

# Why Is A Systemic View Of Health Financing Necessary?

More money for health care is a necessary but insufficient condition for better health.

by **William C. Hsiao**

**ABSTRACT:** The mobilization of funds for health care has gained prominent attention around the world. Billions of dollars in new funds are flowing into health care in low- and middle-income countries. Sadly, this money might not be transformed into efficient and effective health care to help poor and vulnerable people in these countries unless nations take a systemic approach to health care financing. This paper outlines key health policy issues and argues that choosing health care financing methods with integrated institutional arrangements and payment systems is critical to providing equitable, efficient, and effective health care for all. [*Health Affairs* 26, no. 4 (2007): 950–961; 10.1377/hlthaff.26.4.950]

Health has never before seen such wealth.

—Margaret Chan, director-general, World Health Organization<sup>1</sup>

**M**ONEY IS THE MOTHER'S MILK OF HEALTH CARE. However, money does not automatically produce efficient, equitable, and effective health care. More health spending does not necessarily mean better health outcomes. The financing method chosen is of critical importance because it determines the risk-pooling arrangement and the distribution of the cost burden. It also places the financial decision-making power in the hands of a particular organization, which will decide resource allocation and distribution of services and will choose a payment method to provide incentives to providers. It makes a big difference whether that organization is a political entity such as a government ministry, an independent social insurance fund, many private insurers operating in a competitive market, or thousands of individual patients who pay providers directly.

A few examples illustrate how financing methods can influence health outcomes and health care costs. The United States—which relies mostly on private insurance—spends the most on health care per person annually (\$6,697, or 16 percent of gross domestic product [GDP], in 2005), yet it has the highest infant mortality rate and lowest life expectancy of all high-income Organization for Economic Cooperation and Development (OECD) countries.<sup>2</sup> Moreover, forty-seven

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million Americans are uninsured and lack access to health care.<sup>3</sup> India—which relies mostly on individual out-of-pocket payments—spent 4.8 percent of its GDP on health care in 2003, but its infant mortality rate is five times higher and its life expectancy is nine years shorter than Sri Lanka's, which spent only 3.5 percent of its GDP on health care and relies on the government to finance health care.<sup>4</sup>

Contrary to the current dominant view initiated by Jeffrey Sachs, this paper argues that more money for health care is a necessary but insufficient condition for better health.<sup>5</sup> Money can be transformed into equitable, efficient, and effective health care only when appropriate financing methods are used and institutional capacity and human resources are in place. These are the necessary and sufficient conditions without which more money for health may actually do harm.<sup>6</sup>

Too often, health policy debate focuses narrowly on how to generate more funds for health care, ignoring the financing and payment methods chosen. Yet these choices have profound impacts on the outcomes and the performance of a health system. Policy choices determine how a nation's health care is financed. Six alternative financing methods are available: government budget, social insurance, private insurance, community-based insurance, individual health savings accounts (HSAs), or patients paying out-of-pocket. The method chosen determines how health risks are pooled, how equitably the financial burden and health care benefits are distributed, who decides how to transform money into efficient and effective health care, and how effectively health spending inflation can be managed. Furthermore, each method has a different capacity to integrate donor funds into coherent health care delivery.

The health financing method also plays a major role in cost containment, a principal concern for most nations. Cost pressures confront most nations, for reasons that are well known, including HIV/AIDS and new, emerging infectious diseases; patients' rising expectations; and new, expensive technologies and drugs.<sup>7</sup> For high-income countries, obesity and population aging are additional factors, while middle-income countries face double disease burdens under epidemiological transition. All nations face certain common cost pressures, but evidence shows that different health financing methods affect health spending inflation differently and thus have an effect on the sustainability of reasonable health care.

This paper concentrates on health financing issues for low- and middle-income countries, but it draws some evidence from the experiences of high-income countries that may guide less-affluent countries. Its first section clarifies the debate about the roles of government and market in health care financing. The second section presents the major alternative models for transforming money into health care. The next section analyzes the differential impacts of the various financing methods on risk pooling and equity. The fourth section examines a critical challenge in establishing a sustainable health care system: cost pressure. The final section presents global trends in health care financing for low- and middle-income countries and discusses these countries' progress and the challenges they face.

## **Confused Debate About Roles In Health Care Financing**

Before a reasoned discussion of health care financing policy is possible, we must disentangle the confusion created by the ideological debate around the world. Advocates for the free market argue for consumer choice and free-market competition in health care, without adequately distinguishing between the usefulness of competition in the insurance market and in the health care market.<sup>8</sup> Empirical evidence indicates that a free market for insurance cannot achieve social equity and that serious market failures allow insurers to practice risk selection, leaving the most vulnerable people uninsured.<sup>9</sup> Adverse selection among insurance buyers impairs the functions of the insurance market and deters the pooling of health risks widely.<sup>10</sup> Moreover, the insurance market's high transaction costs yield highly inefficient results.<sup>11</sup> On the other hand, evidence indicates that reliance on market competition for the provision of health care may hold potential for more-efficient and higher-quality care.

## **Transforming Money Into Efficient And Effective Health Care**

Three alternative models have been used globally to transform money into health care. Regrettably, they have not been systematically and objectively evaluated and compared. As a result, only a few case studies are available, and the cases are often based on incomplete information and unreliable government data. Thus, it is not possible to generalize and draw clear conclusions on which model is best. The performance of a model seems to depend greatly on a country's institutional capabilities, such as effective and clean government and the accountability of organizations.

Brian Abel-Smith has characterized the alternative models as either direct or indirect in the provision of health care.<sup>12</sup> Under direct provision, the financing and provision of health care would be integrated and managed by the same organization. For example, a country's Ministry of Health (MOH) receives a budget from the Treasury for health care, and it establishes and manages the public hospitals, dispensaries, and clinics that deliver services.<sup>13</sup> Most developing countries have adopted this model.

In comparison, the approach of indirect provision separates the organization that finances the health care from the organization that provides it. Two alternative models have been developed under indirect provision. In one model, the "public trust" model, a government agency acts as the purchaser and buys the services from public or private providers that operate in a competitive market. Thailand and the Philippines, in their recent reforms, have set up such a model. Alternatively, in the "surrogate" model, the government funds health care but delegates the purchasing function to private intermediaries (such as general practitioner [GP] fundholders, community health boards, local cooperatives, and private insurance companies). They act as agents of the MOH to purchase health care for the people. This model has two forms: competitive and local community manage-

ment. The United Kingdom and Colombia have adopted the competitive surrogate model and use GP fundholders and private insurance companies, respectively. In comparison, Tanzania's Community Health Fund relies on community health boards as surrogates to manage the fund and health care.

■ **Impacts on efficiency and quality.** The critical difference between direct and indirect provision (both public trust and surrogate) seems to be their impacts on the efficiency and quality of health care. The former gives more power to the supply side, and the latter gives more power to the demand side (that is, money follows the patient). Direct provision relies on central planning and bureaucratic rules to plan, budget, and manage public hospitals and clinics. Indirect provision relies mostly on the market to organize hospitals and clinics, which compete for patients. Under indirect provision, the funding agency ideally would rely on market competition and select the highest-quality providers at the lowest price and contract with them for health care on behalf of the people. Such an indirect-provision model is practiced by the government of Thailand and by private-sector managed care plans in the United States.

■ **Challenges of the two models.** Obviously, the reliance on competition under the indirect model requires that there be competing providers. In low- and middle-income countries, this condition might exist in urban areas but is unlikely to exist in most rural areas, where there might be only one or two qualified providers; in these cases, the purchaser has to enter into a bilateral negotiation with the provider. For low- and middle-income countries with the direct-provision model, a great challenge involves funding and delivering basic health care to low-income rural residents. Other than a few exceptional countries such as Sri Lanka, Costa Rica, and Iran, most countries are unable to do this.<sup>14</sup>

Most developing countries try to serve rural populations by directly operating tax-financed district hospitals and subdistrict-level health centers, staffed by physicians and nurses, that cover 5,000 or more people. However, farmers demand that their basic primary care and drugs be in close proximity: at the village level. Studies have found that travel distance is the major determinant of where and when farmers seek treatment.<sup>15</sup> When organized health care is not nearby, people resort to self-care, seek inferior health care from unqualified local practitioners, or purchase drugs from village drug peddlers. As a result, the health centers at the subdistrict level frequently remain underused, with supply exceeding demand—a waste of public resources.

Furthermore, operational efficiency is a serious problem in most public hospitals and clinics operating under the direct-provision model. Experience shows that most of the direct-provision plans, over time, suffer from inefficiency and low-quality care.<sup>16</sup> The government budget funds public providers and manages them by bureaucratic rules rather than on the basis of quality of care, health outcomes, and efficiency of the operations. Being local monopolies insulated from competition, these providers disregard patients' preferences, needs, and satisfac-

tion. Furthermore, in Africa and India, physicians and health workers are civil servants with job guarantees and are promoted based on civil-service rules, having little incentive to look after patients' welfare. As a result, they generally pursue their own interests. When the budget is limited, the money goes first to pay salaries, while hospitals and clinics go without supplies and drugs. In Latin American countries, physicians and health workers are unionized and bargain to advance their own interests—higher pay, more convenient working hours, lower workloads, and more staffing. Patient care and efficiency are secondary concerns.

■ **Shifts toward the indirect model.** Studies have documented that the inefficiency of the direct-provision model in many countries may average 30 percent or more.<sup>17</sup> As many countries experienced the shortcomings of this model, some countries led the way to reform and shifted to the indirect-provision model, relying on competition instead. The United Kingdom is the most prominent example. In 1989 it shifted to an indirect-provision model known as the "internal market."

Since the 1990s, some low- and middle-income countries have also turned to the indirect-provision model. Theoretically, this model may transform money more efficiently into effective and patient-friendly health care; however, there are several preconditions for it to work properly. The key questions are how to keep political interference to a minimum and how to motivate a government agency to be an active and prudent purchaser of health care on behalf of the people. The purchaser has to have the competence to be able to select qualified providers (public and private alike), set performance standards, bargain with them on payment methods and rates, and monitor their performance. Under the public-trust model, the government officials who perform these functions must have a strong public interest and be willing to confront and negotiate with public and private providers. Would purchasers be "captured" by the providers and end up serving providers' interests instead of the public interest? When the good providers thrive and the poor providers go bankrupt, is the government willing to let poorly performing public hospitals and clinics close? Does the purchasing agency have the necessary information, ability, capacity, and skills to purchase effectively? There is no general answer to these questions. It depends on the government structure, institutional competence of a government agency, and governmental accountability.

■ **Governments' capabilities.** Unfortunately, many governments might not meet these prerequisites. Exhibit 1 shows the indices of effective governance and corruption for various governments. Countries with an effective governance score lower than 1.0 might have difficulty delivering effective and efficient health care under either direct-provision or public-trust models. Countries with scores lower than -0.5 are likely to have even more serious difficulties. Nonetheless, a few low- and middle-income countries have had some success in purchasing health care using the public-trust model. Thailand is a frequently cited example. Cambodia and Bolivia were able to purchase maternal and child health care effectively.<sup>18</sup> Rural Mutual Health Care in rural China was able to purchase higher-quality primary and

## EXHIBIT 1 Measurement Of Governments' Capability, 2005

Country	Point estimate		Country	Point estimate	
	Government effectiveness	Control of corruption		Government effectiveness	Control of corruption
1. Sweden	1.93	2.10	13. Russia	-0.45	-0.74
2. New Zealand	1.90	2.24	14. Uganda	-0.48	-0.87
3. United States	1.59	1.56	15. Kenya	-0.78	-1.01
4. Portugal	1.03	1.13	16. Bangladesh	-0.90	-1.18
5. Italy	0.60	0.41	17. Nigeria	-0.92	-1.22
6. Turkey	0.27	0.08	18. Ethiopia	-0.97	-0.79
7. China	-0.11	-0.69	19. Ecuador	-1.01	-0.81
8. India	-0.11	-0.31	20. Belarus	-1.19	-0.90
9. Argentina	-0.27	-0.44	21. Congo	-1.31	-1.01
10. Egypt	-0.35	-0.42	22. Congo, Dem. Rep.	-1.64	-1.34
11. Tanzania	-0.37	-0.73	23. Korea, North	-1.82	-1.32
12. Dominican Republic	-0.41	-0.66			

SOURCE: World Bank, *Worldwide Governance Indicators: 1996-2005* (Washington: World Bank, September 2006).

secondary services at a lower cost than the government could obtain.<sup>19</sup>

The competitive surrogate model in lower-income countries has not performed well. Colombia, a lower-middle-income country, established social health insurance (SHI) in 1993 with a competitive surrogate model to reform its health care delivery. Under its model, competing private insurance plans purchase health care to achieve greater efficiency and better quality; neither has materialized. Risk selection by insurers has been a problem, along with political obstacles to corporatizing public hospitals and forcing them to compete on a level playing field.

The success of any model seems to depend on at least five factors. Besides adequate funding and the competence of health officials and medical staff, three other factors are crucial. The performance of the officials and medical staff seems to depend on their dedication to advancing the public interest, their accountability for results, and how well their incentives are aligned with the desired performance.

■ **New threats to health financing.** In recent years, two new threats have appeared that may further impair low- and middle-income countries' ability to transform money into efficient and effective health care. First, the infusion of huge international funds for specific diseases such as HIV/AIDS and tuberculosis (TB) has created vertical programs that draw away the better-qualified staff and fragment the basic health care system. This means that less health care is available for basic prevention, maternal and child health, and the treatment of common diseases such as diarrhea and upper respiratory infections, which kill more people annually than HIV/AIDS. The second new threat involves the emigration of highly qualified medical personnel from many low- and middle-income countries to high-income countries. The increasing outflow of human resources is impairing these countries' ability to provide effective health care to their people.<sup>20</sup>

## Differential Impacts On Risk Pooling And Equity

Two of the six methods of financing—tax financing and universal SHI—pool the health risks of an entire population into one common insurance pool, to improve social equity. Individual HSAs and direct out-of-pocket payments do not pool risks. Community-based insurance pools risks only within a community but does not address the differences of income and health conditions among communities. Employment-based group health insurance pools the risks of workers within a particular company but excludes the unemployed, disabled, and retired.

As for equity in financing, studies have shown that tax financing tends to be more equitable than SHI in distributing the cost burden. Next is community-based insurance and private group health insurance, with HSAs and direct out-of-pocket payments being the least equitable.<sup>21</sup>

In terms of equitable distribution of health care, some tax-financed systems in low- and middle-income countries do favor the poor, as shown by the *EQUITAP* study of Asian countries.<sup>22</sup> However, most countries' systems do not favor the poor because of affluent groups' powerful political influence on the allocation of government resources. These countries spend a higher proportion of public funds on people in the top income quintile than on those in the bottom quintile (Exhibit 2). Meanwhile, modern universal SHI would explicitly target tax funds to the poor. Group health insurance promotes equity only within the group, while HSAs and direct out-of-pocket payments do not pool risks and thus do not redistribute benefits.

As for relying on the private insurance market to insure everyone, ample evidence shows that profit motivates insurers to select the young and healthy to insure while excluding the elderly, disabled, and chronically ill, who then become a financial burden on the government.<sup>23</sup> This is the experience of the United States

**EXHIBIT 2**  
**Incidence Of Public Health Spending Among The Poorest And Richest Populations In Selected Countries, 2004**

Country	Poorest quintile	Richest quintile
Bangladesh	16%	26%
Bulgaria	13	25
Ghana	12	33
India	10	32
Indonesia	12	29
Kenya (rural)	14	24
Madagascar	12	30
South Africa	16	17
Sri Lanka	20	20
Tanzania	19	29
Vietnam	12	29

**SOURCE:** World Bank, *World Development Report 2004* (Washington: World Bank, 2004).

and Chile.<sup>24</sup> Moreover, market transaction costs have been shown to be very high when a nation relies on private insurance. Administrative costs could be as high as 31 percent of all health spending in the United States, which relies on competing private insurers; this number is only 16.7 percent in Canada, which relies on a single-payer social insurance system.<sup>25</sup>

In sum, we have accumulated a vast amount of knowledge and experience about health care financing methods. For equity, efficiency, and risk-pooling reasons, the government is the preferred choice and should take the dominant role in financing health care through tax revenue or universal SHI. High-income countries have all done so, except for the United States.<sup>26</sup> Lower-income countries can do as much as possible according to their fiscal capacity, supplemented by donor funds; these latter funds have to be integrated into the overall financing scheme.

### Health Spending Inflation And Financing Methods

Rising health care costs exert pressure on every country and threaten the sustainability of the world's health care systems. Most nations are confronted with a common challenge: Their annual health spending inflation rate exceeds their national economic growth rate.<sup>27</sup> In other words, health expenditures account for an ever-increasing share of total economic output, and payers have to allocate a larger share of their incomes to pay for health services. How to manage health spending inflation has become a critical issue for most nations.

Exhibit 3 compares average rates of health spending inflation over 1998–2003 (the latest data available) with average growth rates in GDP per capita for the same time period. For 159 countries, on average, growth in annual health spending was 2.08 percentage points higher than the average rate of GDP growth.

The interesting and important question is what part of this inflation rate could be modulated by health care financing policy. We do not have the data to answer this question for developing countries; however, the experiences of advanced

**EXHIBIT 3**  
**Growth In Health Spending And Gross Domestic Product (GDP), By Country Income Classes, 1998–2003**

Income of country	Number of countries	Average annual GDP growth (%)	Average annual health spending growth (%)	Difference between GDP growth and spending (percentage points)
High	32	1.79	4.07	2.29
Upper-middle	34	2.45	3.51	1.06
Lower-middle	43	5.39	8.09	2.69
Low	50	2.83	4.40	1.57
All	159	3.63	5.71	2.08

**SOURCES:** World Bank, *World Development Indicators 2006* (Washington: World Bank, 2006); and World Health Organization, *World Health Statistics 2006* (Geneva: WHO, 2006).

**NOTES:** Averages are population weighted. Growth is per capita and adjusted for inflation. Country income classes are based on the World Bank's definition.

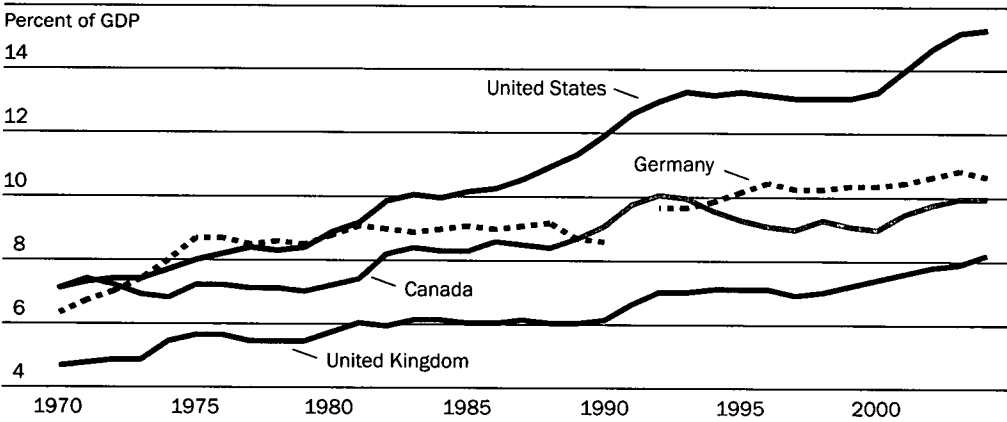


countries can shed some light on this issue.

The reasons behind health care spending inflation have been greatly debated in the United States. Several researchers have argued that most of it is driven by new, expensive technology that cannot be controlled.<sup>28</sup> Since this same technological force operates in all high-income countries, we should see similar inflation rates across countries if technology really cannot be controlled. Yet health spending inflation varies widely across countries. Exhibit 4 compares growth in health spending as a percentage of GDP for four high-income countries. In 1970, all four were spending similar levels of GDP on health care; since then, countries' spending growth rates have diverged. These results indicate that health policy can play a major role in containing health spending inflation. The long-term time-series data to perform the same comparison for developing countries are lacking; nonetheless, developing countries can learn that a multichannel public and private health care financing approach such as that used by the United States is unlikely to contain health spending inflation.

Experience seems to show that a combination of financing and payment methods would influence health spending and its inflation rate. For example, tax or universal SHI financing methods can rationalize resource allocation and allow more to be spent on prevention to reduce the incidence of illnesses and to prevent chronic illnesses (such as hypertension and diabetes) from becoming acute problems requiring costly treatment. The single-payer tax-financing method of the United Kingdom and Scandinavian countries enables them to limit the diffusion of new technology and drugs that are not cost-effective and hence contain the rate of health spending inflation. Thailand's universal SHI uses a capitation payment method to force providers to vertically integrate their services and thus reduce the

**EXHIBIT 4**  
**Health Spending As A Share Of Gross Domestic Product (GDP) In Four Selected High-Income Countries, 1970-2004**



**SOURCE:** Organization for Economic Cooperation and Development, *OECD Health Data 2006* (Paris: OECD, 2006).  
**NOTE:** There is a break in the German series for 1990-92 because of German reunification. Data prior to 1990 refer to West Germany only; data after 1992, the entire country. Data for 1970-1990 and 1992-2004 are not strictly comparable.

duplication of tests and improve the continuity of care. Single-payer financing systems such as those in Canada and Taiwan reduce transaction costs and control what physicians and hospitals can charge beyond the amount insurance pays.

Moreover, different health care financing methods impose different forms of overall budget constraint on the health sector. Their varied degrees of tightness in imposing budget constraints exert varied degrees of pressure on providers to be efficient. Under tax financing and universal SHI, the total amount that would be spent for health care is organized and decided centrally. In contrast, relying on private insurance or direct out-of-pocket payment decentralizes health spending and budget decisions to individual health insurance plans and patients, respectively. In the latter case, providers can practice cost shifting and price discrimination among different payers. Providers would face a lesser budget constraint and be less concerned about efficiency. Winnie Yip and I conducted an econometric study to test this hypothesis and found empirical support for it.<sup>29</sup>

### **Global Trends In Health Care Financing Policy**

Undoubtedly, many countries have to reform their health care financing systems to remedy their underfunding of health care, improve people's health, prevent people from being impoverished by health expenses, and contain rapidly rising health care costs. Some low- and middle-income countries have already done so. SHI seems to have become the preferred strategy for such countries.<sup>30</sup> In 2005 the World Health Assembly passed a policy resolution for the World Health Organization (WHO), recommending that low- and middle-income countries adopt SHI as the health care financing strategy.<sup>31</sup>

This new form of SHI would establish a schedule to provide universal coverage during a decade or more. In its ideal form, all would be covered with the same comprehensive benefits—preventive, primary, secondary, and tertiary services. The population would be divided into two groups, contributory and subsidized regimes. All employees in the formal sector and their family members would be mandated to pay a premium (as a percentage of wages) into a national SHI fund. The government would pay the full premium for the poor and partially subsidize the premium for low-income families. Taxes also would fund prevention and other public goods. Donor funds could be integrated to cover the service costs for specific diseases such as HIV/AIDS and TB. Nonpoor farmers and workers in the informal sectors would be given incentives to enroll voluntarily. Gradually, as the nation's economy grew, the number of farmers and informal-sector workers would diminish; those remaining would be incorporated into the mandatory regime and achieve universal coverage, as was done in South Korea and Taiwan.

In transforming money into health care, the insurance fund would be organized as a public-trust model or competitive surrogate model using primary care centers to purchase services from public and private providers alike through market competition. Public hospitals would be corporatized as nonprofit autonomous com-

munity organizations, competing for patients with private for-profit providers and other nonprofit providers (such as religiously sponsored hospitals).

Besides its capacity to mobilize additional funds for health care and pooling health risk nationwide, SHI holds several other potential advantages. It can target public funds more effectively to the poor in comparison to tax-funded public health services for all. It shifts the subsidy from the supply side to the demand side, which may improve efficiency and quality of care, and it can improve insured people's access to care by using the capacity of private-sector providers.

Thailand, the Philippines, and Mexico have led the way in establishing SHI. Thailand has achieved universal coverage and created an effective public-trust model paying providers largely based on capitation. Many countries such as Ghana, Nigeria, Vietnam, and Yemen are initiating SHI. Worldwide experience shows that successful implementation of modern SHI requires strong, continuous political leadership; capable and dedicated government officials; major institutional reforms; knowledge; and capable human resources. It remains to be seen how many countries can implement SHI successfully.

**H**EALTH CARE FINANCING IS MORE THAN mobilizing additional funds for health care. It requires a systemic view and uses financial power to reform health care delivery organizations and to provide incentives to providers to deliver efficient and effective health care. A country's health care financing method holds the key for it to achieve equitable and efficient health care for all. Ignoring the systemic aspects of health care financing will lead countries to repeat the costly mistakes of those that walked ahead of them.

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*The author is grateful for the insightful comments of Winnie Yip and the able and careful research assistance of Andrew Fraker.*

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