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Transitions in Health Financing and Policies for Universal Health Coverage:


Final Report of the Transitions in Health Financing Project

William D. Savedoff

with Ricardo Bitrán, David de Ferranti, Victoria Y. Fan, Alberto Holly,
Rodrigo Moreno-Serra, Priyanka Saksena, Amy L. Smith, Peter C. Smith, and Ke Xu

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Results for Development Institute
1100 15th Street, N.W., Suite #400, Washington, DC 20005

For additional information, please contact ddeferranti@resultsfordevelopment.org.

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Foreword by David de Ferranti

When this project was first conceived in 2009, there was still widespread skepticism that low- and middle-income countries should seek to move toward universal health coverage (UHC) any time soon. Much has changed since then. Now UHC is cited as “the single most powerful concept that public health has to offer”, as World Health Organization (WHO) Director-General Margaret Chan put it in May 2012 (Chan 2012).

Countries are advancing toward UHC one after the other. Middle-income nations such as Brazil, Mexico, and Thailand have reached major milestones already. Lower-income nations such as the Philippines, Vietnam, Rwanda, and Ghana, have made bold commitments. India, South Africa, and China are on the move too. Meanwhile, the twenty-five wealthiest nations all have some form of UHC now—with one notable exception, the United States, where the political struggle is still playing out.

Why, in a short time, has UHC gone from being seen as “too difficult to aim for” to “too important to postpone”? Rising incomes, together with progress in meeting other needs, have probably been part of the explanation. Economic growth rates in Africa and Asia have been strong enough for long enough—and sufficiently more households have better livelihoods, more secure food, shelter, savings, etc.—so that interest in having reliable access to acceptable health care at an affordable price has become a more prominent popular demand that politicians cannot ignore. Elections turn on this issue—as in Ghana in 2000. Governments respond—as in China in 2010, when the leadership publicly acknowledged that health care had become the number one public concern and then launched major reforms.

Another factor contributing to the growing momentum toward UHC has been the focused effort made in the international community to galvanize more attention to its benefits and feasibility. The WHO had a major role in this, dedicating their World Health Report to the subject in 2010 (WHO 2010) and passing a key World Health Assembly resolution in 2011 (WHA 2011). The Rockefeller Foundation helped significantly, too, through support for (i) the WHO’s work, (ii) a Global Task Force (which brought together key international organizations and

other interested parties), and (iii) a Joint Learning Network (through which practitioners involved in implementing and managing UHC around the developing world come together to share their experience and learn from one another). The Rockefeller Foundation also supported research and advocacy that have led to major conferences and reports such as “The High Level Expert Group Report on Universal Health Coverage for India” in 2011; “The Bangkok Statement on Universal Health Coverage” at the Prince Mahidol Award Conference in January 2012; “the Mexico City Political Declaration on Universal Health Coverage in May 2012”; and meetings planned for the UN General Assembly in September 2012.

Yet the story is more subtle and complicated than that, as Savedoff and the Transitions in Health Financing research team bring out in this paper. Today’s global movement toward UHC follows two other great transitions in health—one demographic and the other epidemiological, as noted in the introduction and explained in the first section. There may be deeper historical roots to what is happening today, too. The preference for UHC over older ways of financing health care (paying fees out-of-pocket at the point of service) is not the first time that humankind has jettisoned ill-functioning traditional practices when newer solutions involving collective action became feasible. First, the rule of law and systems of justice were adopted where formerly brute power prevailed. Then police and fire protection, initially purely private responsibilities, were found to be more efficiently handled communally. Later, in the nineteenth and twentieth centuries, country after country invested in the proper education of their children. Global evidence now shows that overwhelming majorities want health care to be part of what countries succeed in getting right for all.

The key issues now revolve around the questions addressed in the main sections of the paper, including: health financing, coverage and outcomes; what explains growth in health spending; why the pooled share of health spending has grown; and how countries are reforming health systems today. The paper’s findings and messages offer much to think about—and much that would have pleased Phil Musgrove who, as the next Foreword explains, had a seminal role in this undertaking.

Foreword by William D. Savedoff

The Transitions in Health Financing project was originally entrusted to Phil Musgrove who developed terms of references and selected five research teams to participate. Then, we lost Phil in a tragic accident. After mourning his loss, we faced the challenge of picking up this unfinished work and trying to see if we could follow his vision. From my conversations with Phil before his death, I think he saw this research project as an opportunity to bring his wide-ranging knowledge, analytical acuity and powers of written expression together in an encompassing vision of health system changes. Phil had already contributed to key fields within the health economics literature, including national health accounts and health spending (Musgrove, Zeramardini, and Carrin 2002), the use of cost-effectiveness as a policy tool (World Bank 1993; Jamison et al. eds. 1993; Jamison et al. eds. 2006; and Musgrove and Fox-Rushby 2006), comparative health systems analysis (WHO 2000), and public health policy choices (Musgrove 1996). This project could have been a capstone for Phil, providing

much needed clarity to a field that cannot seem to reach consensus on common terminology or frameworks and is often overly complex and full of bias.

And health systems are complex. They involve an extremely diverse range of activities and actors. The kinds of services provided are not only influenced by market behavior but also by public policies, politics, social norms, and ethics. The work here follows Phil's lead by looking at the economic dimensions of the trend toward expanding access to health care around the world and utilizes his initial thinking about how to break the larger question into more manageable and researchable pieces. The results of the different research teams assigned to each of these tasks can be found as working papers in the attached CD-ROM. This final report seeks to bring the different pieces together within a broad perspective, inspired by Phil's framing and enthusiasm. I hope we were able to take it a small part of the way that Phil laid out for us.



Transitions in Health Financing and Policies for Universal Health Coverage:

Final Report of the Transitions in
Health Financing Project

1. Overview

The demographic transition and the epidemiological transition are familiar phenomena. Less familiar, but equally significant for public health, is a transition in health financing which began in most countries in the last century. This transition is characterized by an increase in health spending and a rising share of pooled spending and is due to a combination of economic, technological and political trends. This health financing transition is both influenced by and contributing to an expansion in access to more medical services than ever before, with enormous implications for population health and equity.

Discussions of economic trends associated with health are typically fragmented. Studies that address the growth in health spending are mostly concerned with efforts to contain costs and/or improve cost-effectiveness. Studies that address the rising share of pooled funding typically focus on institutional issues, debating the relative merits of public and private provision, public and private insurance, or public health services in contrast to social insurance. Other studies focus on out-of-pocket spending, looking at the effects of public policies like user fees and community health insurance or measuring the impact of out-of-pocket expenditures on the risks of impoverishment. Still other studies try to disentangle causality, asking whether rising incomes are responsible for improved health or improvements in health have driven economic growth.

The Transitions in Health Financing project looked at these questions together and sought a broad vision for how these different pieces relate. By looking at trends over long periods of time, conducting literature reviews, and contributing additional evidence and analysis, the resulting papers explore the nexus between economics and health within a framework that highlights the general trends that make up this transition.

This report contains five sections as follows:

1. ***“The health financing transition”*** looks at international health spending patterns and provides a framework for the subsequent analyses. It argues that, in the same way that the demographic and epidemiological transitions have informed studies of population growth and changing burdens of disease, the health financing transition makes sense of broad patterns of spending on health over time and across countries.
2. ***“Health financing, coverage and outcomes”*** untangles the interrelationship between spending, policies that expand access to care, and population health. It explains how researchers have measured the impact of

health spending and coverage on health outcomes and presents new evidence that supports this finding.

3. ***“What explains growth in health spending?”*** investigates the factors that influence health spending and explores what rising health spending means. It shows that income growth and changing medical practices and technologies account for most of the growth in health spending. But despite the many concerns raised over rising health expenditure, it is mostly a good thing—buying more health care services for more people.
4. ***“Why has the pooled share of health spending grown?”*** addresses the second feature of the health financing transition—the rise in pooled spending as a share of total health expenditure. It documents this trend using recent data and then shares lessons from a historical review of countries that have achieved universal health coverage. It emphasizes the contingent nature of public policies that aim to expand coverage by mobilizing, pooling, and spending money on health care. Viewed over a long time frame, these political processes are remarkably widespread and persistent at expanding access to care by means of funds raised through mandatory contributions and/or public taxation.
5. ***“How are countries reforming health systems today?”*** discusses some of the strategies used by countries who are trying to achieve universal health coverage today in terms of the institutional mechanisms and the costs. It focuses on new evidence for low- and middle-income countries that are trying to reach universal health coverage with attention to a particular strategy: the creation and expansion of national health insurance systems.

Each of these sections draws directly on the working papers prepared by the researchers who participated in the project. “The Determinants of Health Expenditure: A Country-Level Panel Data Analysis” by Ke Xu, Priyanka Saksena and Alberto Holly provides a literature review and new evidence on the determinants of health spending and was a key input to sections 3 and 4. “The Effects of Health Coverage on Population Outcomes: A Country-Level Panel Data Analysis” by Rodrigo Moreno-Serra and Peter C. Smith reviews the literature and provides new evidence on how spending affects health status and health service coverage and was the main contribution to section 2. “Achieving Universal Health Coverage: Learning from Chile, Japan, Malaysia and Sweden” by William D. Savedoff and Amy L. Smith presents lessons from a historical perspective on how countries have achieved universal health coverage and provides the core material

for section 4. “Universal Health Coverage Reforms: Patterns of Income, Spending and Coverage in Four Developing Countries” by Ricardo Bitrán analyzes reforms in Colombia, Ghana, the Philippines and Vietnam, as the key input to section 5. “The Health Financing Transition: A Conceptual Framework and Empirical Evidence” by Victoria Y. Fan and William D. Savedoff complements the study by Xu, Saksena, and Holly by looking at the determinants of health spending but it expressly aims to test the hypotheses associated with the health financing transition. It provides the foundation for section 1 and additional insights for sections 2 and 4. These working papers are available online and are also provided in the accompanying CD-ROM.

Before continuing, it is worth clarifying that this report does *not* provide lessons about the right way to design a health care system for achieving efficiency and equity. Rather it seeks to provide a fresh perspective on today’s health policies by setting them against long-term trends in health financing and public policy. It accomplishes this

by summarizing the findings of the Transitions in Health Financing project related to:

- the impact of health coverage on outcomes,
- the determinants of health spending and the declining share of out-of-pocket spending,
- the evolution of institutional arrangements for expanding health care access, and
- the diversity of health reforms and performance today.

Readers who are interested in health system design should consult works like *Getting Reform Right* (Roberts et al. 2008). Those interested in guidance for policy would do better to consult works like *Improving the Delivery of Health Services* (Berman et al. 2011). Evidence regarding the achievement of good health at low cost can be found in *‘Good Health at Low Cost’ 25 Years On* (Balabanova et al. 2011). However, we feel that these works sometimes miss an encompassing framework that comes from a longer view. We hope you will find this fresh perspective useful.

2. The Health Financing Transition

Just as countries in the world are experiencing demographic and epidemiological transitions, they are also going through a health financing transition (de Ferranti 2007). The demographic transition is characterized by two trends, a decline in mortality rates followed by a decline in fertility rates (See Box 1). It provides a framework for understanding rapid population growth and changes in demographic profiles that accompanied social changes over the last two centuries. The epidemiological transition is also characterized by two trends, a decline in mortality from infectious diseases and a subsequent decline in mortality from non-communicable causes. The epidemiological transition characterizes how populations have evolved in response to changes in the burden of disease. Together, the demographic and epidemiological transitions provide a compelling framework for analyzing factors underlying some of the most powerful trends of the last few centuries—declining mortality from infectious diseases, rising longevity, rapid population growth, and a growing share of ill health from non-communicable causes.

In parallel, countries are experiencing a health financing transition with its own implications for public health. The health financing transition is characterized by two trends: a rise in health spending per capita and a rising share of pooled health expenditures within this total. As with the demographic and epidemiological transitions, the health financing transition is not inevitable but it is so common as to suggest powerful underlying factors that should not be ignored when considering new policies. Like the other two transitions, countries do not all enter the health financing transition at the same time. They proceed at different paces and sometimes experience profound reversals. And like the other trends, countries can influence the pace and character of the health financing transition

through public policies. In particular, the health financing transition is driven forward by public policies that increase pooled funding (through subsidized provision or mandatory insurance) and apply it effectively to expand access to health care services.

In the health financing transition, out-of-pocket spending often rises in absolute terms but its share of total health spending declines because its complement, pooled spending, tends to grow even faster. For this to happen in so many countries across so many different kinds of health systems requires that pooled financing is in some way displacing out-of-pocket spending and is more effective at mobilizing funds for health care. Otherwise, we would expect to see just as many countries where out-of-pocket spending rose more than proportionally to the rise in pooled spending. Such cases are in the minority and only persist for short periods of time.

Pooled spending encompasses a wide range of mechanisms for mobilizing funds and paying for health care (See Figure 1). In most countries, governments raise taxes to pay for public health care facilities, reimburse private health care providers, and/or subsidize insurance premiums. These taxes are often levied on income and value added, but also include taxes on sales, imports, property, and even financial transactions (Savedoff 2004). Mandatory insurance contributions in the form of payroll deductions are another common way to mobilize funds and channel them into institutions, such as social security schemes, which in turn pay health care providers (Carrin and James 2005). While taxes and mandatory insurance contributions represent the largest sources of pooled health funding, voluntary insurance premiums also pool funds across groups of people. Some of these schemes

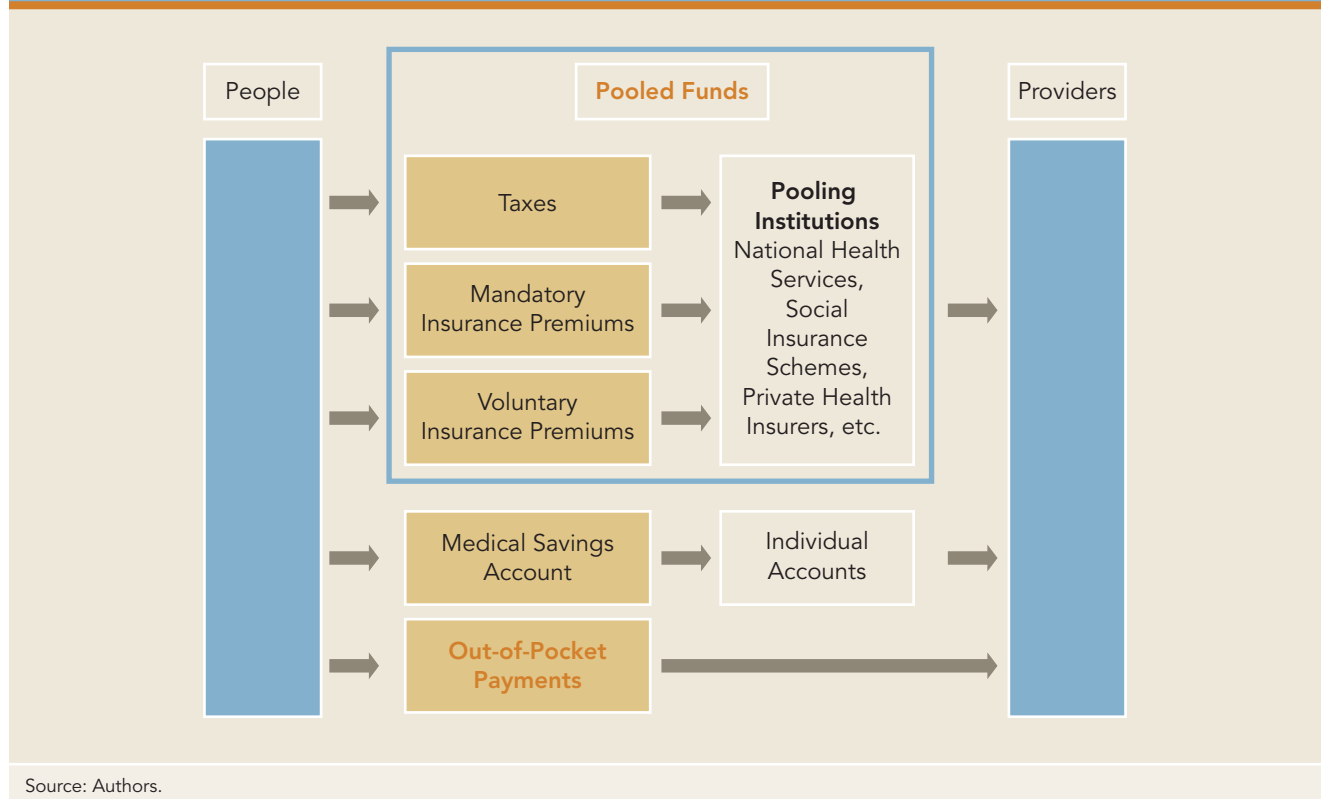
Box 1: The demographic and epidemiological transitions

The demographic transition is characterized by two trends, a decline in mortality rates followed by a decline in fertility rates. Chesnais (1993) provides a comprehensive treatment of the demographic transition, tracing the development of the concept from as early as 1909 in the work of Adolphe Landry through the 1940s with studies by Thompson, Notestein, Davis and Blacker. The idea of a demographic transition was closely associated with the process of 19th century industrialization to which it was often attributed. The rapid increases in longevity and declines in fertility across the world in the second half of the twentieth century raised questions about the causes of the demographic transition which continue to be widely debated. Nevertheless, the relationship between declining mortality and fertility is a powerful tool for visualizing the process of population growth.

The epidemiological transition is also characterized by two trends, a decline in mortality from infectious diseases and a subsequent decline in mortality from non-communicable causes. The epidemiological transition was first proposed by Omran (1971) as a way of characterizing how populations have evolved in response to changes in the burden of disease. An extensive literature has followed, looking at the causes, implications, and even exceptions to this pattern (Caselli et al. 2002; Gribble and Preston 1993).

Neither of these transitions is inevitable, the underlying causes are not predetermined, and every country experiences them at different times and with its own particularities. Nevertheless, the general patterns are sufficiently widespread that the analytical framing is useful for comparing, contrasting, and ultimately understanding, demographic and epidemiological change.

Figure 1: Relationship between pooled and out-of-pocket health spending



Source: Authors.

are for-profit but many are non-profit associations as well (Sekhri and Savedoff 2005).

Out-of-pocket expenditures and medical savings accounts are not pooled. Out-of-pocket expenditures are paid by individuals for services received by themselves or members of their household. It is a very large component of health funding in most countries, though it is a smaller share in countries which have made progress toward universal health coverage. Medical savings accounts provide individuals with an opportunity to set aside funds that can be utilized for health care. These accounts allow individuals to obtain financial protection against health risks later in life but without the benefits of risk pooling that come from insurance mechanisms and government programs. Medical savings accounts are of limited significance in most health systems, even in the United States and Singapore where they are more widespread.

What different pooling mechanisms share in common is that money fed into the pool by individuals and households—whether in the form of taxes, premiums, or mandatory contributions—is determined by one set of criteria (often related to income, consumption, occupation or residence) and is paid out on the basis of other criteria—primarily the need for health care. Thus pooling ef-

fectively subsidizes the care of people when they get sick with funds paid in by those who are healthy. By creating programs that are either universal or targeted toward the poor, most countries also have policies to subsidize health care for those who would otherwise be unable to afford it by raising a larger proportion of funds from people who are wealthier.

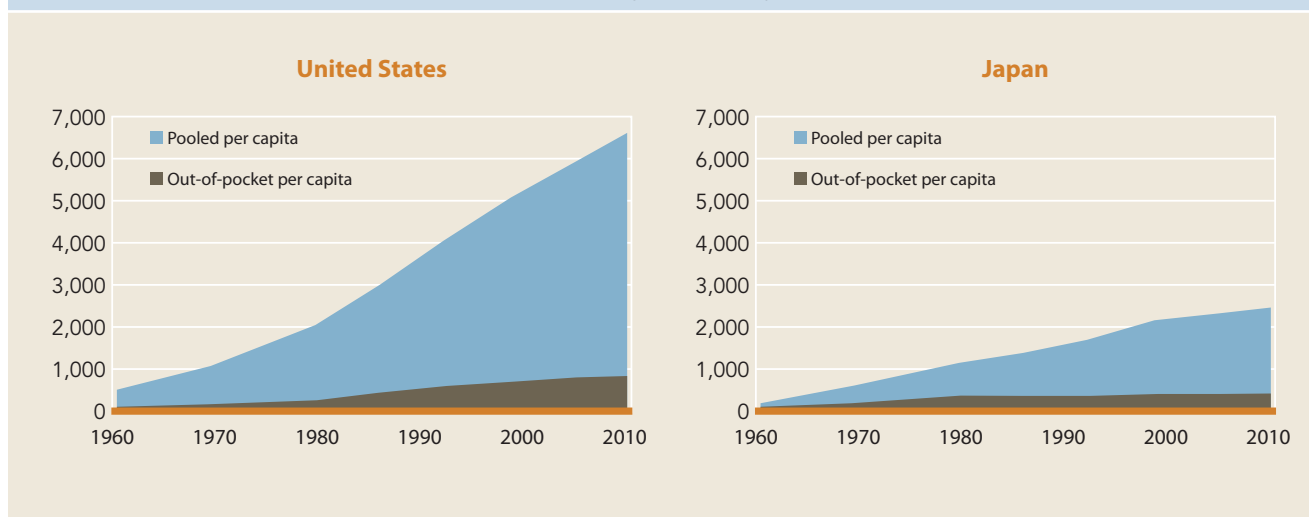
The expanding share of pooled spending is important for several reasons. It is an efficient mechanism for improving public welfare by providing insurance against the risks of illness and its associated costs. It is also an effective mechanism for improving equity by mitigating the effects of income on access to health care and on healthy life chances. Though pooled funding is a necessary condition for these achievements, it is not sufficient. Once funds are mobilized and pooled, they still need to be spent efficiently on expanding access to necessary and useful health care services.

The health financing transition is most clearly visible over long time periods. For example, from 1960 to 2008, U.S. health expenditures rose from \$148 to \$7,668 per person (See Figure 2).¹ More than 85 percent of that increase in spending was due to growth in pooled spending—slightly more than half of which came from tax-supported pub-

¹Unless otherwise noted, currency units are 2005 purchasing power parity dollars.

Figure 2: Rising Health Expenditures and Pooled Shares in the United States and Japan

(2005 Purchasing Power Parity Dollars)



Source: Savedoff et al. 2012 using data from the Centers for Medicare and Medicaid Services for the United States and OECD for Japan.

lic programs. The pooled share of spending rose from 53 percent of total health expenditures to 88 percent in 2008. Japanese health spending also rose over that period, from \$171 to \$2690, while the pooled share of spending rose from 60 percent to 80 percent (Savedoff et al. 2012). From 1960 to 2010, health spending rose by about 10 percent per year in Australia, Finland and France at the same time that the share of pooled spending rose from 64 percent to 81 percent in Australia, 56 percent to 80 percent in Finland, and 70 percent to 93 percent in France (Fan and Savedoff 2012).

The availability of comparable historical data for developing countries is limited, but Fan and Savedoff (2012) find that the health financing transition can be observed in a sample of 126 countries between 1995 and 2009 (See Box 2). Over this period, the share of pooled health expenditures in total health expenditures rose on average by 0.2 percentage points annually after controlling for income

and other factors. The average share of pooled spending rose from just under 64 percent in 1995 to just over 66 percent in 2009. The shift was stronger among the 46 low-income countries (where the pooled health spending share rose from an average of 47 percent to 53 percent) than in the 23 high-income countries (where the pooled health spending share remained essentially the same at 82 percent) (Fan and Savedoff 2012).

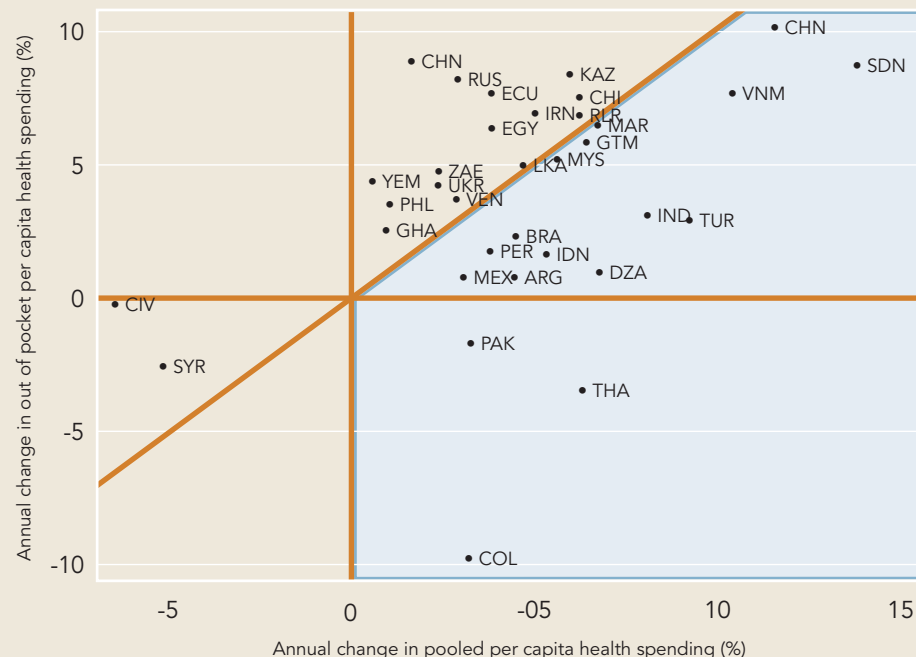
The relative rates of growth in out-of-pocket and pooled spending determine whether a country is moving through the health financing transition or not. This can be demonstrated visually with Figure 3 which plots the growth rate of pooled and out-of-pocket spending. When pooled spending grows faster than out-of-pocket spending, the pooled *share* of total health expenditure rises. Countries in this category appear below the 45-degree line in Figure 3. Countries in which pooled spending is growing are locat-

Box 2: A Conceptual Framework and Empirical Evidence of the Transition in Health Financing

Almost every country exhibits two important health financing trends: health spending per person rises and the share of out-of-pocket spending on health services declines. In this paper, we describe these trends as a “health financing transition” to provide a conceptual framework for understanding shorter term analyses of health markets and public policy. We review the literature to show that health spending growth is a consequence of rising income and expanding medical technologies, while declining shares of out-of-pocket spending are a consequence of political movements and social change. Using 14 years of data from 126 countries, we examine these explanations for changes in health spending and its composition with regressions in levels and first differences. We estimate that the income elasticity of health spending is about 0.7, confirming findings in the latest comparable studies. Our analysis also shows a significant secular trend in health spending – rising about 1 percent annually – which is associated with expanding use of new medical treatments and changing medical practices. The out-of-pocket share of total health spending is not related to income, but is strongly influenced by a country’s capacity to raise general revenues – offering support to the hypothesis that the composition of health spending is largely determined by public policies.

Source: Victoria Y. Fan and William D. Savedoff

Figure 3: Changes in pooled and out-of-pocket spending, 1995-2009



Note: Includes countries that had more than 1 million people in 1995 and which were classified in World Bank income groups 2 and 3 in 2012. Annual changes are calculated for per capita expenditures.

Source: Fan and Savedoff 2012.

ed to the right of the y-axis while those in which pooled spending is declining appear to the left. The shaded area shows which countries are experiencing both an increase in *pooled spending* and an increase in the *pooled share* of total health expenditure. Countries are mostly clustered in the top-right quadrant because both health spending components rose between 1995 and 2009, though pooled spending grew faster than out-of-pocket spending in the majority of these countries.

Three particular patterns stand out. In the first pattern, pooled health expenditures rise and out-of-pocket spending declines (countries in the lower-right quadrant of Figure 3). These countries are moving rapidly through the health financing transition. For example, between 1995 and 2009, Thailand increased pooled health spending by 6.2 percent annually at the same time that out-of-pocket health spending fell by 3.4 percent annually (See Table 1). Consequently, the pooled share of total health spending grew significantly—from 57 percent to 84 percent.

In the second pattern, the pooled share of total health spending increases but only because pooled health spending rises faster than out-of-pocket spending (countries in the lower triangle within the top-right quadrant). For example, between 1995 and 2009, Brazil's pooled health spending rose 4.7 percent annually, twice the rate of out-of-pocket health spending which grew 2.2 percent annually. Con-

sequently, the pooled share of total health spending grew from 61 percent to 69 percent over this period.

In the third pattern, health spending grows but the pooled share declines because out-of-pocket health spending grows relatively faster (countries in the upper triangle within the top-right quadrant). For example, between 1995 and 2009, pooled health spending in the Philippines grew 2.3 percent annually but out-of-pocket health spending grew even faster at a 3.5 percent rate. Therefore, the pooled share of total health spending fell from 50 percent to 46 percent over this period.

As shown in Figure 3, most countries have moved forward through the health financing transition over the last 15 years. However, a significant number of countries are outside the shaded area, reinforcing the point that the health financing transition is neither inevitable nor automatic. Placed in a longer time frame, however, it is very likely that the social and political forces that have led most countries toward increasing shares of pooled health expenditures will assert themselves, even in countries which appear to be stagnant or regressing.

Thus the health financing transition is a real and regular phenomenon of modern societies. With its long-term perspective and focus on two key trends—the rise in health spending and the increasing share of pooled health

Table 1: Three health spending patterns, 1995-2009

Health spending per person	Thailand			Brazil			Philippines		
	1995 (\$)	2009 (\$)	Annual change (%)	1995 (\$)	2009 (\$)	Annual change (%)	1995 (\$)	2009 (\$)	Annual change (%)
All	196	313	3.4	505	857	3.8	82	122	2.9
Pooled	113	262	6.2	309	591	4.7	41	56	2.3
Out-of-pocket	83	52	-3.4	196	266	2.2	41	66	3.5
Pooled share of total health spending	57%	84%		61%	69%		50%	46%	

Source: Authors' calculations from WHO National Health Accounts Data 2011.

Note: 2005 Purchasing Power Parity Dollars.

spending—it provides an explicit framework within which the determinants of health spending and the diverse institutional patterns of health system development can be understood. The following sections will show that the health financing transition is driven by three major trends:

- rising income allowing people and countries to purchase more health care,
- changing technologies that expand the possibilities of prolonging and improving life, and
- political and institutional changes aimed at universalizing access to health care by promoting pooled funding.

But before looking at the factors underlying the health financing transition, the next section addresses why we should care. It explains how the health financing transition affects access to care and health outcomes.

3. Health Financing, Coverage and Outcomes

The rise in health spending and declining share of out-of-pocket expenditures that characterize the health financing transition only really matter if they contribute to expanding health care coverage and to improvements in health. In fact, the main justification for public policies to require participation in health schemes and/or to subsidize health care through tax revenues is the plight of people who are unable to afford medical care when they need it. Inability to pay for health care was raised as one of the key concerns of poor people around the world in *Voices of the Poor* (Narayan et al. 2000) and is cited as the primary reason for restricted access to health care services for an estimated 1.3 billion people who are considered poor (Preker et al. 2003).

The health financing transition is thus closely associated with expanding coverage of health systems and is presumed to improve population health. Yet this link is not automatic. If successful, the institutions created to receive pooled health funds and to pay for health care increase the number of people who get the services they need to restore and maintain their health. However, if pooled funds pay for services that people would have otherwise bought for themselves out-of-pocket, there may be no net improvements in health. Furthermore, pooled funds are not always spent efficiently. If the health care services that are provided are not cost-effective or lack critical complementary inputs to be effective then, again, there may be no net positive impact on health (Wagstaff and Claeson 2004).

In other words, the efficiency with which health spending is transformed into equitable access to health care and into health gains is an open question. Differences in health outcomes across countries with comparable levels of health spending demonstrate how much efficiency varies across health systems. Researchers have explored a number of ways to measure and explain these differences, though no consensus has yet emerged (see Box 3).

Whether the transition toward a predominance of pooled health spending results in better health outcomes will depend, therefore, on a number of factors. This transition will yield more health gains when funds are allocated to people who really need and will benefit from health care services. Its impact on health gains will also depend on whether health services become more widely available, costs to individuals become less of an obstacle, and the services provided are cost-effective (Moreno-Serra and Smith 2012b).

Initial empirical research on the links between expanding health care access and health outcomes did not find substantial impact. Public spending on health—which represents the main form of pooled funding in almost all countries—seemed to have limited effects on infant and child mortality rates (Musgrove 1996; Filmer and Pritchett 1999). The failure to find an impact was explained in part by recognizing that many other factors influence population health. Other social phenomena related to rising incomes, improved nutrition, safe water and hygiene, and disease vector control may be the main influences on population health status and the effects of health care provision might be overshadowed by these other factors.

Nevertheless, subsequent research has measured positive contributions of pooled funding to better health outcomes. In cross-country data for more than 100 countries, public spending on health appears to be associated with lower child and maternal mortality (Wagstaff and Claeson 2004; Bokhari et al. 2007). The benefits of public spending on health also appear to be more significant for the poor (Bidani and Ravallion 1997). Studies of individual high-income countries demonstrate significant improvements in health for those covered by health insurance programs (Gruber 2009). The evidence has been weaker in low- and middle-income countries where health insurance appears to improve access to care and reduce catastrophic

Box 3: Measuring health system efficiency

Measuring health system efficiency is difficult for a number of reasons. One key obstacle is disagreement over which inputs and outputs of the health system are relevant to assessing a health system's efficiency. Another obstacle is the absence of a clear standard for judging what is attainable by health systems. The World Bank (1993) provided rough comparisons of health system efficiency by comparing levels of health spending and life expectancy relative to a country's income level. The World Health Organization (2000) pushed this kind of analysis further by establishing distinct dimensions of health system performance (health outcomes, responsiveness and financial protection) and developing weighted summary rankings. Two prominent methods for analyzing health system efficiency are stochastic frontier analysis (SFA) and data envelopment analysis (DEA) (Evans et al. 2001; Jacobs et al. 2006). Moreno-Serra and Smith 2012a provides an explanation and application of the DEA approach. It is available online at <http://www.resultsfordevelopment.org/focus-areas/transitions-health-financing> and in the appendix on CD-ROM.

Box 4: The Effects of Health Coverage on Population Outcomes: A Country-Level Panel Data Analysis

by Rodrigo Moreno-Serra and Peter C. Smith

This study provides robust empirical evidence on the causal link from national levels of health system coverage to population outcomes. We assemble a large panel dataset available at the cross-country level, with annual data for the period 1995-2008 encompassing 153 developing and developed countries. We measure the level of health system coverage through indicators of pre-paid (pooled) public and private health expenditure and immunization rates, to try to capture effective access to needed care and protection from financial hardship due to health payments. Population health is measured by the under-five mortality rate and female and male adult mortality rates. We use a two-step instrumental variables approach that directly estimates the reverse causal effects of under-five and adult mortality on coverage indicators, so as to explicitly adjust for these impacts when estimating the effects of health coverage on mortality outcomes. We subject this model to a battery of specification and robustness tests, and also examine differential effects of the coverage variables according to country income levels.

Taken together, our results indicate that expansions in health system coverage lead, on average, to improved general population health. Higher government health spending per capita is consistently found to reduce both child and adult mortality rates. The estimated gains are the largest when under-five mortality is examined and are larger for low and middle income countries than in the full sample. Based on the results for under-five mortality and public health spending, the implied marginal cost of saving a year of life is just around US\$1,000 in the full sample of countries. For the average country, pre-paid public spending seems more effective in reducing mortality than prepaid private insurance funds. Higher immunization coverage is also found to decrease mortality rates. Thus, our study offers evidence that investing in broader health coverage can generate significant gains in terms of population health.

Available online at <http://www.resultsfordevelopment.org/focus-areas/transitions-health-financing> and in the appendix on CD-ROM.

spending without strongly demonstrable effects on health (Escobar et al. 2010).

Health coverage could be improving health outcomes without showing up in cross-country data for several reasons such as reverse causality, unobserved factors and time lags. Reverse causality would obscure the influence of pooled spending on health outcomes if countries respond to worse health conditions by spending more on health care. Unobserved factors such as economic growth, education, and public hygiene, can also obscure the rela-

tionship between health coverage and health outcomes. Finally, the effects of pooled spending on health care might not have an immediate impact in the same year, with effects only showing up in later years, that is, with significant lags.

Moreno-Serra and Smith (2011) address these analytical problems using a new data set that includes 153 countries with information over a 14-year period (See Box 4). They confirm that government spending on health (including tax-financed and insurance-based expenditures) is associ-

Table 2: Impact of health spending and coverage on health outcomes (from Moreno-Serra and Smith 2011)

For a 10% increase in:					
	Government health spending per capita	OOP health spending per capita	OOP health spending (share of total)	VHI health spending per capita	Immunization coverage rate
Under-five mortality rate	(-) 7.9 per 1,000	No effect	No effect	No effect	Negative significant effect not robust
Female mortality rate (adult)	(-) 1.6 per 1,000	(-) 4.4 per 1,000	(+) 11.6 per 1,000	No effect	(-) 8.5 per 1,000
Male mortality rate (adult)	(-) 1.3 per 1,000	(-) 2.9 per 1,000	(+) 13.6 per 1,000	No effect	(-) 6.8 per 1,000

Source: Reproduced from Moreno-Serra and Smith 2011.

Notes: The table presents the baseline estimated incremental effect, on each health outcome, for a 10% increase in the corresponding coverage indicator (relative to the observed average in the data). OOP = private out-of-pocket; VHI = private voluntary health insurance. Incremental effects expressed in deaths per 1,000. (+) denotes increase (positive regression coefficient) and (-) denotes decrease (negative regression coefficient). No effect = no statistically significant effect is found in the baseline model. Significant effect not robust = a statistically significant effect is found in the baseline model but not across robustness tests.

ated with lower child and adult mortality rates (See Table 2). They find that a 10% increase in per capita government spending reduces mortality by almost 8 deaths per 1,000 children under five, by 1.6 deaths per 1,000 adult women, and by 1.3 deaths per 1,000 adult men. They also find that the magnitude is larger when focusing on low- and middle-income countries. For these countries, a 10% increase in per capita government spending reduces mortality by about 12 deaths per 1,000 children under five. They caution that these estimates are average effects and do not imply that increased spending will always and everywhere lead to improvements in health. The efficiency of spending will necessarily influence the actual effects in any given context.

Moreno-Serra and Smith (2011) also provide new evidence about other forms of health spending. Voluntary health insurance appears to have no measurable impact on population health status, although this might be expected given its relatively small share of health spending in most countries. They also measure the impact of out-of-pocket expenditures on health outcomes and find that, after controlling for other factors, countries in which out-of-pocket spending is a higher share of total health expenditure have

higher adult mortality rates. While the result is tentative, it suggests that the transition toward lower out-of-pocket shares of spending are likely to improve population health status in addition to reducing the financial risk of illness as documented in Xu et al. 2003 and Xu et al. 2007.

As evidence accumulates regarding the effect of health coverage on health outcomes, the health financing transition becomes more than a description of expenditure trends. It has implications for social welfare in at least three ways. First, by expanding the share of health spending which is pooled, it channels funds through institutions which can—potentially—improve the efficiency of this spending relative to individual out-of-pocket payments. Second, it mobilizes more funds for health care, expanding access to necessary care for people who might otherwise be unable to afford it. Third, it reduces the financial barriers to access and lowers the probability that households will be impoverished by health spending. Because it involves raising health spending and increasing the share of pooled funds, the health financing transition therefore contributes to improving population health through all three pathways.

4. What Explains Growth in Health Spending?

Health spending has been rising in most countries over time. This is due to growing demand for health care services when people and societies grow wealthier and express these demands through markets and through politics. In addition, the growing supply of medical care, including new treatments and interventions, contributes to the increase in health spending. As populations age, the disease burden shifts in ways that also contribute to increase health spending. Other explanations, such as rising prices and excessive care due to insurance do not make much of a difference to the growth in health spending. Thus the rise in per capita health spending described by the health financing transition is not just inflation or a transfer from one group to another. Rather, it describes a “real” increase in the sense that higher spending corresponds to an expansion in the number and types of health care services provided to more people and contributing to their improved health.

In cross-country studies, national income is the factor most strongly correlated with total health spending. In fact, researchers consistently find that 70 to 90 percent of the variation in health spending across countries is associated with variations in national income. This suggests that as income grows, demand for health care services—by individuals and by governments—leads to health spending growth. However, national income is also closely associated with a number of other factors that influence health spending and, as a result, its role can be overstated. Higher income countries tend to have a larger supply of

medical personnel, facilities and technologies which can raise expenditures by fully satisfying this demand or even by inducing spending on ineffective care. Higher income countries also tend to have older populations which may require more health care services.

Still, when household income and government revenues rise, effective demand for health care grows. After controlling for other factors, like demographics and changing medical practices, the net impact of income on health spending is positive and quite significant. Initial studies using cross-country comparisons estimated that a 1 percent increase in national income was associated with anywhere from a 1.1 to 1.5 percent increase in total health spending.² Nonetheless, more recent work using panel data has shown that a 1 percent increase in national income is associated with at most a 0.9% increase in health spending after controlling for other factors (Gerdtham and Jönsson 2000; Baltagi and Moscone 2010). Overall, between 10 and 25 percent of the growth in health spending can be attributed to growth in income (Chernew and Newhouse 2012). While most of these studies focus on higher-income countries, a new WHO data set that includes 153 countries over a 15-year period (1995-2009) made it possible for this research project to confirm and extend some of these findings for low- and middle-income countries.

Xu, Saksena and Holly (2011) analyzed a range of factors that influence health spending: income, fiscal capacity, demographics, diseases, institutional characteristics,

Box 5: The Determinants of Health Expenditure: A Country-Level Panel Data Analysis

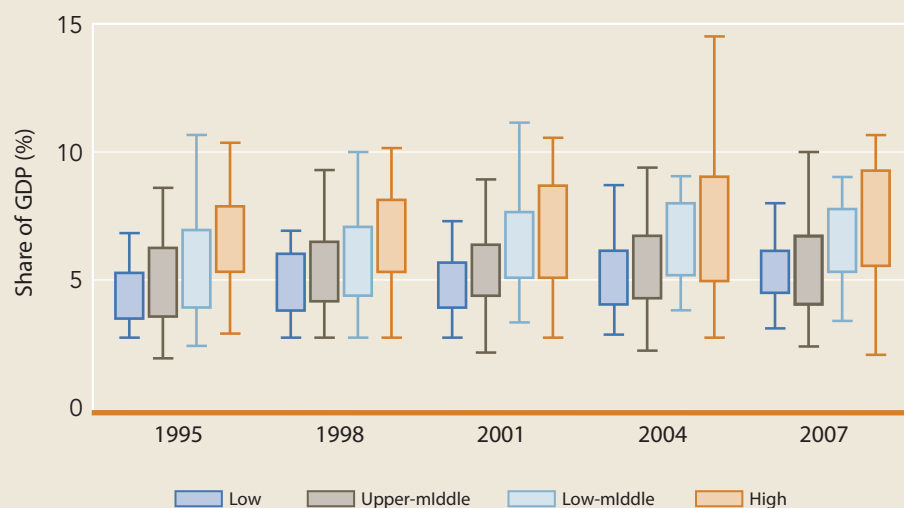
by Ke Xu, Priyanka Saksena and Alberto Holly

The rapid growth of health expenditure has become a great concern for both households and governments. There is extensive literature on the determinants of health expenditure in OECD countries, but the same is not true for developing countries. The aim of this study is to understand the trajectory of health expenditure in developing countries. We use panel data from 143 countries over 14 years, from 1995 to 2008 to study this. We apply both standard fixed effects and dynamic models to explore the factors associated with the growth of total health expenditure as well as its main components namely, government health expenditure and out-of-pocket payments. Our data show great variation across countries in health expenditure as a share of GDP, which ranges from less than 5% to 15%. Apart from income many factors contribute to this variation, ranging from demographic factors to health system characteristics. Our results suggest that health expenditure in general does not grow faster than GDP after taking other factors into consideration. Income elasticity is between 0.75 and 0.95 in the fixed effect model while, it is much smaller in the dynamic model. We found no difference in health expenditure between tax-based and insurance based health financing mechanisms. The study also confirms the existence of fungibility, where external aid for health reduces government health spending from domestic sources. However, the decrease is much smaller than a dollar to dollar substitution. The study also finds that government health expenditure and out-of-pocket payments follow different paths and that the pace of health expenditure growth is different for countries at different levels of economic development.

Available online at <http://www.resultsfordevelopment.org/focus-areas/transitions-health-financing> and in the appendix on CD-ROM.

²See studies cited in Gerdtham and Jönsson 2000 as well as Getzen 2000; Musgrove et al. 2002; and van der Gaag and Stimac 2008.

Figure 4: Total health expenditure as a share of GDP by income group, 1995-2009



Source: Reproduced from Xu, Saksena and Holly (2011).

Note: Countries are classified by World Bank income categories. The median and extreme values are indicated by horizontal lines. The boxes encompass the interquartile range of countries.

substitution among spending components, and time (See Box 5). They not only looked at the determinants of total health spending but also at its components: government spending, out-of-pocket spending, and foreign aid. Finally, they disaggregated their analysis by income category, postulating that the relationships among these variables are different in low-income countries than in middle- or upper-income countries.

Xu, Saksena and Holly (2011) note that health expenditures vary significantly across countries as a share of GDP (See Figure 4). High income countries spent an average of 7.4 percent of GDP on health over the 14-year period compared to only 5.2 percent among low-income countries. Overall, this share ranged below 5 percent to more than 15 percent. They demonstrated that income was the most consistent predictor of health expenditures but that other factors also explained some of the variation. In particular, countries with older populations and greater capacity to mobilize public revenues (as evidenced by larger total government spending) tended to spend more on health. They also found evidence of a secular increase in total health spending over time, approximately 1 percent per year for all income groups.

With regard to the effect of income on health spending, the analysis by Xu, Saksena and Holly (2011) confirms that, in the absence of other factors, health spending would probably rise more slowly than national income (See Table 3). They estimate an income elasticity that

ranges from 0.75 to 0.95 in their fixed effects models, with even lower estimates in dynamic models. They calculate an income elasticity for total health expenditure of 0.926 for low-income countries, 0.823 for lower-middle income countries, and 0.753 for upper-middle income countries. This downward pattern, however, appears to reverse for high income countries with an estimated income elasticity of 0.949.

Fan and Savedoff (2012) apply a different specification to this data set and confirm the key results in Xu, Saksena and Holly (2011) regarding income elasticities, the significance of government revenue capacity, and time trends. In particular, using a fixed effects model, they estimate an income elasticity across all countries of 0.915 and a secular increase in total health expenditure of one percent annually. They argue that a first-differences model may provide more accurate estimates, in which case the income elasticity of health spending is about 0.7. Income elasticity estimates are likely to become more precise as data improves and the appropriateness of different statistical models becomes apparent. Yet, the conclusion that these income elasticities are less than one is unlikely to change because it is such a robust finding.

If income were the only factor, these estimates suggest that health spending should *decline* as a share of income over time. This is effectively what happens in most countries with spending on normal goods such as clothing and food—spending on these normal goods rises with income

Table 3: Income elasticity of health spending by country income group (from Xu, Saksena and Holly, 2011)

	Low-income	Lower-middle income	Upper-middle income	High income
Total Health Expenditure	0.926**** (0.046)	0.823**** (0.043)	0.753**** (0.06)	0.949**** (0.072)
Government Health Expenditure	1.178**** (0.314)	0.371**** (0.073)	0.543* (0.294)	0.369*** (0.127)
Out-of-Pocket Health Expenditure	1.098**** (0.085)	0.869**** (0.076)	0.842**** (0.109)	1.503**** (0.133)

Source: Xu, Saksena and Holly 2011.

Notes: Coefficients from fixed effects models with 143 countries in which log expenditures are regressed on log income and other independent variables. Standard errors presented in parentheses with asterisks denoting statistical significance as follows: **** $p < 0.001$, *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

but not as quickly and so their overall *share* declines. To account for the observation that higher income countries spend a *greater* share of GDP on health requires that other factors are also contributing to higher health spending. This is, in fact, the case. The development and use of new medical technologies, in particular, has been a major source of spending growth.

Spending rises when medical practices adopt new technologies and expand the use of older ones. Advances in medical technologies are increasing the number and kinds of health services available to improve people's health. When these services are utilized, the quantity of care provided increases along with total spending. Technological advances can also increase productivity, giving people the same health gains at lower cost. In such cases, technological advances can offset spending growth.

Researchers have assessed the impact of technology on health spending in several ways. Studies that use growth accounting methods estimate the impact of technological change as the residual that remains after subtracting the effects of measurable factors like income growth and demographic change (Chernew and Newhouse 2012). Other studies directly estimate the impact of technological change on the productivity of medical care by comparing changes in health service costs and benefits over time. For example, studies have analyzed the utilization, costs and health benefits of treating heart conditions, cataracts and depression, finding that most innovations have reduced the unit cost of additional health benefits. They therefore argue that technology contributes to the growth of aggregate health spending mainly as a consequence of extending treatment to more people (Cutler and McClellan 2001).

The pace of technological advances in medicine, thus, works in two directions: reducing the unit costs for certain kinds of care, particularly once they become routine, and raising unit costs for other kinds of care that are producing proportionally larger health gains (Savedoff 2009).

As people age, they use more health care, but this contributes only modestly to increases in aggregate health spending. People are living longer than ever before and older people generally spend more on health care. However, people are also in better health at any given age than the generations that preceded them (Fogel 2003; Freedman et al. 2002; Dormont et al. 2006). In addition, health care spending is more closely associated with an individual's proximity to death than it is to their age (Lubitz and Reilly 1993; Zweifel et al. 1999). As people live longer healthier lives, end-of-life expenditures are delayed; the aggregate financial burden today is therefore lower. Getzen (1992) confirmed that aging has little impact on health spending growth using data from 20 countries between 1960 and 1988. He argues that the correlation between health spending and aging disappears once changes in income and other time trends are incorporated. More recent work by Xu et al. (2011) and Fan and Savedoff (2012) with data on over 100 countries from 1995 to 2009 confirms that the share of people over 60 years of age is not a strong or consistent factor in explaining total health spending.

Prices for medical services do not explain rising health spending. Price inflation is often blamed for growing health expenditures. However, health care is actually characterized by rapid productivity gains which are poorly measured and this leads to overestimates of health care inflation (Cutler and McClellan 2001; Chernew and Newhouse 2012). The

common view that health prices are rising is probably related to the salience of the newest and most expensive treatments, leading people to ignore the falling cost of other forms of care which have become routine.

Insurance and management institutions do not have systematic effects on health spending growth. The decline in the share of out-of-pocket spending lifts one limitation on the ability of people to get access to health care services. In the case of public health programs and social insurance this is, indeed, one of the key goals. Questions arise whether they can promote the utilization of needed care while simultaneously limiting unnecessary care.

Insurance coverage is associated with greater utilization of health care services, but by itself that does not account for observed increases in aggregate health spending (Manning et al. 1987; Newhouse 1992; Docteur and Oxley 2003; Escobar et al. 2010). Cross-country comparisons have failed to demonstrate a consistent relationship between health spending and financing arrangements such as social

insurance, integrated public provision, or separated financing and provision (Leu 1986; Gerdtham and Jönsson 2000). Xu, Saksena and Holly (2011) find no evidence to support a systematic difference between tax-based and insurance-based health financing institutions in explaining health expenditures. They also explore a novel hypothesis that ‘mixed systems’—those in which financing arrangements are not dominated by either social insurance or government-financed care—may be less effective at controlling costs. However, this too finds little support in the data.

In sum, income and technology are the main drivers of health spending growth. Growth in health spending associated with aging populations appears to be largely offset by a parallel improvement in health status at all ages. Price inflation and institutional mechanisms are incapable of explaining the growth in health spending. Countries are spending more on health care largely because they are buying more health benefits with their growing incomes and have a widening range of medical technologies and treatments to purchase.

5. Why Has the Pooled Share of Health Spending Grown?

The second element of the health financing transition is a rising share of pooled health spending and, conversely, a declining share of out-of-pocket health spending. While total health spending is driven by a combination of economic and technological factors, the rising share of pooled health spending is primarily a consequence of political processes. In most countries, public policies have created health financing institutions that mobilize funds through mandatory insurance contributions and/or taxes and thereby attenuate the link between individuals' incomes and their ability to utilize health care services.

The key economic argument that might explain a rise in pooled health spending is based on the demand for health insurance. People can improve their well-being by insuring against risks, such as the possibility of falling ill and needing to pay for health care services (Arrow 1963). However, if the demand for health insurance were the primary force behind the growing share of pooled health spending, commercial insurance should have led the process and become a significant part of national health expenditures. Instead, pooled funding for health care has begun in most countries with non-profit associations or as a result of demands by organized labor and social movements. Commercial health insurance arrived later and has thrived only where it receives favorable tax treatment and where public regulation has organized a supportive market structure (Sekhri and Savedoff 2006).

Fan and Savedoff (2012) directly analyze the share of out-of-pocket health spending, which is essentially the complement of the pooled share.³ They confirm that economic factors are not important to the composition of health spending since income is insignificant in their statistical analysis of the out-of-pocket share of health spending. Instead, countries with stronger public capacity to mobilize resources have lower out-of-pocket spending shares—a clear indication that public policy has a significant impact on the composition of health spending. In addition, Fan and Savedoff find a small but consistently negative trend in the share of out-of-pocket spending, an average annual decline of about 0.2 percentage points. This trend is confirmed by analysis in Xu, Saksena and Holly (2011) which finds that the level of out-of-pocket spending in the sample is consistently declining during a period when total health spending was increasing.

Savedoff and Smith (2011) argue that the growth of pooled funding for health care is the result of collective action to expand access to health care services and provide people with protection from the financial burden of illness (See Box 6). The clearest explanation for the long-term rise in the pooled share of health spending is the persistence of political demands for universalizing health coverage. Despite enormous variation across countries, similar trends regularly recur: income rises, health spending rises, the pooled share of health spending rises, and successively larger portions of the population gain access to more health care services at less financial risk. This long-term perspective is significant because it suggests that the move toward universal access to health care is propelled by fundamental social forces.

While the broad trends are similar, the path taken by any particular country is different and leads to unique institutions for pooling funds and spending on health (Bump 2010; Savedoff and Smith 2011). The historical path is contingent on many factors related to popular movements and political leadership, changing moral claims and world views, and events such as economic recessions, wars, migration, and new diseases. The institutions adopted to pool funds and provide health care are generally adaptations of existing indigenous approaches to health care mixed with ideas borrowed from other countries. This historical variation in public policy means that some countries are able to achieve universal coverage at much lower incomes than others. It also explains why health systems look so different across countries even though they have similar aims—to expand access to health care and provide financial protection.

Savedoff and Smith (2011) review historical evidence and identify four patterns in the way countries achieve universal health coverage: the key role played by social movements in pressing for universal health coverage; the widespread involvement of governments in managing or regulating health financing; the contingent nature of public policy making; and the incremental nature of progress.

First, social movements have played a key role in organizing institutions to pool health funding and in lobbying governments to enact universal health care policies. These social movements are extremely varied. For example,

³Together, pooled health spending and out-of-pocket spending account for almost all health spending. The only other significant categories are foreign aid and medical savings accounts. Foreign aid is a significant share in some low-income countries. Medical savings account are insignificant in most countries and represent a relatively small share of health spending even in the few countries which have associated incentives or mandates (e.g., the United States and Singapore).

Box 6: Achieving Universal Health Coverage: Learning from Chile, Japan, Malaysia and Sweden

by William D. Savedoff and Amy L. Smith

Over the last hundred years, most countries have made substantial progress toward universal health coverage. The shared trends include rising incomes, increasing total health expenditures and an expanding role for government in improving access to health care. Despite this, countries vary significantly in their particular routes to universal health coverage. These routes are shaped by prominent leaders and strong popular movements and framed by particular moral claims and world views. They are affected by unpredictable events related to economic cycles, wars, epidemics and initiatives in other public policy spheres. They are also influenced by a country's own institutional development and experiences in other countries. As a result of these highly contingent paths, countries reach universal health coverage at different income levels and with disparate institutional arrangements for expanding health care access and mitigating financial risk.

This paper examines the histories of attaining universal health coverage in four countries—Sweden, Japan, Chile and Malaysia. It shows that domestic pressures for universalizing access to health care are extremely varied, widespread, and persistent. Secondly, universal health coverage is everywhere accompanied by a large role for government, although that role takes many forms. Third, the path to universal health coverage is contingent, emerging from negotiation rather than design. Finally, universal health coverage is attained incrementally and over long periods of time. These commonalities are shared by all four cases despite substantial differences in income, political regimes, cultures, and health sector institutions. Attention to these commonalities will help countries seeking to expand health coverage today.

Available online at <http://www.resultsfordevelopment.org/focus-areas/transitions-health-financing> and in the appendix on CD-ROM.

Sweden's temperance movement in the late 19th century was organized to ban alcohol but it played a significant role in advocating for expanding health insurance coverage. Other important actors in Sweden included the medical profession, labor unions and political parties (Immergut 1992). In Japan, village cooperatives, the military, the Japanese Medical Association and labor unions played important roles (Garon 1987; Ogawa et al. 2003). In Chile, the medical profession, labor unions and the military also pressured for expanding health care (Mardones-Restad and Azevedo 2006; Jimenez and Bossert 1995). In Malaysia, ethnically identified organizations mobilized to develop institutions for providing health care and colonial administrators initiated public health measures, but it was the developmentalist state after independence that pursued extension of health coverage most strongly (Barraclough 1999). These same actors were never unanimously in favor of expanding health coverage and many of them also resisted health reforms at different times because they disagreed with cost sharing arrangements, feared government intrusion into health care or promoted alternatives to mandatory pooling of health expenditures. Thus, support for expanding access to care cannot be taken for granted nor can it be inferred deterministically from a group's supposed interests; but the overall trends are still favorable to universalizing coverage.

Second, government involvement in managing or regulating health care financing is the only way that countries have achieved universal health coverage. While the appropriate public role in health care is hotly debated in almost every country, the fact remains that countries with generalized access to health care and financial protection all achieved this through public action. The nature of these policies varies significantly. In some countries, the government raises tax revenues and directly provides health care

through publicly-owned and publicly-managed facilities. At the other extreme, governments may pass laws mandating enrolment in private insurance plans which are regulated to assure that no one is excluded and that premiums are affordable. In between these extremes are myriad forms with different degrees of public involvement in the ownership and management of care. However, governments are always part of the critical architecture that mobilizes funds, pools them, and then channels them to health care providers in a way that assures people can get the health care services they need without undue financial hardship.

Third, the public policies enacted to expand health care access are the result of highly contingent processes. Negotiation, rather than design, is the appropriate model for how reforms are shaped. This contingency is apparent from any detailed look at the history of health care policy. Even health reforms that are commonly cited as ideal types for the design of a health system actually emerged from negotiated compromises or were the unforeseeable consequences of actions taken to address short-term problems. For example, Bismarck's efforts to expand health care in late 19th century Germany were blocked by the political opposition because they rejected his proposal for government involvement in funding and managing insurance. Bismarck ultimately compromised, leading to core features which characterize today's social insurance systems, particularly the shared responsibility of employers and employees for financing health care (Immergut 1992).

The British National Health Service (NHS) provides another example that reforms are negotiated rather than designed. The NHS relies predominantly on tax revenues for funding and hospitals are largely publicly owned and managed. Yet, the Beveridge Report—issued in 1943 and cited as the design for this system—actually proposed to

universalize care through a social insurance mechanism (Musgrove 2000; Beveridge 1942). After World War II and the experience with publicly managing hospitals throughout the war, a newly-elected Labor Government enacted legislation to create a health care system with direct government-provision. The original plan was to finance this health care system with mandatory payroll contributions but demand grew so rapidly that parliament chose to subsidize health care with general revenues. The result of these short-term decisions was to establish a system that relies almost entirely on general taxes (Digby 1998; Rivett 1997).

Other cases demonstrate similarly contingent paths. In Japan and Sweden, health proposals were propelled at times by demographic changes; at other times, delayed by recessions and war. Japan's progress toward universal health coverage was marked by unexpected events: decisions to adopt elements of Germany's social health insurance system; the idiosyncrasy of creating a government-managed health insurance fund for employees in small firms; and the creation of citizen health insurance in response to rural cooperative movements. In Chile, export booms, epidemics, and military coups punctuated the process of reform. The particular features of Malaysia's system of providing universal health coverage was also uniquely influenced by its colonial past, by the political accommodations arranged between ethnic groups by the dominant party, and the particular strategy of state-led development that followed independence (Savedoff and Smith 2011).

Finally, increasing the pooled share of health financing and expanding access to care is generally an incremental and gradual process, though the pace of progress appears to have accelerated in recent years. In countries with insurance institutions such as Germany, Japan and Chile, participation was initially mandated for employees of large firms and later extended to employees of smaller firms, the self-employed, rural workers, and dependents. In the final stages of reaching universal coverage, governments established explicit mechanisms to subsidize

participation for the unemployed, indigent, and others who were not otherwise covered. This process took over a century in Germany and about four decades in Japan and Chile. In countries with direct public provision of care, like the United Kingdom, Malaysia, and Brazil, the gradual extension of coverage often has more to do with the physical location of facilities and policies regarding fees because eligibility for care is not conditional on enrollment in an insurance plan. For these countries, urban areas are frequently privileged in terms of access to health care during initial periods and specific programs are necessary to expand supply into rural areas and disadvantaged communities. In either case, the kind of services that are available to citizens also expands. Often attention is focused on public health measures and hospital care in early phases with outpatient services and preventive care extended later. Given the continuing pace of innovation in medicine, public policy continues to grapple with which services should be provided long after universal health coverage is attained.

The rising share of pooled financing is important to the efficiency and equity of health care services. This second element of the health financing transition is primarily a political phenomenon, one which is driven by social movements and political processes that seek to expand access to health care services. This process is highly contingent, leading to diverse institutional forms and proceeding in fits and starts. Yet, the historical record shows that domestic pressures are so widespread and common that almost every country in the world is enacting public policies to increase the pooled share of health funding and to universalize access to health care. Even in countries that effectively achieve universal health coverage, changes in the economy, politics, and medical technology continue to pose challenges for assuring equitable access to health care along with financial protection. This means that the process of political engagement and debate over health care never really ends (Mossialos 2002; van Doorslaer 2004). In this regard, universal health coverage may be better understood as an orientation rather than a destination.

6. How Are Countries Reforming Health Systems Today?

Countries that are trying to achieve universal health coverage today face different challenges than those in the past due to changes in medical technology, demographics, and epidemiology as well as economics, politics and the environment. Even countries that have substantially reached universal health coverage have to work hard just to maintain, let alone improve, the comprehensiveness and equity of their health systems. Yet other trends have facilitated the movement toward universalizing health care, including economic growth and rising productivity. This section looks at some recent efforts to achieve universal health coverage. It shows how the long term trends described in earlier sections are manifested in today's initiatives to expand access to health care. It also demonstrates that despite broad progress, reforms in many countries stall as a result of political opposition, provider behavior, or implementation problems.

Reaching for universal health coverage in the 21st century

While most wealthy countries have systems that assure health care access for most of their population, most low- and middle-income countries are still struggling to reach this goal. Lessons from the past are useful, but they do not always recognize that the conditions facing countries today are quite different than those in the past.

One of the biggest differences facing low- and middle-income countries is due to advances in medical technology. When Western European countries expanded their health care systems in the mid-twentieth century, sulfa drugs were among the most advanced medications available and antibiotics were in their earliest phases of development. Treatments for cancer were mostly unknown. Vaccinations were only available for a small number of diseases. Trauma care and treatment of cardiovascular diseases were quite limited. By contrast, low- and middle-income countries today are trying to expand access to health care when the definition of necessary medical treatments is much broader. It can be quite costly to provide all citizens with access to MRIs, advanced cancer treatments, and the like. Colombia illustrates the tension between public policies that have tried to guarantee a limited package for all citizens and constitutional guarantees of access to care for all. Colombian citizens are increasingly appealing to the courts to force the public insurance system to cover services, some of which

are deemed too expensive by public regulatory authorities (Yamin et al. 2009). At the same time, medical advances have driven down the costs of care. Cost-effective vaccines are available to address a wide range of illnesses. Diagnostic tests and surgical techniques for many conditions have come down in price. Even drug prices have declined over time for costly treatments, including anti-retroviral drugs (Nunn et al. 2007). So the advance of medical technology poses challenges for as well as facilitates the move toward universal health care.

Changing demographics have also altered the conditions faced by countries trying to achieve universal health coverage. Access to care expanded in Western Europe, North America and Japan during periods in which population growth was slowing and in countries where declines in fertility occurred relatively soon after declines in mortality. By contrast, many low- and middle-income countries experienced rapid population growth and are trying to provide access to significantly larger numbers of people. In this regard, Asian and African countries are facing bigger challenges than the countries of Latin America, the Caribbean, Eastern Europe and Central Asia where the demographic transition is generally farther advanced.

Epidemiological conditions today are much different than they were a century ago. Countries that are trying to improve health care access today are facing a disease burden which presents a double challenge. First, they need to improve access to health care for infectious diseases and malnutrition which have been long-standing problems. But they also need to provide services for non-communicable conditions, such as diabetes and cardiovascular diseases, and to address a rise in obesity. The changing composition of the disease burden challenge results, in part, from earlier successes in combating disease and increasing longevity. At the same time, it complicates the process of expanding the supply of health care services and paying for them.

Economic, political, and environmental conditions are also different today. Earlier sections have discussed how economic growth increases effective demand for health care and raises productivity. Rapid economic growth in many low- and middle-income countries is facilitating policies to achieve universal health coverage. Annual growth rates of over 7 percent in places like Singapore, Malaysia, South Korea, and Hong Kong made it much easier to finance universal health care programs than other places where economic growth has been slow or faltered. Political conditions have also changed dramatically. In the

mid-twentieth century, social movements involving labor unions and ideologies in favor of social welfare states were ascendant. Today's advocates of universal health coverage are operating in a world with greater skepticism about the role of the state and with weaker union movements. Finally, while environmental conditions have always been recognized as a factor that influences health conditions, global warming may be altering the habitats of disease vectors in ways that could significantly influence the costs of attaining universal health coverage.

Though conditions have changed, most low- and middle-income countries are pursuing public policies to expand access to health care and often to provide financial protection. These countries are able to learn from experiences in other countries and they are also influenced by expectations derived from foreign success. This has made it possible in many cases to expand coverage more rapidly and at lower cost than the countries that achieved universal health coverage in the last century. For example, it took Belgium and Germany over 100 years from the time they set out to provide coverage to all their citizens and finally achieved universality. By contrast, Malaysia and South Korea reached the same goal in roughly three decades, at lower income levels and at lower cost (Carrin and James 2004; Savedoff et al. 2012).

Today's health sector initiatives all rely on increasing pooled funding, but the particular sources for funds and institutions for applying them differ. In Malaysia, general taxes are the predominant source of pooled funding while in South Korea, mandatory payroll contributions are the most significant source (Chee and Barraclough 2007; Kwon 2009). In addition to relying on different sources of funding, these reforms also differ on whether they rely primarily on expanding publicly-financed and publicly-provided health care or focus on building mandatory health insurance schemes. The expansion and improvement of public provision is less frequently conceived as a policy of universal health coverage but at root it has the same goals: provide all citizens with access to necessary health care services without causing impoverishment. Public reforms seek to achieve these aims by financing health care through taxes and providing health care at low or no cost to the patient. The other major category, often described as social insurance, creates explicit enrolment mechanisms by which citizens become eligible for health care services. These reforms usually mobilize significant revenues through payroll taxes or specific insurance contributions. For people who are unable to pay such contributions, general revenues are used or cross-subsidy mechanisms are created to subsidize the costs of care.

Few reforms fit completely in one or the other of these extremes. Brazil's reforms in the last 20 years eliminated the country's social insurance system and replaced it with a "Unified Health System" of public provision. A key

initiative within this system for expanding access to care is the *Programa Saude Familiar* which provides incentives for municipalities to establish medical teams that serve a defined population (Victora et al. 2011). Thailand's health reforms include enrolment in insurance mechanisms, but the major thrust of its recent drive toward universal health coverage has relied primarily on general revenues to a program that finances care that is provided predominantly in public health facilities (Somkotra and Lagrada 2008). Many formerly communist countries sought to replace their soviet-era public systems with private market approaches. Most of them, however, have come to realize that markets are ineffective. For example, China eliminated the communist-era public health services during its turn to market-friendly policies in the 1980s, but it has more recently supported the creation of insurance programs to address large inequities in access to care (Hu et al. 2008). Many Latin American countries are responding to the fragmentation of their health systems by creating new programs to fill gaps in coverage. Colombia enacted its national health insurance plan in 1993 and is continuing to work on its implementation (Escobar et al. 2010). Mexico created a program called *Seguro Popular* which is meant to provide health care to the self-employed, unemployed, and indigent who are otherwise ineligible for coverage in formal sector insurance schemes (Frenk et al. 2006). India has the lowest share of pooled health spending among the world's large countries, yet recent reforms have committed the country to mobilize more public revenues and dedicate them to expanding access to health care. Some of these initiatives follow a public provision model while others are more characteristically based on insurance schemes (Reddy et al. 2011). In each case, these countries are charting strategies that enable them to navigate through their specific institutional and political situation while striving to meet expectations for universal coverage.

Social insurance reforms in Colombia, Ghana, Vietnam and the Philippines

Social insurance reforms are among the most common initiatives seeking to achieve universal health coverage in low- and middle-income countries today (Lagomarsino et al. 2012). Some common features of these reforms are:

- an explicit legal commitment to establish universal health coverage
- an elimination or reduction of fees and copayments for those who use health care services
- new mandatory contributions from formal sectors workers and their employers

- requirements that governments use general tax revenues to pay premiums for people who are not otherwise covered by health insurance, and
- guarantees of access to health care services for everyone affiliated with an insurer.

According to Bitrán (2012), these reforms are often driven by popular pressures resulting from dissatisfaction with the quality and cost of available health services; however, the outcomes of social health insurance reforms vary significantly (See Box 7). To be successful, the reforms have to increase both the effective demand for and supply of health care services. For this reason, Bitrán (2012) distinguishes four cases:

Situation 1: Reforms increase the effective demand for services and providers respond by increasing supply with productivity gains. As a result utilization rises without significant cost increases (e.g., Colombia)

Situation 2: Reforms increase the effective demand for services and providers respond by increasing supply but without productivity gains. As a result utilization rises but with rising costs (e.g., Ghana and Vietnam)

Situation 3: Reforms increase the effective demand for services and providers do not respond by increasing supply or productivity. As a result, utilization fails to rise and costs may or may not increase (e.g., the Philippines)

Situation 4: Demand remains unchanged (e.g., user fees are eliminated but unofficial fees rise) and the supply response is limited. As a result, utilization fails to rise and costs may or may not increase.

Of the four cases considered by Bitrán, Colombia is the most successful. The health reform that started in 1993 had a difficult phase of implementation, including an initial period with a steep rise in spending. However, by 2009, the new insurance system had expanded insurance enrolment from 52 percent to 95 percent of the population and increased the utilization and equity of health care services, including skilled birth attendance. The reforms significantly changed the composition of health financing, increasing government and social insurance spending from 43 percent in 1995 to 80 percent of total health spending in 2009. Out-of-pocket expenditures fell over the same period from 35 percent to 8 percent of total health expenditures. The most unusual feature of Colombia's experience is that it achieved all this with no significant increase in health spending. Total health expenditure rose initially from US\$340 per capita in 1995 to US\$450 per capita in 1997, but then fell sharply and ended in 2009 at US\$350 per capita—roughly where it started.

Ghana's experience is quite recent but is promising. In 2005, Ghana launched its National Health Insurance Scheme (NHIS) in a context where insurance coverage was virtually nonexistent. NHIS expanded enrolment to 34.5 percent of the population by 2008 and provided modest increases in access to health care services despite a slowdown in economic growth and constraints on public spending. By 2009, net public spending on health care was the same as at the beginning of the reform because rising social health insurance contributions were offset by a comparable decline in government budget allocations from general taxes. The reform may have contributed to a reduction in the share of health care expenditures that are paid out-of-pocket (from around 42 percent before the reform to 34 percent in 2009). The Ghanaian reform is

Box 7: Universal Health Coverage Reforms: Patterns of Income, Spending and Coverage in Four Developing Countries

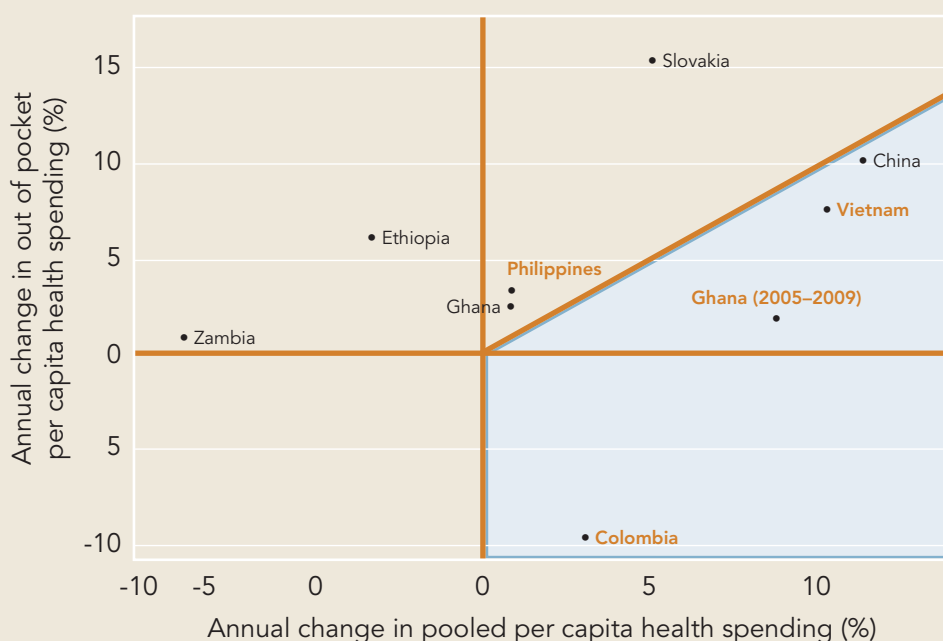
by Ricardo Bitrán

Achieving universal health coverage (UHC) is a central social aspiration of most developing countries, but one that poses multiple policy challenges. This research reviews reforms in four developing countries over the past 15 years: Colombia, Ghana, Vietnam, and the Philippines. The countries were selected to illustrate different circumstances, policy approaches, and results in different regions of the world and for countries with different income levels. The research examines the changes that took place in the four countries in absolute and relative spending levels for public, private, and total health spending, along with changes in health insurance coverage. In particular, it explores the hypotheses that effective coverage expansion requires additional public financing and reduces out-of-pocket spending. The research also analyzes the link that may exist between the countries' economic cycles, health spending, and health insurance coverage. Finally, it looks at consequences of expanding coverage for equity.

All four countries have aimed to achieve UHC through social insurance mechanisms. Colombia's reform started in 1993 and has been able to achieve near universal coverage while reducing out-of-pocket spending and controlling total health costs. Ghana's reforms are more recent, starting in 2005, yet it has managed to achieve significant gains in health coverage and has also reduced dependence on out-of-pocket spending. Vietnam's social insurance reforms started in the 1990s. It has increased coverage while modestly reducing reliance on out-of-pocket spending during a period when total health expenditures tripled. Reforms in the Philippines since 1995 show slow progress in expanding coverage, rising expenditures and a growing reliance on out-of-pocket expenditures.

Available online at <http://www.resultsfordevelopment.org/focus-areas/transitions-health-financing> and in the appendix on CD-ROM.

Figure 5: Changes in pooled and out-of-pocket spending for selected countries, 1995-2009



Note: Social insurance reforms began in different years: Colombia (1993); Ghana (2005); Philippines (1995) and Vietnam (1995). Other countries included as reference points only.

Source: Fan and Savedoff 2012.

quite new, yet microeconomic studies have found promising effects on people enrolled in the program in terms of access to services and financial protection (Makinen et al. 2001; Brugiavini and Pace 2010; Nguyen et al. 2011).

Vietnam has also expanded insurance coverage significantly, but it is an outlier in terms of its rapid and sustained rise in total health spending. Vietnam's health sector strategy, which had initially relied on market liberalization, changed significantly in 1993 when it launched its first health insurance program. The public goal set that year was to expand insurance enrolment and reach universal health coverage by 2010. While insurance coverage has risen significantly, from less than 10 percent in 1995 to almost 60 percent in 2009, the country missed its initial target. Access to basic health services is quite widespread in the country as indicated by immunization rates above 90 percent and birth attendance by skilled personal reaching almost 90 percent.

Increased health insurance coverage has come at a cost for Vietnam. Real total health expenditure tripled between 1995 and 2009. Despite rapid economic growth through this period, health spending as a share of GDP rose from 5.1 percent to 7.0 percent. Between 1995 and 2009, the

pooled share of total health spending has grown, but only from 34 percent to 40 percent. Out-of-pocket spending continues to be the largest single source of health expenditures at 57 percent as of 2009. Vietnam's reforms have moved it closer to the goal of universal health coverage in terms of access to care (Gwatkin et al. 2003). However, financial protection appears to be quite poor. Impoverishment due to health spending continues to be a serious problem in Vietnam, more serious than in other East Asian countries (Lieberman and Wagstaff 2009; Dao et al. 2008).

The Philippines appears to have been the least successful of the four countries because insurance coverage has increased marginally and the level of financial protection may actually have declined. After decentralizing its public health system to local governments, the Philippines passed a National Health Insurance Law in 1995. The law created a new organization, PhilHealth, to provide health insurance to formal sector employees (using payroll taxes) and indigent Philippines (financed through government revenues). Health insurance coverage was about 30 percent in 1995 and data from the Demographic Health Survey indicates that insurance coverage grew to 42 percent in 2008.⁴ Access to health services has improved but inequalities remain quite large and progress has been slow.

⁴PhilHealth's official figures report coverage of 60 percent in 2008

For example, the share of children receiving treatment for diarrhea rose from about 55 percent in the late 1990s to about 62 percent in 2008.

It is not unusual that total health spending continued to rise in the Philippines—from \$47 per person in 1995 to \$74 per person in 2009—during a period when insurance coverage rose. However, it is unusual that the pooled share of total health spending declined over that same period. Government and social insurance spending on health was about 41 percent in 1995, rose to a high of almost 50 percent in 2000 and then fell to a low of 35 percent in 2009. Out-of-pocket health spending remains the largest single source of health financing in the Philippines. The result has been highly problematic: financial barriers limit access to care (Jowett et al. 2007; Herrin and Lavado 2011) and financial protection is weak (Lieberman and Wagstaff 2009).

Three of these countries—Colombia, Ghana and Vietnam—have moved forward through the health financing transition as characterized in Section 1 (See Figure 3 and Figure 5). In Colombia, the share of pooled health spending has risen as a result of increases in pooled health spending and declines in out-of-pocket health spending. In Ghana and Vietnam, health spending has risen at the same time that the share of pooled health spending has increased. In the cases of Colombia and Ghana, we have evidence of improvements in access to care and financial protection. Vietnam shows improvements in access to care but continuing difficulty in providing financial protection. By contrast, the Philippines is struggling to reach universal health coverage and its reforms until now have apparently failed to make much progress. The pooled share of health spending, in particular, has declined.

These four experiences with health insurance reforms illustrate a wide range of potential outcomes which depend on the design of reforms, how they are implemented,

and the political and economic context in which they occur. These experiences show that total health spending increases with income growth but that public policies can affect the pace of that growth and its composition. Colombia demonstrates that significant advances are possible in relatively short time frames and without large increases in spending over the medium term. Vietnam shows how implementing health insurance reforms can be accompanied by rapid expansion of private out-of-pocket expenditures, limiting the impact on access to care and financial protection and raising overall health expenditures. The Philippines may be a cautionary tale in that health spending has risen without clear evidence that it has generated significant progress. Ghana's health reform is much more recent but early evidence suggests it could be quite successful.

Almost every low- and middle-income country today is engaged in some reform to expand access to health care and improve financial protection (Lagomarsino et al. 2012). The conditions they face are quite different than those which confronted countries that achieved universal health coverage in the last century. Despite new challenges, many of these countries are learning from foreign experiences and progressing more quickly than ever before. Countries whose reforms are not progressing raise a cautionary note at the same time that they illustrate that success is not a foregone conclusion. Political action appropriate to the economic, environmental, social, and epidemiological conditions is essential to designing and implementing a successful universal health coverage strategy. The specific institutions created to pool funding and provide care will vary across countries, but success is dependent in every case on a clear commitment to extend health care access to everyone, expand the share of pooled funding, and create mechanisms to spend funds efficiently and equitably.

7. Conclusions

Human health has changed dramatically in the last few centuries with rapid growth in longevity, sharp declines in fertility, and a strong shift in the disease burden from infectious to non-infectious illnesses. Economies have also undergone dramatic change, with advances in technology, globalization of trade and production, massive restructuring of work and workplaces, and significant increases in incomes and wealth. This report has argued that the health financing transition—a shift toward higher health spending and a higher pooled share of health spending—provides a framework for analyzing key links between economics, politics, and health.

Total health spending is going to rise in most countries in response to economic growth and expanding medical technologies. The key question facing most countries is whether they will use public policies to channel those rising expenditures through pooled financing mechanisms,

which hold promise for improving the efficiency and equity of health care, or abdicate responsibility and let out-of-pocket spending dominate, which implies rising inequity and increasing limits on access to care. The specific institutional mechanisms for channeling pooled funds will vary across countries because they are contingent on political processes and historical events. Despite this variation, a long-term perspective shows that progress is likely. Many efforts by low- and middle-income countries are improving health coverage quite rapidly. Reforms which took a century or more in Europe are currently succeeding in a matter of two to three decades despite new challenges posed by greater supply and demand for services. The evidence presented here shows that health financing is about a lot more than fiscal sustainability, costs and prices. Reaching universal health coverage has real effects on access to care and population health. That is ultimately what matters.

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1100 15th Street, N.W., Suite #400
Washington, DC 20005

Tel: (202) 470.5737 | Fax: (202) 470.5712

info@resultsfordevelopment.org | resultsfordevelopment.org



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