad health risks. Thus, access to private health insurance, and therefore health care, improves. Critics of a community-based system argue that just the opposite may occur because healthy individuals who are forced to pay more for health insurance may elect not to purchase health insurance. The decision not to purchase health insurance may be particularly true for low-income individuals or families who are forced out of the insurance market because of an increase in health insurance premiums. Others are concerned that private insurance carriers will elect not to sell insurance in regions that require a community-based rating. The effect of community-based rating on access to private health insurance is not fully understood and needs to be the subject of further research.

While it is clear that employers make the premium payments to insurance carriers, economic theory suggests that most of the cost of the insurance is pushed back on to employees in terms of forgone wages when competitive labor markets exist. The forgone wage argument is based on the notion that in a competitive labor market employers lower their wage offer to workers in an attempt to recoup the cost of medical insurance. Workers accept the lower wage offer provided they attach a monetary value to the medical insurance. Employees therefore bear a share of the cost of medical insurance in terms of lower wages. As a result, any requirement on employers to provide health care coverage may place a tremendous financial burden on low-wage workers since they are forced to pay for medical insurance through forgone wages.

Where a government agency acts as a third-party payer, financial risk is distributed among a much larger segment of the population. Generally, when some type of social insurance program is implemented, participation is mandatory and the cost of the program is heavily subsidized through taxes. Even under these circumstances individuals may be called on to bear some of the financial risk in terms of deductibles and copayments. The objective is to contain medical costs by making consumers financially responsible for a portion of their health care costs.

Finally, the growth of managed care has meant that health care providers have increasingly been forced to share in the financial risk. The objective is to limit the production of unnecessary medical care and contain costs through financial incentives. For example, fixed payments for medical services, such as capitation, make medical care providers accountable for cost overruns. Other more sophisticated payment schemes that force medical care providers to bear some of the financial risk include bonuses and withholds. These performance-based methods of compensation directly link the level of compensation provided to the appropriateness of the medical care provided. Global budgeting, which establishes spending limits for medical services provided over a given time period, is another mechanism used to transfer financial risk on to health care providers.

-  
-  
-

TO ACCESS ALL THE 14 PAGES OF THIS CHAPTER,  
Visit: <http://www.eolss.net/Eolss-sampleAllChapter.aspx>

### Bibliography

Bos E. et al. (1999). *Health, Nutrition, and Population Indicators: A Statistical Handbook*, 75 pp. Washington, D.C.: World Bank. [This statistical handbook provides current indicators on health status, health determinants, health systems, and health for nations across the globe.]

Murray C.J.L., Govindaraj R., and Musgrove P. (1994). National health expenditures: a global analysis. *Global Comparative Assessments in the Health Sector* (ed. C.J.L. Murray and A.D. Lopez), pp. 141–152. Geneva: World Health Organization. [This study was done as background research for the *World Development Report 1993*. The major objective of the report was to estimate total, public, and private health care expenditures for countries of the world.]

Organization for Economic Cooperation and Development (OECD) (1999). *OECD Health Data 99*. Paris: OECD. [This data set contains information on the health status and health utilization of the 29 member states of the OECD. It also provides data on health care expenditures and financing.]

Santerre R.E., Grubaugh S., and Stollar A.J. (1991). Government intervention in health care markets and health care outcomes: some international evidence. *Cato Journal* 11 (Spring–Summer), 1–12. [This study investigates the factors that influence health status across a sample of OECD countries. The study found that income, education, urbanization, and the female labor force participation rate affect the infant mortality rate. It also found that the percentage of government-financed health care expenditures had no effect on health, as measured by the infant mortality rate.]

Santerre R.E. and Neun S.P. (2000). *Health Economics: Theories, Insights, and Industry Studies*, 646 pp.

Fort Worth: Dryden Press. [This health economics text provides the basic economic concepts needed to understand medical markets. It includes an introduction to basic microeconomics, an analysis of the behavior of health care providers in a number of different market settings, an examination of the role of government, and a number of industry studies.]

Schieber G. and Maeda A. (1999). Health care financing and delivery in developing countries. *Health Affairs* **18** (May/June), 193–206. [This excellent review article analyzes the health care financing systems of developing nations.]

Stahl I. (1990). Sweden. *Advances in Health Economics and Health Services Research, Supplement: Comparative Health Systems* (ed. R.M. Scheffler and L.F. Rossiter), pp. 197–210. Greenwich, Conn.: JAI Press. [This article provides an overview of the basic attributes of health care systems by focusing on the interaction between the three main participants: consumers, health care providers, and third-party payers.]

World Health Organization (WHO) (1999). *World Development Report 1999. Making a Difference*. Geneva: WHO. [This annual report published by WHO provides current health data on all its member states.]

### **Biographical Sketch**

**Stephen Neun** is a Professor of Economics who joined the faculty at Utica College in 1982. He has a Ph.D. in economics from the University of Connecticut and has published numerous articles on executive compensation and corporate control in such journals as the *Quarterly Journal of Business, Economics and Managerial and Decision Economics* and *The Review of Economics and Statistics*. Most recently he has been working in the area of health care and recently co-authored a textbook entitled *Health Economics*. At the present time he is the Dean for Social Sciences and Management at Utica College.