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# REVIEW OF WORLD BANK'S EXPERIENCE WITH COUNTRY-LEVEL HEALTH SYSTEM ANALYSIS

Ricardo Bitrán, Paulina Gómez, Liliana Escobar and Peter Berman

December 2010





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**December, 2010**

## Health, Nutrition and Population (HNP) Discussion Paper

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# **Health, Nutrition and Population (HNP) Discussion Paper**

## **Review of World Bank's Experience with Country-Level Health System Analysis**

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**Abstract:** The World Bank often carries out in-depth analysis of the conditions and challenges facing different sectors in our client countries as a contribution to developing the analytical and information base for lending, policy dialogue, and more in-depth analytical work. In the health sector, we have identified a substantial body of this type of work focusing on analyzing the performance of health systems, its causes, and potential strategies for performance improvement. We call this work "health system analysis" (HSA). The Bank's 2007 HNP strategy emphasizes the importance of our work on health system strengthening. HSA is often the analytical foundation of this work in countries.

This paper reviews a sample of HSAs -- 12 major studies carried out since 2000 across all Bank regions. Using the health systems framework of the Flagship Program on Health Sector Reform and Sustainable Financing, a comparable synopsis of each study has been prepared in a simple two page chart which traces the analysis from measures of health system performance to its causes and then from policy "control knobs" to proposals for reform which are intended to improve that performance. Several key questions about the conceptual basis, content, process, and results of the Bank's work on HSA are investigated.

The review finds that most of our HSAs make use of sound analytical frameworks that link performance to a causal analysis and derive policy recommendations and reform strategies from that analysis. However, a number of different analytical frameworks are used as reference points. Some areas of analysis are much better developed than others: for example, analysis of health outcomes and health care financing are typically detailed and use standardized frameworks and measures, while analysis of service delivery or governance and institutional arrangements are less so. HSAs are major pieces of analytical work, in some cases costing as much as \$1M. More attention should be given to engaging clients in the development and use of HSAs and to documenting best practice experience. The review concludes that HSA is an important part of the Bank's (and other partners' and our clients') efforts to support health system strengthening programs and makes recommendations about how it could be further developed as a tool and product in our health systems work.

**Keywords:** Health systems analysis, health systems, health sector reform, health care reform, comparative health systems

**Disclaimer:** The findings, interpretations and conclusions expressed in the paper are entirely those of the authors, and do not represent the views of the World Bank, its Executive Directors, or the countries they represent.

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The authors are grateful to the World Bank for publishing this report as an HNP Discussion Paper.



## **EXECUTIVE SUMMARY**

### **BACKGROUND**

Over its 30-year engagement in health policy research and lending, the Bank has espoused different paradigms. From an early emphasis on family planning in the 1970s, it evolved to support the primary health care wave of the mid 1980s, then the health reform impetus of the 1980s and 1990s. For the past several years and until today, the Bank's emphasis has been on health system strengthening.

Annually, the institution produces a large volume of policy research and sector assessment reports. In the past decade a body of work has emerged which we call health system analysis (HSA) –comprehensive and critical reviews of a country's health system performance leading to policy recommendations that guide Bank operations in this area or that offer policy advice to client countries. Noteworthy recent examples of this work include *Reforming China's Rural Health System* (2009), Turkey's *Reforming the Health Sector for Improved Access and Efficiency* (2003), *Better Health Systems for India's Poor* (2002), and Mozambique's *Better Health Spending to Reach the Millennium Development Goals* (2006).

Despite the central role that these assessments play in the Bank's HNP operations, the institution does not have an explicit framework on health systems assessment nor has it carried out a review of its work in this area, to assess coherence or improve the methods of its approaches. This gap contrasts with previous analytical approaches that the Bank adopted in the social sectors, which were accompanied by explicit guidelines, such as the HNP Poverty Reduction Strategy Paper Sourcebook (2004).

This report seeks to fill a gap in knowledge at the World Bank regarding the way the institution conducts HSA. To this effect it reviews 12 regionally diverse HSA reports that the Bank has carried out since the year 2000. It is hoped that this review may reveal strengths and weaknesses in the approaches that authors have adopted, hence guiding Bank efforts to refine its methods and to provide guidance to future authors of these assessments.

The objectives of this project are as follows: (1) Review 12 HSA reports carried out by the World Bank since the year 2000; (2) Assess the conceptual basis, scope, and technical quality of these reports; (3) Provide recommendations about gaps and potential improvements in the Bank's approach; (4) Critically describe the process by which the Bank undertook its health systems analysis, disseminated its findings, and used its findings.

To respond to these objectives, the authors analyzed the conceptual framework, data, and methods used in each of the reports. Specifically, they sought the following information: (a) The criteria that report authors used to decide which aspects of the health system to include or exclude from their analysis; (b) The rationale or model underlying their analysis; (c) The kinds and quality of information they collected for their analysis, the sources of this information; (d) The analytical methods they adopted –how they defined and identified health system problems, determined their likely causes, and recommended viable and effective solutions; and (e) Other aspects of the written review.

This was a joint review by a team of three researchers, including a senior health economist and two senior MDs/public health experts. Each report was reviewed by all 3 researchers, 1 as the main reader and 2 as secondary readers. Each reading was followed by a joint review.

## FINDINGS

The Bank produces comprehensive analyses of a country's health sector, systematically assessing in detail the various parts, actors, or functions that compose it. Probably no other development agency in the world produces such complete and systematic analyses of health systems for low- and middle-income countries, and no country in that group carries out own assessments as rich as the Bank's.

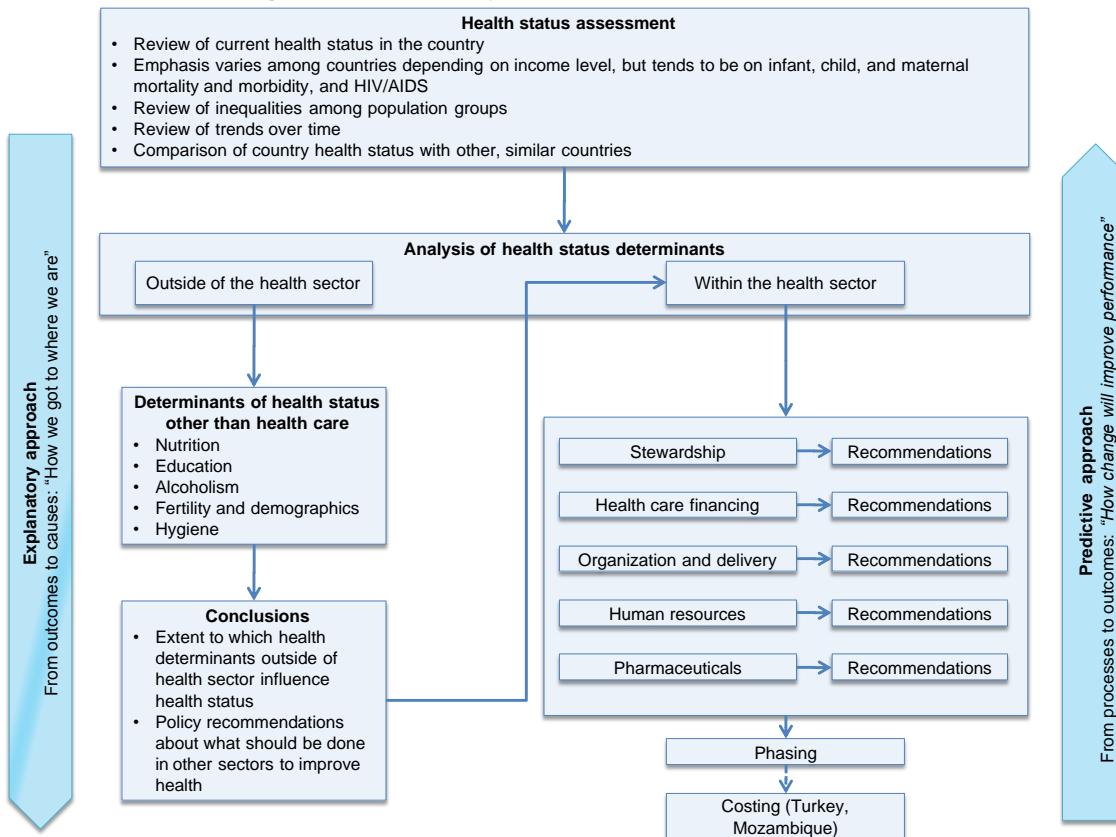
Whereas the Bank has not formalized or standardized its methods for HSA, it tends to replicate more or less the same method everywhere. Replication may occur in some informal way –for example with Bank officers asking staff and consultants to emulate some previous HSA report that they consider a model– since the Bank does not have written HSA guidelines.

The Bank's standard HSA method essentially has two chief characteristics. One is the dissection and separate analysis of a system's health parts, followed by some form of integration. The other is the logic of the analysis.

*Dissecting for separate analysis a health system's parts:* The Bank generally conducts comprehensive health system analyses by partitioning and examining in detail the system's components or functions, including (a) *financing* (revenue collection and financial protection through risk pooling and other mechanisms); (b) *payment to providers* (payment method and budget allocation criteria); (c) *organization and delivery* (functioning of health care providers, health workforce, the markets for pharmaceuticals/medical supplies/technology, the use of health-related information for decision-making); and (d) *regulation* (by government, professional groups or industries), government's *stewardship* capacity through policymaking, and government's ability to modify consumer and provider behavior through *persuasion*. To capture this approach the authors developed a so-called *HSA Chart* to summarize schematically the approach taken by the authors of each HSA report.

*The logic of the analysis:* The departure point everywhere is a review of health status for infants and children, fertile age women, adults, the elderly, those afflicted by specific conditions, or other groups (see Figure 1). This review first examines levels and trends in health status, and compares them with other countries of similar characteristics, or across the regions of the same country. Whether the health status indicators appear out of line with other countries or regions, or unlikely to improve fast enough to meet the MDGs, or are not improving as much as their presumed potential, the analysis that follows typically conforms to a similar logic. It first involves an assessment of determinants of health outside of the health sector, such as safe water sanitation, education, nutrition, housing, and lifestyles. It then continues with an assessment of health determinants within the health sector, a task that proceeds by parts, where the parts are those listed in the preceding paragraph, from (a) to (d).

**Figure 1 General analytical approach of World Bank HSA**



Source: Authors.

HSAAs then proceed to the identification of problems or opportunities for improved health system performance, and the formulation of related policy recommendations both for governments and development agencies. Generally, Bank HSA reports exhibit internal consistency in their logic. For each of the problems identified authors list possible causes, and then for each cause they propose solutions.

All HSA reports reviewed here seek to improve health status. Yet only the reports which rely heavily on the *Marginal Budgeting for Bottleneck* (MBB) methodology (two out of the 12 reviewed here) venture to predict the consequences that the recommended policy changes may have on health outcomes. All other reports fall short of linking recommendations to outcomes.

The analysis in HSAs typically identifies general major kinds of opportunities for improved performance: *effectiveness and efficiency* –the improvement in health status with existing, and with any necessary new resources; *equity* –the reallocation of existing resources or the injection of additional resources to reduce socially unacceptable inequalities in access to health services, in health status, or in the financial burden of health care to families; *quality of care* –the availability of qualified human resources, medicines, and other inputs, and the medically correct combination of these resources for the delivery of services; and *financial protection* –the existence of enough risk pooling and insurance coverage to allow individuals and households to live their lives without the fear of impoverishment or financial catastrophes from health shocks.

The production of HSAs often involves large research and consulting operations that generate primary information through surveys or that resort to secondary information to produce a rich array of datasets and reports.

It carrying out this review it was difficult to assess who were the users of these reports, beyond the Bank and the studied countries themselves, or how the reports were used. The consultants have now completed a second phase of data collection on the HSA processes which will be presented in a separate report. The Bank's HSA are financed with the Bank's own resources in the form of non-reimbursable grants as well as contributions from other development partners and governments. The consultants could not obtain much information about the cost of these reviews, but from the little information that they did get it seems that they cost from \$150,000 upwards. HSAs as complex and rich as those that involve the production of a large volume of separate consulting reports, such as the ones for India, Turkey, Azerbaijan, and Ethiopia, may cost up to \$ 1 million.

There was little evidence from this review that HSAs are repeated in a single country in ways which would allow comparisons over time. Repetition would enable the Bank, other donors, and the countries themselves to track change as well as to assess the value of previous studies.

Despite some gaps in information, the wealth of information in these HSAs constitutes a valuable public good that would not become available otherwise. The ability of others (the studied countries themselves and other development agencies) to benefit from this information, seem to justify the joint-financing of HSA of this sort by various donors or development institutions, when Bank resources alone are insufficient.

The following is a list of recommendations arising from this review:

- Given the high cost of these HSAs, the prospects for insight that they offer, and the observed variability in methods, it may be useful for the Bank to consider expanding internal efforts to strengthen technical approaches and exchange of information about HSA methods and experiences, in order to enhance its HSA capabilities.
- One approach might be to provide training to Bank staff and clients (country counterparts) to improve planning, implementation, and use of HSAs. Short courses or course modules associated with the *Flagship Course on Health Sector Reform and Sustainable Financing* could be developed to familiarize the Bank's staff and clients with HSA methods. Seminars held during the production of this consulting report, to present preliminary findings, were received with considerable interest by Bank staff. It allowed them to learn about new techniques of analysis or about similarities and differences in analytical methods and policy approaches to health system problems in different countries and regions.
- The internal effort could also include the production of technical notes, guidelines, and measurement tools to build up areas of HSAs that are less technically developed. Some areas of analysis are already well developed. For example, reports make use of relatively standardized measures of health outcomes and health status and often draw on standardized data sources such as Demographic and Health Surveys. Health financing and expenditure analysis benefits from widely used methods such as national health accounts and public

expenditure reviews. However, several other areas of work became clear in the process of writing this review where the technical bases for HSA are less developed. These include:

- More focused analysis of health system performance and strengthening issues related to health-problem-specific programs such as HIV/AIDS, Malaria, TB, Maternal and Child Health, Non-Communicable Diseases, etc. In principle, these should be embedded within larger health system analyses, but the system-wide HSAs may not provide details on these subordinate areas of system performance in ways that would allow problem-specific strategies to be developed and embedded within larger system strengthening strategies. In light of recent debates about “vertical versus horizontal approaches”, HSAs could better help address these issues.
- Analysis of the organization of health care delivery and development of reform strategies to improve its performance. HSAs often analyze elements of the service delivery area within countries, such as human resources, pharmaceuticals, and information systems (all “building blocks”), but may not go much beyond enumerating facilities at the level of service delivery providers. Better approaches are needed to understanding the determinants of service delivery performance, the role of the private sector, and alternative strategies for service delivery.
- Institutional and governance analysis in public systems and perhaps comparison with other large systems is often poorly developed in HSAs. There does not appear to be a common conceptual framework for institutional and governance analysis that is being used so that it is difficult to draw lessons from better and worse performers within and across countries.
- Systematic approaches to the planning, dissemination, and use of HSAs could potentially be enhanced with better guidance on HSA processes and how best to engage with clients and development partners in different settings.
- The linkage between health systems analysis and outcomes is often poorly articulated. Answers to questions such as “if we do this, what will happen” could be developed better in HSAs. This kind of analysis could be pursued in terms of health outcomes (perhaps also in terms of intermediate indicators like utilization, quality, and cost) as well as in terms of financial protection.
- Another area of concern is reliability of HSA recommendations. Put another way, would different teams of competent analysts, given the same information, come up with the same conclusions about system performance, its causes, and appropriate action plan? The Bank should consider whether some type of expert review could help address this concern, beyond the current mechanism of peer reviewers usually selected by the task team leader. It could be helpful to have one or two members of a common experienced review team invited to review many different HSAs in a “quality enhancement review” type process.
- The Bank would greatly benefit from the systematic tracking over time of policy and related health system events in the study countries after an HSA has been completed. This would enable it to determine which of its predictions were correct and which incorrect, which of its policy recommendations were applied and which ones were not, what were the consequence of applying some of its recommendations, what was the actual cost and timing required to implement some change, and what factors facilitated or hindered. There were almost no second or third round HSAs. Repeat HSAs not only provide an opportunity for developing

new operations and policy advice, but also for learning about the value-added of previous work.

- The Bank may want to maintain a database with standard information about its HSA reports such as data, authors, cost, background reports, and so on the allow better future tracking of this important area of work.

## INTRODUCTION

The World Bank's involvement in health, nutrition and population (HNP) programs begun in the mid 1970s, with the launch in 1974 of its successful Onchocerciasis Control Program, followed in 1975 by the publication of its first *Health Sector Policy Paper*. Starting in the 1980s the Bank became and has remained for nearly three decades the World's largest external funder for health and one of the largest supporters in the fight against HIV/AIDS (Ruger 2005).

Over its 30-year engagement in health policy research and lending, the Bank has espoused different paradigms. From an early emphasis on family planning in the 1970s, it evolved to support the primary health care wave of the mid 1980s, then the health reform impetus of the 1980s and 1990s. For the past several years and until today, the Bank's emphasis has been on health system strengthening (See the six phases of World Bank engagement in HNP in Box 1).

Bank operations in the HNP sector initially helped countries strengthen and expand the infrastructure and supplies for basic programs. Although modest success was achieved through this approach, in its 1997 HNP Sector Strategy Paper the Bank recognized that "institutional and systemic changes were often needed for a sustained impact on outcomes for the poor, improved performance of health systems, and sustainable financing" (World Bank 1997). Since then the Bank has supported health systems policy research and health system assessments, both as part of its overall strategy and in the context of its health support and lending operations.

Annually, the institution produces a large volume of policy research and sector assessment reports. Over the past decade, many of these initiatives have taken the form of health system analyses (HSA) –comprehensive and critical reviews of a country's health system performance leading to policy recommendations that guide Bank operations in this area or that offer policy advice to client countries. Noteworthy recent examples of this work include *Reforming China's Rural Health System* (2009), Turkey's *Reforming the Health Sector for Improved Access and Efficiency* (2003), *Better Health Systems for India's Poor* (2002), and Mozambique's *Better Health Spending to Reach the Millennium Development Goals* (2006).

Despite the central role that these assessments play in the Bank's HNP operations, the institution does not have an explicit framework on health systems assessment nor has it carried out a review of its work in this area, to assess coherence or improve the methods of its approaches. This gap contrasts with previous analytical approaches that the Bank adopted in the social sectors, which were accompanied by explicit guidelines, such as the HNP Poverty Reduction Strategy Paper Sourcebook (2004).

A background paper for a recent conference on health systems held at the World Bank states the following:

*In order to enhance collective action at country level for strengthening health systems, better common understanding is needed on analytical approaches to health systems, along with some consensus on concepts, terms, and categories for health systems strengthening.<sup>1</sup>*

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<sup>1</sup> Shakerishvili, G. with contributions from Atun, R., P. Berman, W. Hsiao, B. Siadat, and C. Burgess (2009) *Building on Health Systems Frameworks for Developing a Common Approach to Health Systems Strengthening*. World Bank.

This report seeks to fill a gap in knowledge at the World Bank regarding the way the institution conducts HSA. To this effect it reviews 12 regionally diverse HSA reports that the Bank has carried out since the year 2000. It is hoped that this review may reveal strengths and weaknesses in the approaches that authors have adopted, hence guiding Bank efforts to refine its methods and to provide guidance to future authors of these assessments.

The report is organized as follows: Section 2 presents review objectives and research questions. Section 3 presents review methods. Section 4 describes selected analytical frameworks available in the literature that HSA report authors drew on, explicitly or implicitly. Section 5 presents general findings arising from a review of all 12 reports. Section 6 contains a description and analysis of each of the 12 reports. Section 7 offers a brief discussion about the report production process and the consequences of the reports. Finally, Section 8 offers conclusions.

#### **Box 1. Six Phases of World Bank Engagement in HNP**

##### **Population lending, 1970–79**

The Bank focused on improving access to family planning services because of concern about the adverse effects of rapid population growth on economic growth and poverty reduction. A handful of nutrition projects was also approved following a 1973 nutrition policy paper, and throughout the decade health components were included in agriculture, population, and education projects as important links between health, poverty, and economic progress were established.

##### **Primary health care, 1980–86**

The 1980 *Health Sector Policy Paper* (World Bank 1980a) formally committed the Bank to direct lending in the health sector with the objective of improving the health of the poor by improving access to low-cost primary health care. The rationale for this policy change was contained in the *World Development Report 1980: Poverty and Human Development* (World Bank 1980b), which emphasized that investment in human development complements other poverty reduction programs and is economically justifiable. However, over this period systemic constraints were encountered in providing access to efficient and equitable health services.

##### **Health reform, 1987–96**

Following the release of *Financing Health Services in Developing Countries: An Agenda for Reform* in 1987 (Akin, Birdsall, and De Ferranti 1987), the Bank addressed two new objectives: to make health finance more equitable and efficient and to reform health systems to overcome systemic constraints. The message was further refined by the *World Development Report 1993: Investing in Health* (World Bank 1993c), which highlighted the importance of household decisions in improving health, advocated directing government health spending to a cost-effective package of preventive and basic curative services, and encouraged greater diversity in health finance and service delivery.

##### **Health outcomes and health systems, 1997–2000**

The 1997 *Health, Nutrition, and Population Sector Strategy Paper* (World Bank 1997b) focused on health outcomes of the poor and on protecting people from the impoverishing effects of illness, malnutrition, and high fertility. However, it continued to emphasize support for improved health system performance (in terms of equity, affordability, efficiency, quality, and responsiveness to clients) and securing sustainable health financing.

##### **Global targets and partnerships, 2001–06**

The Bank's objectives, rationale, and strategy remained unchanged, but major external events, the surging AIDS epidemic, and the Bank's commitments to specific targets and to working in partnerships led to an increase in finance for single-disease or single-intervention programs, often within weak health systems.

##### **System strengthening for results, 2007–present**

In the context of changes in the global health architecture, *Healthy Development: The World Bank Strategy for Health, Nutrition, and Population Results* (World Bank 2007a) emphasizes the need for the Bank to reposition itself, with a greater focus on its comparative advantages, to more effectively support countries to improve health outcomes. It adheres closely to the 1997 strategy's objectives and means for achieving them, with increased emphasis on governance and demonstrating results.

*Source: Fair (2008).*

## **REVIEW OBJECTIVES**

The objectives of this project are as follows: (1) Review 12 health systems analysis (HSA) reports carried out by the World Bank since the year 2000; (2) Assess the conceptual basis, scope, and technical quality of these reports; (3) Provide recommendations about gaps and potential improvements in the Bank's approach; (4) Critically describe the process by which the Bank undertook its health systems analysis, disseminated its findings, and used its findings.

To respond to these objectives, the authors analyzed the conceptual framework, data, and methods used in each of the reports. Specifically, they sought the following information: (a) The criteria that report authors used to decide which aspects of the health system to include or exclude from their analysis; (b) The rationale or model underlying their analysis; (c) The kinds and quality of information they collected for their analysis, the sources of this information; (d) The analytical methods they adopted –how they defined and identified health system problems, determined their likely causes, and recommended viable and effective solutions; and (e) Other aspects of the written review.

To respond to the above objectives, the authors sought, through their review, answers to the following list of research questions:

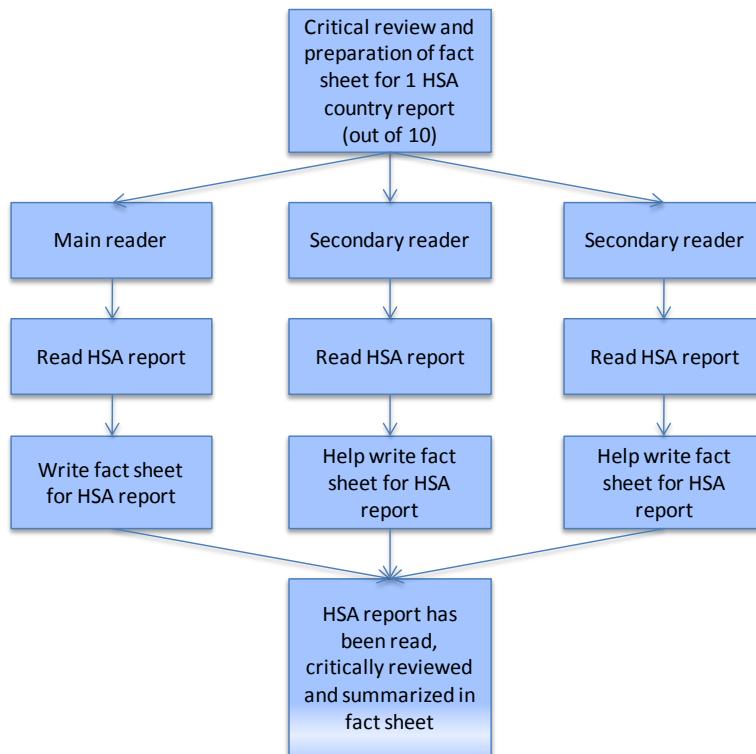
- What motivated each study/report?
- How well was the problem established?
- What methods did the authors to identify causes and were they sound?
- Specifically, what conceptual framework did they adopt in their study?
- What recommendations did they make and were they consistent with the analysis?
- Did recommendations seem feasible given constraints, as described in report?
- What recommend can be made from the above review to strengthen the Bank's way of carrying out HSA?

## **METHODS**

### **REVIEW TEAM**

This was a joint review by a team of three researchers, including a health economist and two MDs/public health experts. Each report was reviewed by all 3 researchers, 1 as the main reader and 2 as secondary readers. Each reading was followed by a joint review. Figure 2 depicts the report review process.

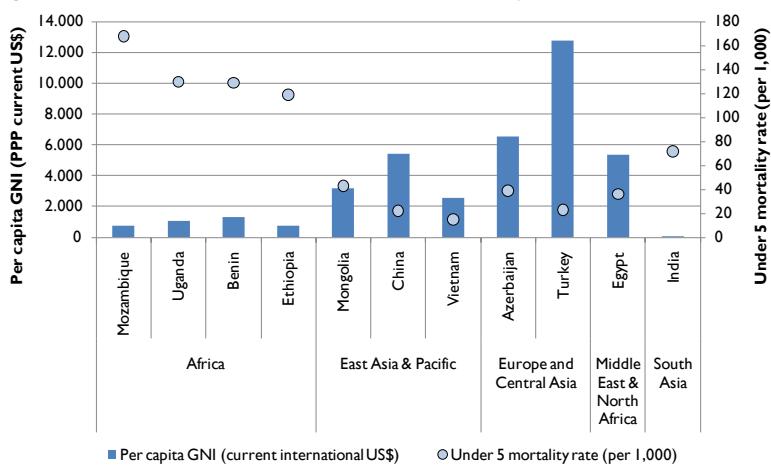
**Figure 2 Joint review process**



## COUNTRY SAMPLE AND SELECTION CRITERIA

All reports included in the review were selected by the World Bank through a two-stage process. First, they collected all health sector reports that the Bank produced since the year 2000. Second, they drew 12 country reports for 11 countries (there were 2 reports on China) with the aim of achieving geographic representation and population significance. Table 1 below, lists the 11 countries selected. To characterize the sample, the table shows their per capita income, under 5 mortality rate, and total population. There were no reports available from the Latin-American and Caribbean (LAC) region. The following table lists each of the 12 reports in the sample, with their title, authors, reviewers, and number of documents. Figure 3 illustrates the sharp differences in sample country characteristics in terms of child mortality rates and per capita income. Findings from this review will preserve the order of countries shown in the figure, from left to right.

**Figure 3 Countries in sample: Under 5 mortality and per capita income**



Source: World Bank, World Development Indicators, Quick Query, <http://ddp-ext.worldbank.org/ext/DDPQQ/memberdo?method=getMembers>.

**Table 1 Reports reviewed**

Country	Year	Report title	Authorship and reviewers	Documents
<b>Africa</b>				
Mozambique	2006	Better Health Spending to Reach the Millennium Development Goals	Authors: Not Listed Peer reviewers: Not listed	One volume, 77 pages
Uganda	2005	Improving Health Outcomes for the Poor in Uganda: Current Status and Implications for Health Sector Development	Authors: S. Chao, S.N. Nguyen, S. Chakraboty, K. Tulenko, P. Owkero, M. Lauglo, M. Rani, S. Bonu, W. Ainashe Peer reviewers: A. Preker, R. Reinikka, A. Soucat, K. Odera Rogo	One volume, 170 pages <i>Working Paper Series</i>
Benin	2009	Santé, Nutrition et Population: Rapport Analytique Santé Pauvreté	Authors: A. Akpamoli (MOH), V. Goyito (MOH), and C. Lemiere (World Bank)	One volume, 236 pages
Ethiopia	2005	A Country Status Report on Health and Poverty, Vols. I and II	Authors: Multiple, no names listed Coordinators: C. Pena, A. Soucat Peer reviewers: H. Alderman, M. Chawla, M. Lioy	Two volumes Volume I: Not available Volume II: Main report, 230 pages
<b>East Asia &amp; Pacific</b>				
Mongolia	2007	The Mongolian Health System at a Crossroads: An Incomplete Transition to a Post-Semashko Model	Authors: M. Borowitz, B. Else, H. Fuenzalida, Y. Samushkin, J. Both, N. Ohno Main peer reviewers: J. Hammer, P. Gottret, C. Walker Other reviewers: V. songwe, J. Langenbrunner, J. Buitman, R. Rannan-Eliya	<i>Working Paper Series</i> Paper No. 2007-1
China	2009	Reforming China's Rural Health System	Team leaders: L. Meyers and J. Langenbrunner Authors: A. Wagstaff, M. Lindelow General supervision: D. Dollar, E. Jimenez, T. Manuelyean, F. Saadah, B. Hofman	One volume, 180 pages Several background papers not reviewed and not explicitly listed
China	2004	The Health Sector in China: Policy and Institutional Review	Authors: X. Liu and Y. Yi	One volume, 99 pages
Vietnam	2009	Health Financing and Delivery in Vietnam: Looking Forward (HNP Series)	Authors: S. Lieberman and A. Wagstaff Peer reviewers: J. Langenbrunner, P. Panopoulou, P. Schneider	One volume, 171 pages
<b>Europe &amp; Central Asia</b>				
Azerbaijan	2005	Health Sector Review Note	Team leader: E. Baris Authors: P. Panopoulou (health financing), A. Lim (pharmaceuticals), M. Gracheva (health determinants), L. Kossarova (demand and utilization) Peer reviewers: M. Chawla, M. Borowitz, J. Kutzin	Two volumes Volume I: Main report, 73 pages Volume II: Background papers, 185 pages Health status and determinants Demand and utilization Health system stewardship Health care financing Human resources for health Organization and delivery Access to pharmaceuticals
Turkey	2003	Reforming the Health Sector for Improved Access and Efficiency	Team leader and principal author: Mukesh Chawla. Contributors to specific chapters: N. Jaganjac, DS. Miller, HDNHE (Ch. 1), W.M. Tracy, M. Huppi, I. Akcayoglu, S. Kavuncubasi, A. Kisa, B. Hanan, MJ. Rivers, A. Konukman, V. Verbeek-Demiraydin, E. Lule, and N. Ooman.	Two volumes plus OECD review Volume I: Main report, 83 pages Volume II: Background papers, 199 pages OECD Review of Health Systems: Turkey, 119 pages
<b>Middle East &amp; North Africa and South Asia</b>				
Egypt	2004	Egypt's Health Sector Reform and Financing Review	Authors: S. El-Saharty, J. Antos, N. Hafez Afifi Oversight: G. Schieber Peer reviewers: J. Bultman, P. Gottret	One volume, 37 pages Annexes, 33 pages
India	2002	Better Health Systems for India's Poor	Authors: D. Peters, A. Yazbeck, R. Sharma, G.N.V. Ramana, L. Pritchett, A. Wagstaff Advisors: A. Prekar, A. Harding, P. Musgrove, D. Gwatkin, R. Fryatt Peer reviewers: R. Radhakrishna, K. Narayana, P.S. Vanishtha, R. Bhatt, C.A.K. Yesudian, P. Srinivasan Quality enhancement reviewers: a. Colliou, S. Stout, S. Devarajan, M. Lewis	One volume, 347 pages Human Development Network Health, Nutrition, and Population Series Several background papers

## HEALTH SYSTEM FRAMEWORKS

This section briefly describes different conceptual frameworks available in the literature regarding health systems, the definition of their performance, and the assessment of performance.

### HEALTH SYSTEM

According to Murray and Evans (2003), a health system can be defined differently at different levels. The narrowest definition considers a health system as those activities directly under the control of the Ministry of Health, sometimes restricted to personal (individual) curative health services. This system is represented by the smallest circle in Figure 1 and excludes activities such as public information campaigns about healthy habits or efforts to reduce the consumption of alcohol or tobacco products.

The second, broader definition corresponds to the next largest circle in Figure 4. It includes personal and collective medical services, but excludes intersectoral actions, such as water and sanitation programs, designed specifically to improve the health status of the population. Under this definition, health system administrators have no incentive to lobby for anti-tobacco legislation or the provision of sewer systems since they are responsible only for this narrow set of health actions.

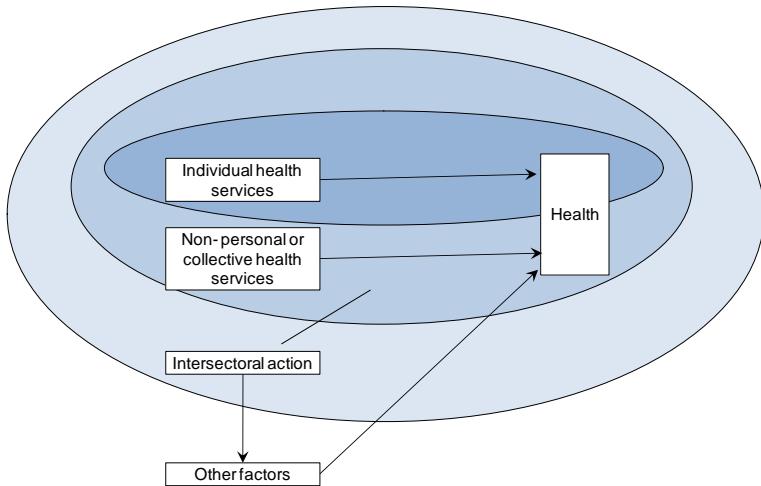
The third definition states that:

Health systems include all the actors, institutions and resources who undertake actions with a main objective to improve health status. This definition goes beyond personal and collective medical services, incorporating those intersectoral services in which health system decision makers may or may not be involved, which contribute to improved health status of the population through activities outside of their direct area. An example of this is the adoption of legislation to reduce traffic accidents.

WHO's proposed definition is the third option. Its use would encourage governments, as stewards of the health system, to focus on a definable set of actions whose primary intent is to improve health. Ministries of Health would take responsibility for personal and non-personal interventions, but also for encouraging a limited set of intersectoral actions designed specifically to improve health.

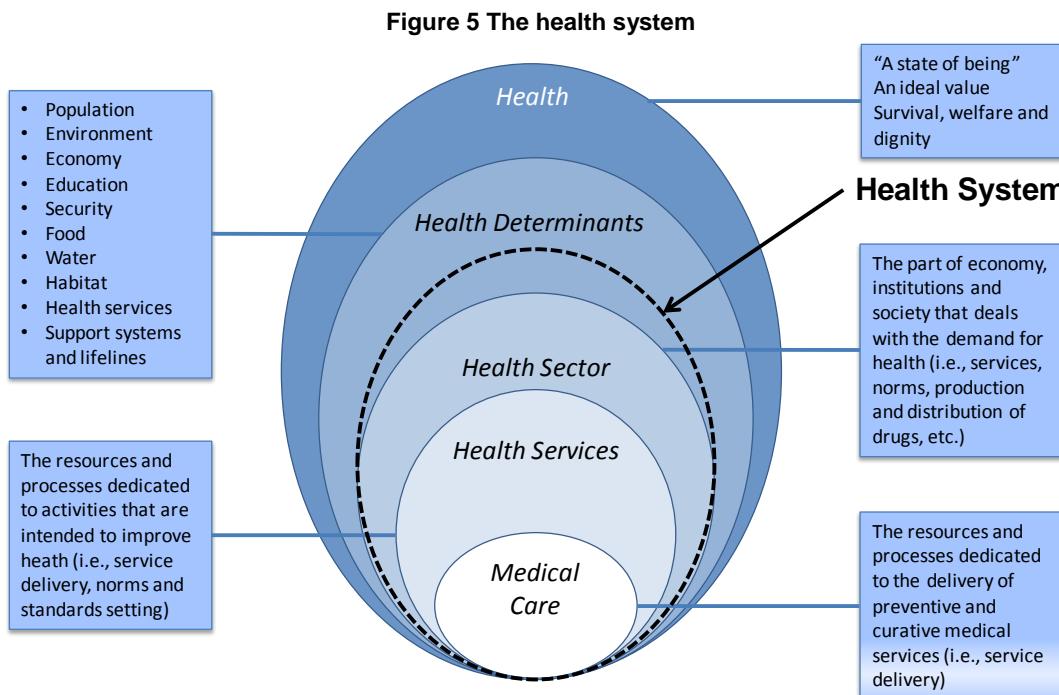
According to WHO's definition, a health system could be represented by the dotted line in Figure 5. It would contain the so-called health sector, including all Ministry of Health and social security health institutions and individuals, private for profit and non-profit health care providers and

**Figure 4 Boundaries of a health system**



Source: Murray and Evans (2003).

other organizations, the pharmaceutical industry, the health infrastructure and equipment industries, physical and mental rehabilitation services, and private health insurers. It would also contain other institutions and activities outside of the health sector whose primary purposes is to improve health status. It would contain parts of the food industry, parts of the water and sanitation services, and parts of other sectors of the economy and society whose main purpose is to improve health status.



Source: Modified from WHO (1999).

## HEALTH SYSTEM FUNCTIONS

There are as many definitions of health system functions as there are authors. For example, Murray and Evans (2003) identify the following four basic functions: *financing* (the process by which revenues are collected, accumulated in fund pools, and allocated to specific health actions); *service provision* (the way inputs are combined to allow the delivery of a series of interventions or health actions); *resource generation* (the actions of institutions that produce inputs, particularly human resources, physical resources such as facilities and equipment, and knowledge); and *stewardship* (setting, implementing and monitoring the rules of the game for the health system; assuring a level playing field among all actors in the system (particularly purchasers, providers and patients). Frenk and Londoño (1997) also identify four functions, but different ones. They are *financing*, *delivery*, *modulation* (a broader concept than regulation, which involves setting transparent and fair rules of the game) and *articulation* (which makes it possible to organize and manage a series of transactions among members of the population, financing agencies, and providers so that resources can flow into the production and consumption of services). Mills, Rasheed, and Tollman (2006) focus on the functions of *stewardship and regulation*, *organizational structures*, *financing of organizations*, and *general management* (human resources and quality assurance), although they mention the existence of several other health system functions.

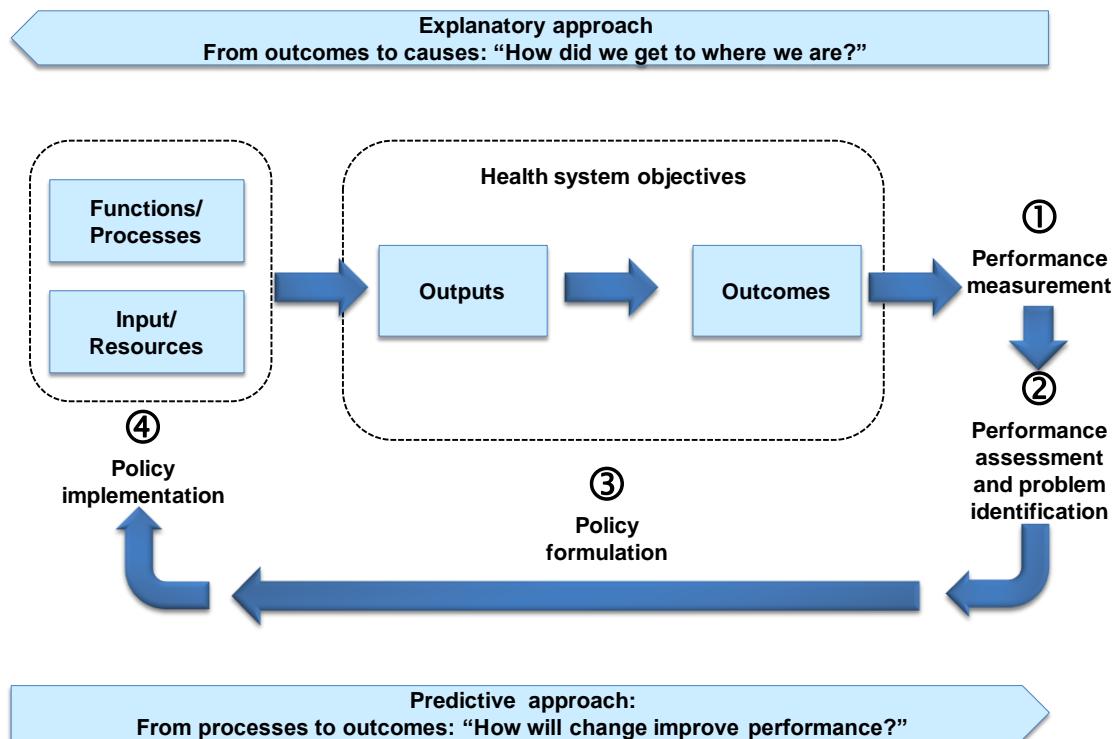
## HEALTH SYSTEM PERFORMANCE ASSESSMENT AND THE POLICY CYCLE

There is a vast and growing literature on the subject of health system performance and its assessment. A recent paper by Hsiao and Siadat (2009, unpublished) reviews alternative approaches to performance measurement, from models that describe health systems to ones that attempt to predict the consequences of policy on health system performance.

The literature offers varying views on what constitutes performance and how to assess it. Generally, however, the differences are sometimes superficial or are a reflection of differences in emphasis. Typically, authors consider the existence of a health system composed of resources (medical infrastructure, health personnel, pharmaceutical products, supplies) and actors (individuals, institutions) which carry out a diverse set of functions (policy making, provision of services, financing, risk pooling, management, and so on) to achieve desired results, or health system objectives. These can be measured either as output (production of health services), outcomes (impact of health services on health status), or both. Performance measurement consists of an evaluation of results, given available resources, expectations, and a framework to judge results.

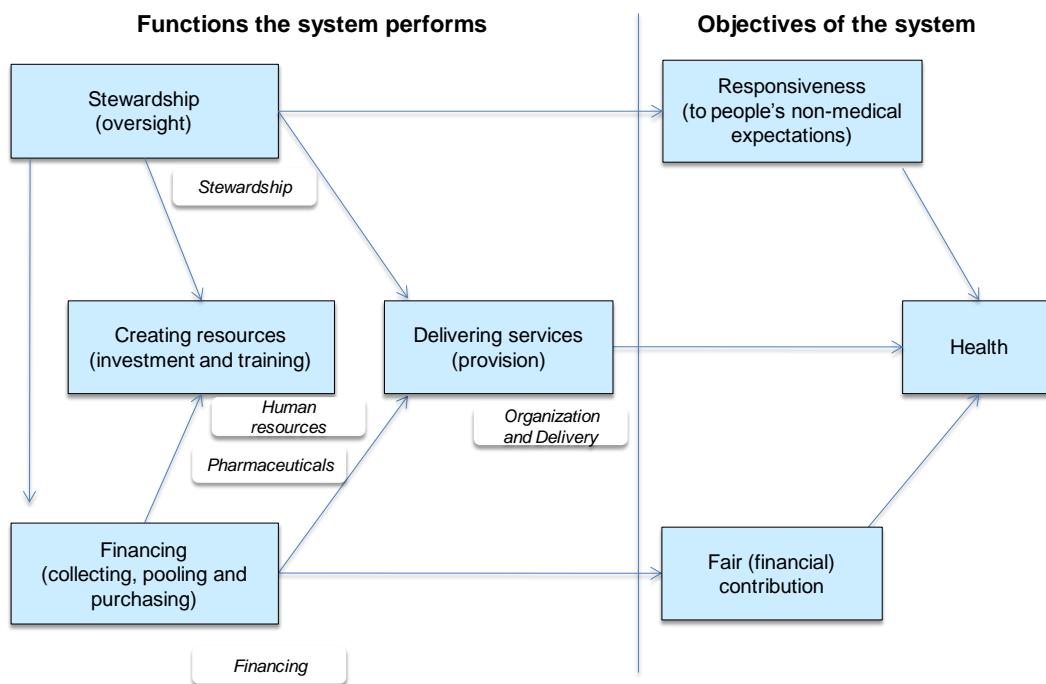
But performance assessment has limited value in itself unless it can inform policymaking. Hence the conceptual performance assessment literature generally links methods for performance measurement with a framework that enables policymakers to connect policy action with performance through a relationship of causality. Figure 6 depicts this general approach. What follows is a brief review of selected specific approaches available in the literature.

**Figure 6 Health system performance assessment: from problems to causes to solutions**



**WHO's World Health Report (2000).** In this report WHO proposed a conceptual framework to evaluate health system performance. It considered the four functions mentioned above and shown in Figure 6, and three health system objectives: *health status*, *responsiveness* (to people's non-medical expectations), and *fair financial contribution*. WHO proposed specific metrics for the system's objectives. For health status, it used Disability Adjusted Life Expectancy (DALE). For responsiveness it considered two dimensions, respect for persons (respect for the patient's dignity, confidentiality, and ability to make decisions about one's own health) and client orientation (prompt attention, amenities, freedom to choose provider, access to support social networks). For a fair financial contribution it proposed that a system is perfectly fair if the ratio of total health contribution to total non-food spending is identical for all households, independently of their income, health status or their use of the health system. WHO recognized a general lack of knowledge about the determinants of health system performance and, therefore, the limited understanding available about health policy and its consequences. Still, it classified policy action into the four broad areas of stewardship, resource creation, service delivery, and financing. It then critically reviewed available evidence regarding policy action in these areas and its implications for health system performance.

**Figure 7 Evaluation of the performance of a health system according to WHO (2000)**

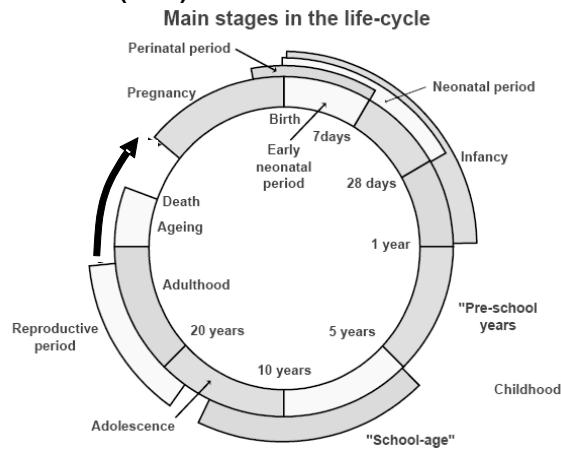


Source: WHO (2000).

### World Bank's Poverty Reduction Strategy Paper Sourcebook (2002)

This publication presented the Bank's framework for the development of a poverty-focused health policy approach. The framework comprised three steps: (1) assessing health outcomes amongst the poor; (2) understanding the causes of these outcomes; and (3) designing policies to improve health outcomes of the poor. The PRSP framework was deductive. Its point of departure was the set of observed health outcomes of the poor, which the framework sought to measure with various tools. It considered that health risks vary at different stages of the life cycle and that each risk has a corresponding indicator. It then presented known evidence about availability, costs and effectiveness of health interventions to deal with key risks. Figure 9 presents the PRSP model of determinants of health sector outcomes.

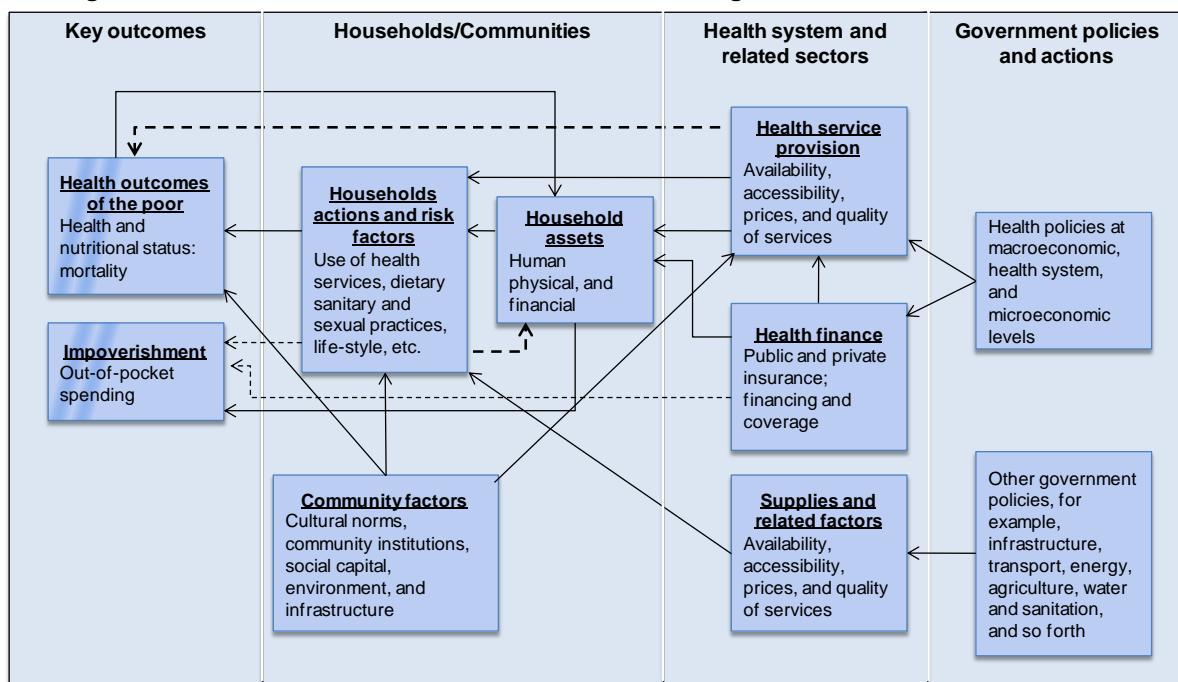
**Figure 8 Main stages in the life cycle according to World Bank PRSP (2002)**



Source: World Bank PRSP Sourcebook (2002).

Finally, the Bank's PRSP framework linked policy action in the area of HNP and the determinants of HNP outcomes, as shown in Table 2.

**Figure 9 Determinants of health sector outcomes according to World Bank's PRSP framework**



Source: Claesson, Griffin, Johnston, McLachlan, Soucat, Wagstaff, Yazbek (2002), PRSP Sourcebook, Ch. 18.

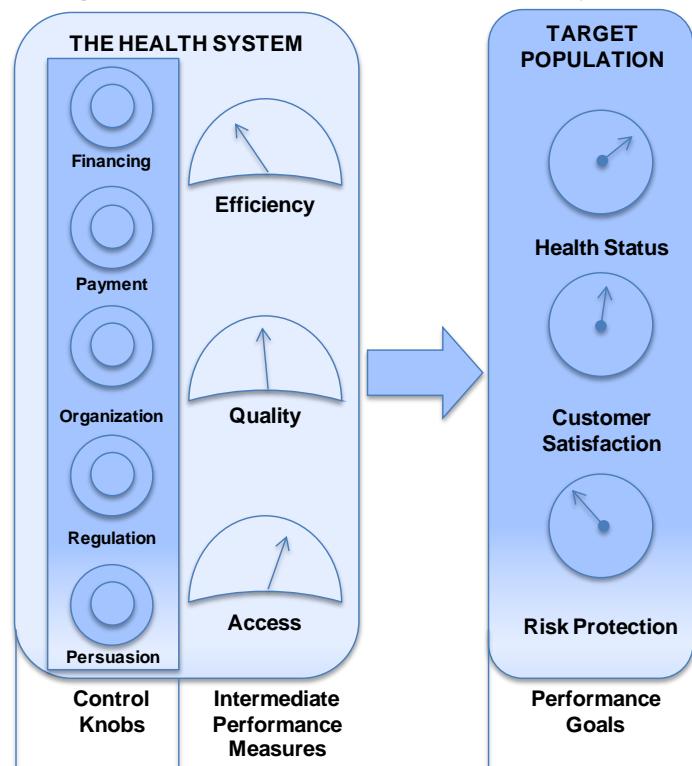
Finally, the Bank's PRSP framework linked policy action in the area of HNP and the determinants of HNP outcomes, as shown in Table 2.

**Table 2 World Bank's PRSP framework: Government policy and determinants of HNP outcomes**

Determinants of HNP outcomes	Policy interventions					
	HNP expenditure allocations	Financing and revenue	Provision and service delivery	Stewardship	Monitoring & evaluation	Policies outside the Ministry of Health
Availability & accessibility of HNP services						
Quality of HNP services						
Price of HNP services						
Household income						
General education						
Health-specific knowledge						
Gender inequality						
Price, availability, accessibility & quality of food						
Price, availability, accessibility & quality of water & sanitation						
Community & social capital						

**Getting Health Reform Right (2004).** In this book Roberts, Hsiao, Berman, and Reich defined health system performance and offered a systematic approach to performance improvement through their so called policy *control knobs*. This methodology is also known as the Flagship Program approach, jointly developed by the World Bank Institute (WBI) and faculty from the Harvard University School of Public Health. WBI has adopted it as its core training methodology for over 10 years in its training program known as the *Flagship Program on Health Sector Reform and Sustainable Financing*. The approach focused on policy action, identifying 5 key control knobs that policymakers could modify, alone or in combination, to achieve a desired performance (see Figure 10). The control knobs are *financing*, *payment*, *organization*, *regulation*, and *persuasion*. These authors also formulated both *intermediate performance measures* and longer-term performance measures, referred to as *performance goals*, which include *health status*, *customer satisfaction*, and *risk protection*. The noteworthy features of this work were (1) the emphasis on health policy and its consequences on health system performance, (2) the use of ethical theory to judge health sector performance, (3) the use of political economy theory to help formulate politically feasible policy changes, and (4) the use of a systematic assessment for diagnosing problems in performance.

**Figure 10 The five control knobs of a health system**



Source: Roberts, Hsiao, Berman, Reich (2004). Getting Health Reform Right. Oxford.

**WHO's Building Blocks (2006).** This conceptual framework, like the control knobs approach by Roberts *et al.* (2003), defines both long-term health system goals and intermediate goals. The final goals are *health*, *equity*, *responsiveness*, *financial fairness*, and *efficiency*; the intermediate goals are: *access*, *coverage*, *quality*, and *safety*. To achieve long and intermediate goals, health systems must comprise 6 core, well-functioning components, which WHO refers to as the *6 building blocks* (see their definition in Box 2 and a graphical depiction of the approach in Figure 11). Unlike the control knob approach, however, the building blocks method does not appear to be a dynamic, analytical set of principles and instruments that health policy makers can apply in different circumstances. Rather, the building blocks are a set of programmatic categories which are aligned with agency's work programs. Also, there is an emphasis on the provision of inputs and less attention to process changes that may be needed to make inputs more effective. Accordingly, the approach is not a conceptual framework

for policymaking in health but instead as a prescription, resulting from a previous diagnosis, about all the priority actions that WHO, other international health development agencies, and member countries should do to strengthen their health systems (see list of priority actions, by building block, in Table 3. The building block approach therefore does not lend itself to health system analysis but provides guidance, in the form of a check list, about what countries should have to ensure that they can achieve the above listed long-term and intermediate goals.

**USAID's Health System Assessment Approach (2007).** USAID published its so-called "How-to" manual for HSA in 2007 and pilot tested it in two African countries. It adopted the WHO (2000) conceptual framework to HSA. It is based on 6 modules, one for each sub-component of the health system. All or a subset of these modules can be applied to assess a country's health system performance. Each module comprises indicators that can be constructed using secondary data and other information that can be obtained through structured interviews of key stakeholders (for more detail, see Box 3).

#### **Box 2 WHO's six building blocks of a health system**

Good health services are those which deliver effective, safe, quality personal and non-personal health interventions to those that need them, when and where needed, with minimum waste of resources.

A well-performing **health workforce** is one that works in ways that are responsive, fair and efficient to achieve the best health outcomes possible, given available resources and circumstances (i.e. there are sufficient staff, fairly distributed; they are competent, responsive and productive).

A well-functioning **health information** system is one that ensures the production, analysis, dissemination and use of reliable and timely information on health determinants, health system performance and health status.

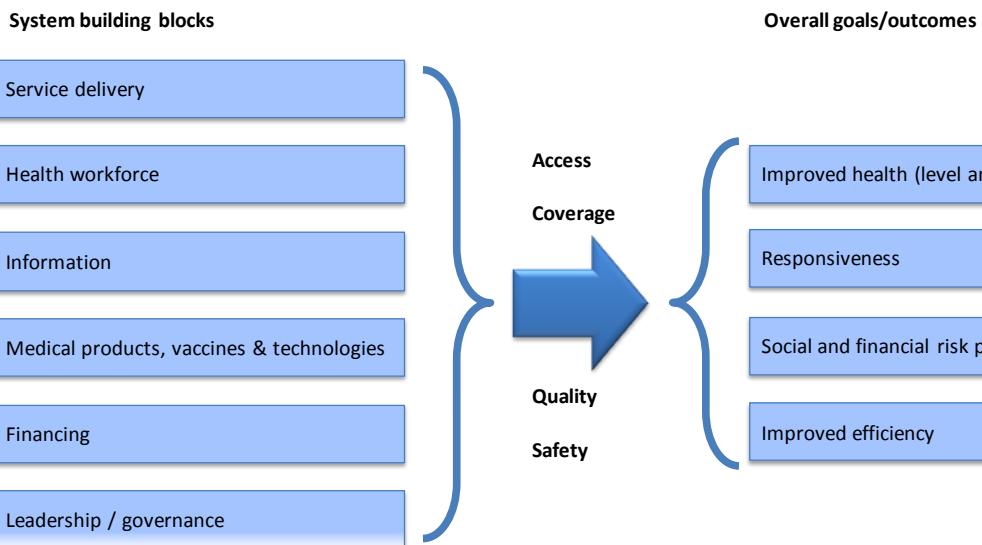
A well-functioning health system ensures equitable access to essential **medical products, vaccines and technologies** of assured quality, safety, efficacy and cost-effectiveness, and their scientifically sound and cost-effective use.

A good **health financing** system raises adequate funds for health, in ways that ensure people can use needed services, and are protected from financial catastrophe or impoverishment associated with having to pay for them. It provides incentives for providers and users to be efficient.

**Leadership and governance** involves ensuring strategic policy frameworks exist and are combined with effective oversight, coalition building, regulation, attention to system-design and accountability.

Source: WHO (2007).

**Figure 11 WHO's health system or “building blocks” framework (2007)**



Source: WHO (2007), Strengthening health systems to improve health outcomes. WHO's framework for action.

**Table 3 WHO priority actions under each of its 6 building blocks**

(1) Service delivery	(2) Health Workforce	(3) Information	(4) Medical products, vaccines and technologies	(5) Sustainable financing and social protection	(6) Leadership and governance
<ul style="list-style-type: none"> <li>• Integrated service delivery packages</li> <li>• Service delivery models</li> <li>• Leadership and management</li> <li>• Patient safety and quality of care</li> <li>• Infrastructure and logistics</li> <li>• Influencing demand for care</li> </ul>	<ul style="list-style-type: none"> <li>• International norms, standards and databases</li> <li>• Realistic strategies</li> <li>• Crisis countries</li> <li>• Costing</li> <li>• Training</li> <li>• Evidence</li> <li>• Working with international health professional groups</li> </ul>	<ul style="list-style-type: none"> <li>• National information systems</li> <li>• Reporting</li> <li>• Stronger national surveillance and response capacity</li> <li>• Tracking performance</li> <li>• Standards, methods and tools</li> <li>• Synthesis and analysis of country, regional and global data</li> </ul>	<ul style="list-style-type: none"> <li>• Establish norms, standards and policy options</li> <li>• Procurement</li> <li>• Access and use</li> <li>• Quality and safety</li> <li>• New products</li> </ul>	<ul style="list-style-type: none"> <li>• Health financing policy option</li> <li>• Improve or develop pre-payment, risk pooling</li> <li>• Ensure adequate funding from domestic sources</li> <li>• Used funds</li> <li>• Promote international dialogue</li> <li>• Increase availability of key information</li> </ul>	<ul style="list-style-type: none"> <li>• Develop health sector policies and frameworks</li> <li>• Regulatory framework</li> <li>• Accountability</li> <li>• Generate and interpret intelligence</li> <li>• Build coalitions</li> <li>• Work with external partners</li> </ul>

Source: WHO (2007).

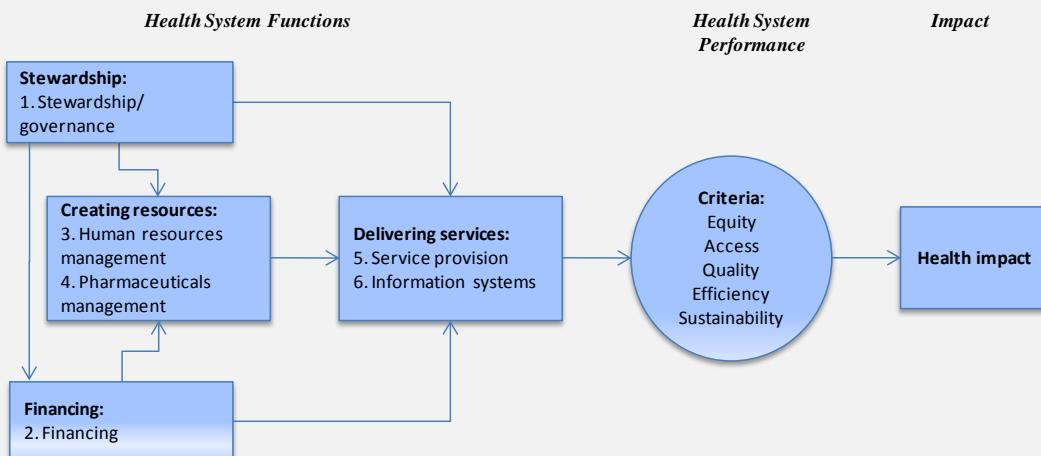
**A comparison of frameworks.** Superficially the frameworks just reviewed seem similar, as the information shown in Table 4 would suggest (USAID’s approach is not included in the table because of its conceptual similarity with WHO’s approach). In practice, however, there are important differences between them, either in their logic or in their intended use. WHO’s framework presented in its World Health Report 2000 and the Roberts *et al.* (2004) control knob approaches are the most similar both in their conception and their applicability. But they exhibit important differences as well. The control knob approach contains guidance about diagnosing health system performance problems, presents a more general way of thinking about health policy change, and pays considerable attention to ethical and political issues, features lacking or addressed only tangentially in the World Health Report 2000. In contrast, the WHO 2000 approach stands out for its simplicity. As is shown below in this report, simplicity seems to have been an appealing feature for the authors of several of the World Bank HSA reports reviewed here, who have espoused that approach. But aside from its simple presentation, the WHO building blocks book is also a formulation of WHO’s agenda in health systems strengthening and a general checklist for countries wishing to review the status of the components of their health

systems. It does not appear to be a general way of thinking about health system strengthening in part because it does not present a theory or a model of causality to assess health system performance. The World Bank's PRSP Pathways (2003) approach appears complex in its web of causal relationships. Like the control knob approach, it can be used to diagnose the problems of a health system particularly from the perspective of health outcomes of the poor. By revealing the causes of poor health status among low-income populations, this approach also informs policy action. PRSPs have been systematically developed and implemented in low-income World Bank member countries beginning in 1999. Their formulation was participatory at country level. PRSPs should help generate considerable empirical knowledge about the determinants of health status and about other HNP outcomes among the poor and the effectiveness of health policies in developing countries.

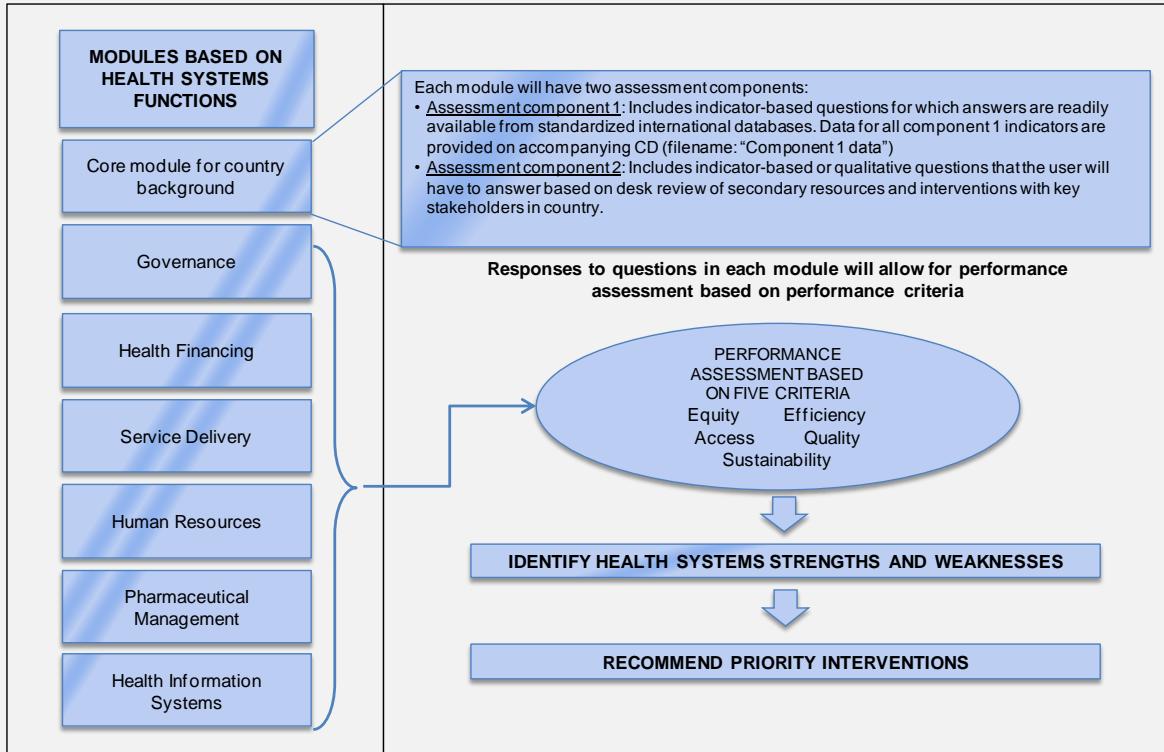
### Box 3. USAID's Health Systems Assessment Approach: A How-To Manual

In 2007 The U.S. Agency for International Development (USAID) published its Health Systems Assessment Approach: A How-to Manual. It adopted the conceptual framework on health system analysis and performance offered by WHO in its World Health Report 2000. Accordingly, USAID's framework is based on a model of health system performance that consists of 4 key functions (*stewardship, financing, creating resources, and delivering services*), and 6 sub-functions, from stewardship to information systems –see Figure 12). It also applied the standard 5 performance criteria shown in the figure to assess health system impact. This HSA tool contains 6 modules (Figure 13), one for each of the 6 sub-functions just mentioned. Depending on the user's needs it can be applied in full, with its 6 modules, or partially, using only a subset of the modules. USAID pilot tested its approach in Benin and Angola.

**Figure 12 USAID's Conceptual Framework for Health Systems Performance**



**Figure 13 Schematic Presentation of the USAID HSA Approach**



Source: Islam, M., ed. 2007. *Health Systems Assessment Approach: A How-To Manual*. Submitted to the U.S. Agency for International Development in collaboration with Health Systems 20/20, Partners for Health Reformplus, Quality Assurance Project, and Rational Pharmaceutical Management Plus. Arlington, VA: Management Sciences for Health.

**Table 4 Conceptual Frameworks - A comparison**

Elements of the framework	WHO (2000)	World Bank PRSP Pathways(2002)	Control Knobs (2004)	WHO's 6 Building Blocks (2007)
Boundaries of a health system	All those activities and resources whose main objective is to improve health status	<ul style="list-style-type: none"> <li>The array of institutions and services whose primary purpose is to protect and improve health.</li> <li>Other factors that influence health status but which do not have health status improvement as their main objective are considered outside of the boundaries of the health system.</li> </ul>	<ul style="list-style-type: none"> <li>Health sector or health care system</li> <li>All those who deliver health care, public or private, modern or traditional, all levels</li> <li>The flows of money that finance Health care</li> <li>The activities of those who provide inputs into the health care process</li> <li>The financial intermediaries</li> <li>The activities of organizations that deliver preventive care</li> </ul>	All those activities and resources whose main objective is to improve health status
Performance measures	<p>Performance goals:</p> <ul style="list-style-type: none"> <li>Health status</li> <li>Responsiveness</li> <li>Fair financing</li> </ul> <p>Distributional dimension of performance matters for:</p> <ul style="list-style-type: none"> <li>Health status</li> <li>Responsiveness</li> </ul>	<p>Performance goals</p> <ul style="list-style-type: none"> <li>Health status</li> <li>Responsiveness to public</li> <li>Financial status</li> </ul> <p>Intermediate objectives</p> <ul style="list-style-type: none"> <li>Equity</li> <li>Efficiency</li> <li>Quality</li> <li>Macroeconomic efficiency</li> <li>Consumer choice</li> <li>Provider autonomy</li> </ul>	<p>Performance goals</p> <ul style="list-style-type: none"> <li>Health status</li> <li>Customer satisfaction</li> <li>Risk protection</li> <li>The distributional dimension of performance matters</li> </ul> <p>Intermediate performance measures:</p> <ul style="list-style-type: none"> <li>Efficiency</li> <li>Quality</li> <li>Access</li> </ul>	<p>Performance goals</p> <ul style="list-style-type: none"> <li>Health</li> <li>Equity</li> <li>Responsiveness</li> <li>Financial Fairness</li> <li>Efficiency</li> </ul> <p>Intermediate performance measures</p> <ul style="list-style-type: none"> <li>Access</li> <li>Coverage</li> <li>Quality</li> <li>Safety</li> </ul>
Main factors/activities /functions in health sector related to goals, objectives, etc.	<ul style="list-style-type: none"> <li>Delivering personal and non-personal health services</li> <li>Raising, pulling and allocating revenues to purchase those services</li> <li>Investment in people, buildings and equipment</li> <li>Stewardship</li> </ul> <p>Alternative formulation:</p> <ul style="list-style-type: none"> <li>Delivering services (provision)</li> <li>Financing (collecting, pooling, and purchasing)</li> <li>Creating resources (investment and training)</li> <li>Stewardship (oversight)</li> </ul>	<ul style="list-style-type: none"> <li>Financing (collection, pooling, allocation, purchase)</li> <li>Service delivery</li> <li>Oversight</li> </ul>	<ul style="list-style-type: none"> <li>Financing</li> <li>Payment</li> <li>Organization</li> <li>Regulation</li> <li>Behavior</li> </ul>	<ul style="list-style-type: none"> <li>Service delivery</li> <li>Health Workforce</li> <li>Information</li> <li>Medical products, vaccines and technologies</li> <li>Sustainable financing and social protection</li> <li>Leadership and governance</li> </ul>

## GENERAL FINDINGS FROM REVIEW OF 12 HSA REPORTS

This section presents general findings arising for the review of all 12 reports, while the following section reviews each individual report in greater detail. Overall, the review reveals a rich, high-quality body of work with thorough analyses of the health sector in the study countries. While there is no such thing as a set of official guidelines at the Bank to carry out HSA analyses, the reports generally share many features in terms of their tendency to move from problem identification to their likely causes, and to the formulation of phased policy recommendations to address those causes. The broad assessment of the Bank's technical work in this area is positive. This section describes the general features of the work reviewed, highlights the strengths of the work, but also identifies areas of weakness which the Bank may seek to address through training, guides, information dissemination, and other internal measures.

### OBJECTIVES OF REPORTS REVIEWED

The 12 reports reviewed here had a diverse set of objectives motivated by different questions and starting points (Table 5). It will not be surprising, then, to find that their methods differed. For example, the Mozambique report started out by showing large health gains over a short time span and sought to scale up health services to consolidate and extend these gains in order to achieve its MDGs. Vietnam's report also documented relatively good health status for the country given its income, but was motivated by concerns over catastrophic health spending by households. The China (2009) report, in contrast, had as its chief concern the deteriorating health status in the nation's countryside resulting from a collapse of the Cooperative Medical System. Likewise, the Azerbaijan report was motivated by a dramatic drop in health status and the associated need for considerable reform of its health system. The Egypt report sought to provide a critical assessment of its Health Sector Reform Pilot Project. Hence it was not intended to serve as a general assessment of Egypt's health system. All but 1 (Egypt's) of the 12 reports reviewed here can be considered as general assessments of the respective country's (or a large part of the country, as in the case of China) health system.

Table 5 Reports' main objective

Country	Year	Main objective
Mozambique	2006	Large health gains in short time span. Scale up health services toward the MDGs through more health resources and also better spending
Uganda	2005	Lack of major improvement in health status and persistent inequalities. Provide a better understanding of the connections between health outcomes and poverty in Uganda and the performance of the health system in targeting the poor
Benin	2009	Need to strengthening the health system to combat three priority health problems: (i) malaria among children, (ii) maternal and neonatal mortality, and (iii) child malnutrition
Ethiopia	2005	Consolidate knowledge to lay the groundwork for discussing and refining strategies and policies in the health sector in Ethiopia
Mongolia	2007	Be a complementary resource for policymakers and practitioners during the implementation of the new Health Sector Strategic Master Plan 2006-2015, by providing a detailed assessment of challenges for the Mongolian health sector, and an in-depth discussion of key strategic issues for medium and long term
China	2009	Synthesize WB's analytic & advisory activities in China in response to a request for technical assistance from the Government
China	2004	Not shown; background paper for World Bank's China Rural Health Study; critically describe China's health sector with an emphasis on the post-reform era
Vietnam	2009	Improve health system performance further, even though Vietnam has done and continues to do better

**Table 5 Reports' main objective**

Country	Year	Main objective
		than might be expected, given its per capita income. Vietnam has a high incidence of catastrophic household health spending (people in Vietnam are receiving quite sophisticated care, but the country's social health insurance program does not yet cover the entire population)
Azerbaijan	2005	Dramatic deterioration in health status. Spur policymakers to consider a set of options for reforming the system, thereby enabling them to embark on a long-awaited reform initiative to improve health outcomes
Turkey	2003	Carry out a comprehensive review of all aspects of Turkey's health sector, to help the country make the substantial and sustained efforts it will require in the coming years to meet the health targets of the Millennium Development Goals by the year 2015
Egypt	2004	Provide the Government of Egypt and its development partners with a critical assessment of experience to date with the Health Sector Reform Pilot Project
India	2002	Inform and facilitate a professional and public discussion on the future directions for India's health system, by answering the two questions: (1) How can India meet the health needs of the most vulnerable segments of its population? And (2) How can the roles of the public and private sectors be structured to better finance and deliver health services?

### REPORTS' ANALYTICAL APPROACHES

Given the diversity of motivations for the reports, it is not surprising to find that they adopted a somewhat diverse set of methodologies and conceptual frameworks. Most reports made explicit reference by name to the conceptual framework they selected; some referred to two or more approaches, borrowing different parts from each. The review was obviously more interested in the internal coherence of the approach(es) –checking if all stated report objectives were adequately addressed and that sound methods were used to that effect– than in the existence of an explicit reference to it.

As is shown in Table 6 the most frequently used approach was that presented in WHO's 2000 World Health Report. Only 1 report made explicit reference to the Roberts *et al.* (2004) WBI/Harvard control knob approach, even though the Bank has for over a decade been teaching this approach to hundreds of health system experts from its country clients and to dozens of World Bank staff. It was noted before in this report that the WHO (2000) and the Roberts *et al.* (2004) approaches share similarities, yet they are far from being substitutes. The World Bank should examine the causes of this apparent disconnect between the methods it teaches and the methods it actually applies.

**Table 6 Conceptual frameworks adopted in reports reviewed**

	Mozambique (2006)	Uganda (2005)	Benin (2009)	Ethiopia (2005)	Mongolia (2007)	China (2004)	China (2009)	Vietnam (2009)	Azerbaijan (2005)	Turkey (2003)	Egypt (2004)	India (2002)
WHO World Health Report (2000)	X		X			X	X		X	X		
World Bank Pathways (2002)	X	X		X								
Harvard/WBI Flagship Control Knobs (2004)	X											
WHO Building Blocks (2007)												
Marginal Budgeting for Bottlenecks, Unicef/World Bank/WHO (2005)		X										
Other or no pre-existing framework explicitly stated					X		X			X	X	

Attempting to characterize each report's approach according to a single conceptual framework is simplistic, even if the report authors declare to have followed that approach. In practice, several reports adopt a unique approach. For example, the China (2009) report devotes its first 3 chapters (50 pages) to a review of issues and challenges in China's rural health system. It examines trends in health outcomes, inequalities, household out-of-pocket spending, health insurance coverage, availability of hospital beds and so on. It also discusses the ongoing rural health reform and evaluates some of its impacts using secondary data. In subsequent chapters it adopts the WHO (2000) framework to offer an outlook of the future in the areas of health insurance, service delivery, and accountability and incentives in public health.

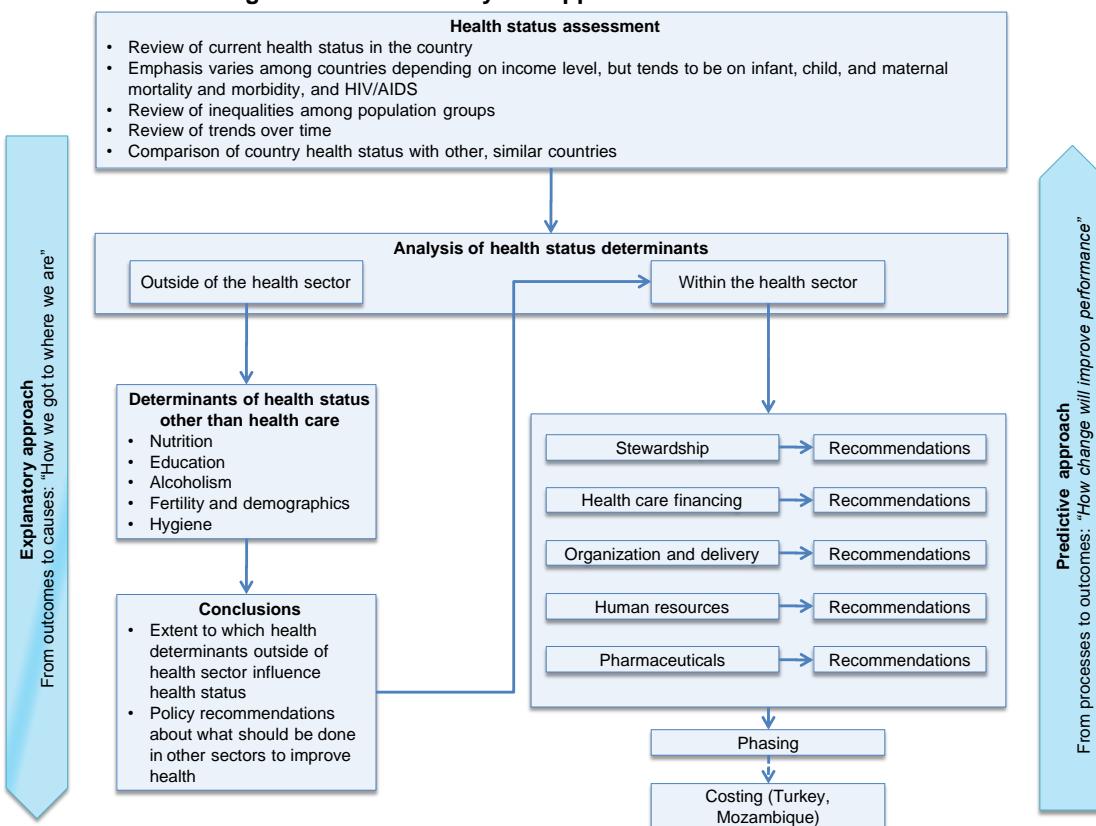
The Azerbaijan (2005) report follows more closely the WHO (2000) approach. It comprises two volumes: a 185 page Volume II offers a detailed assessment of each of 7 aspects of the health system including: (1) health status and determinants, (2) demand and utilization, (3) health system stewardship, (4) health care financing, (5) human resources for health, (6) organization and delivery, and (7) access to pharmaceuticals; and a shorter 75-pages volume that integrates the findings from these separate aspects to draw conclusions and formulate a detailed agenda for reform.

So does the Turkey (2003) report. The 200-page-long Volume 2 contains 9 separate chapters on the following subjects: (1) status and trends in health indicators, (2) demand for health services, (3) supply of health services, (4) human resources in health, (5) organization of the health sector, (6) health care financing, (7) consumption and production of pharmaceutical products, (8) economic crisis and the health sector, and (9) meeting the millennium goals for health. Volume 1 (100 pages), integrates the findings from Volume 2 and proposes an agenda for reform.

Several other HSA reports carried out by the Bank and reviewed here contain similar analyses and level of detail (see Box 4).

With the exception of the Egypt report, all other HSA documents reviewed here more or less follow the logic presented in Figure 14. They begin with a detailed assessment of health status and health issues in the country. This assessment evaluates inequality in health across population groups (by geography, ethnicity, income, age, and gender), trends over time, emergence and evolution of significant diseases, and so on. From this it moves to an analysis of health determinants in the *health system*, distinguishing between those that are outside of the *health sector* (i.e., outside of the direct control of the Ministry of Health) and those in the health sector. Generally, the assessment does not attempt to quantify the relative influence on health status of the factors outside and within the health sector. Instead, it typically explores the status of known health determinants such as nutrition, education, water and sanitation, and demography, safety, and habits (such as alcoholism and smoking).

**Figure 14 General analytical approach of World Bank HSA**



Source: Authors.

From this they move to an analysis of the health sector itself, including both public and private components, and discussing each of the several health sector components (Figure 14 shows 5 of them, but in some cases the analyses include more, for example health information systems and others). A set of conclusions and recommendations emerges from each component. A policy chapter then integrates the findings from each component and recommends policy action to improve health sector performance. In some reports (e.g., Turkey, Mozambique) the authors cost out the proposed reforms; in most, authors recommend a phasing of the policy interventions and state where the World Bank might play a role.

#### **Box 4. The World Bank's detailed HSA: Example from Ethiopia**

The World Bank's HSA may be the most detailed assessments of health systems available for the countries where it has carried them out. They contain a considerable amount of detail and exhaustive analysis of secondary data. Often they involve extensive collection of primary data. To illustrate the Bank's HSA approach, below is the table of contents of its 2005 HSA report for Ethiopia. Other reports reviewed here that contain a similar (and in cases greater) level of detail include those from India (2002), Turkey (2003), Azerbaijan (2005), Uganda (2005), Mongolia (2007), China (2009), and Benin (2009).

#### **Contents of World Bank (2005) Ethiopia: A Country Status Report on Health and Poverty (230 pages)**

1. **Introduction**
  - o Drug outlets Drug Availability Personnel
  - o Special Pharmacies
  - o Availability of Equipment
  - o Condition of Health Facility Buildings
  - o Availability of Transport for Healthcare Personnel
  - o Utilization of Health Services
  - o Reasons for Visits
  - o Quality of Health Services
  - o Technical Quality
  - o Consumer/ Client Satisfaction
  - o Community Participation (Social Accountability)
2. **Health outcomes**
  - o Child Mortality
  - o Child Malnutrition
  - o Maternal Mortality Rates (MMR) and MDG Targets
  - o Maternal Malnutrition. Fertility
  - o HIV/AIDS
  - o Tuberculosis
3. **Household and community factors affecting health: knowledge, attitude and practices**
  - o Child Survival
  - o Child Malnutrition
  - o Breastfeeding
  - o Supplementary Foods
  - o Iodized Salt
  - o Use of Bed Nets
  - o Use of Oral Rehydration Solution (ORS)
  - o Immunization
  - o Use of Vitamin A Supplementation
  - o Antenatal Care and Delivery Care
  - o Women's Nutritional Status
  - o Female Circumcision (FC)
  - o Family planning
  - o Knowledge of HIV/AIDS
  - o Knowledge of Sexually Transmitted Illnesses (STIs)
  - o Household Utilization of Services
  - o Reasons for Choosing a Health Facility
4. **Household health expenditures in Ethiopia**
  - o Household expenditures on health compared to food and other expenditures
  - o Expenditures on Last Consultation
  - o Expenditures on transportation for last consultation
5. **Health service delivery system**
  - o Policy and Institutional Framework
  - o Policy and Program Reforms
  - o Health Sector Development Program (HSDP)
  - o Performance of the HSDP I (1997-2002)
  - o HSDP II and III
  - o SDPRP
  - o Organization of Health Services Delivery The Public System
  - o The NGO Sector
  - o The Private Sector
  - o Traditional Healers
  - o Access to Health Services
  - o Geographical Access
  - o Human Resources
  - o Regional Distribution Gender
  - o Staffing Norms
  - o Salaries, Incentives and Staff Retention
  - o Availability of Material Resources
  - o Availability of Beds
  - o Essential Drugs and Common Medicines
  - o Policy Background
  - o Sourcing
6. **Public health expenditures**
  - o Public Spending on Health Services
  - o Health Sector Funding: Public and Private Sector Contributions
  - o Health Spending and Curative Care
  - o Public expenditures in Ethiopia
  - o Public Spending on Healthcare
  - o Capital and Recurrent Expenditures on Health
  - o Allocation of Public Expenditures
  - o Public Expenditures and Hospital Programs
  - o Regional expenditures vary widely
  - o Tigray's Success: Expenditures to Results
  - o Actual Capital Spending and the HSDP
  - o Donor Funding
  - o Cost Recovery Revenues
  - o Public Spending and the Poor
  - o Woreda Decentralization: Preliminary Experiences and Issues
7. **Spending more, spending better. The cost and potential impact of alternative service delivery options for high impact interventions in Ethiopia**
  - o Applying the MBB Tool in Ethiopia: Process and Methodology
  - o Step 1: Identify High Impact Interventions that Need to be Strengthened in the Ethiopian Health
  - o Services Delivery System
  - o Step 2: Identifying Country-Specific Service Delivery Strategies
  - o Preventive maternal & neonatal care:
  - o Step 3: Identifying Bottlenecks Hampering Effective Coverage Using High Impact Interventions
  - o Step 4: Setting the Frontiers of Health Service Coverage
  - o The Reduction of Bottlenecks: How Much is Enough?
  - o Density vs. Quality of Health Care Provision
  - o Step 5: Variances in Impact and Cost of Addressing Different Bottlenecks The Optimum Combination of Access and Bottleneck Reduction
  - o Evaluating of Potential Returns from Alternative Service Delivery Arrangements
  - o Simulating Policy Options: Costs and Benefits of Expanding Treatment
  - o Human Resource Implications of the Chosen Policy Options
  - o Reaching the Health MDGs in Ethiopia
  - o Conclusion
8. **Building on existing strengths and addressing policy issues for improved health outcomes**
9. **Bibliography**
10. **Annexes**

Source: World Bank (2005) *Ethiopia: A Country Status Report on Health and Poverty (In Two Volumes) Volume II: Main Report*. The World Bank Group Africa Region Human Development & Ministry of Health, Ethiopia.

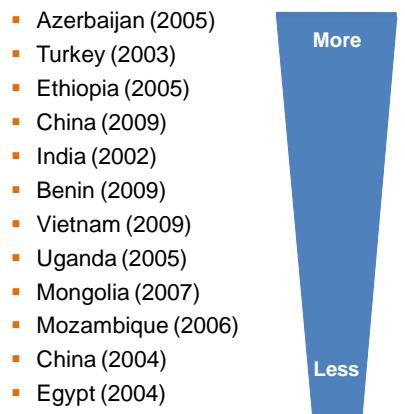
According to these authors, the relative level of detail with which the country reports reviewed analyze the health system is that shown in Figure 15. Often, what distinguishes one report from another is the emphasis that the authors place on specific components of the health system. Such a difference may stem largely from the authors' own background, but also from differences in country circumstances and report objectives. For example, compared with the China 2009 and the Mozambique 2006 reports, the Uganda (2005) report presents a relatively thorough analysis of health status, health knowledge and behavior, organization of the health delivery system, and organization of the private health delivery system (Table 7). The Mozambique report does not make a single reference to the private health care delivery sector in that country and does not address the issue of risk protection and health insurance. The China 2009 report, instead, carries out an in depth analysis and discussion of financial incentives to health care providers and risk protection/health insurance.

**Table 7 Depth of analysis of health system components in selected HSA reports**

Components of the health system	China (2009)	Uganda (2005)	Mozambique (2006)
Health status and its determinants	+	+++	++
Knowledge, behavior, and practices affecting health	+	+++	+
Organization and service delivery	+	+++	+++
Private health care delivery	+	+++	Not mentioned
Incentives to health care providers	+++	++	++
Risk protection and health insurance	+++	+	Not mentioned

Key: + = lowest; ++ = intermediate; +++ = highest.

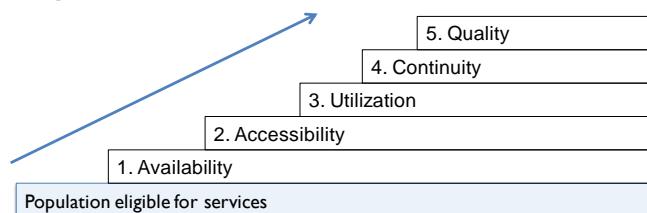
**Figure 15 Level of detail with which the reports reviewed analyze the health system**



## BOTTLENECK ANALYSIS

Of the 12 reports reviewed, two (Mozambique and Ethiopia) adopted the Marginal Budgeting for Bottlenecks (MBB) approach to identify constraints to the timely consumption of quality health services. The MBB approach, depicted in Figure 16, estimates the potential impact, resources needs, costs and budgeting implications of country strategies to remove implementation constraints of the health system. It estimates the marginal or incremental resources required for overcoming those constraints, and achieving better results, and relates these resources to the country's macro-economic framework (WHO, 2010). Owing to the MBB's emphasis on micro issues involving the production and delivery of health care, the Mozambique and Ethiopia reports address issues that the other reports do not address, given the greater emphasis of the latter on more macro policy issues.

**Figure 16 Sequential relationships of health services**



Source: Source: World Bank (2006).

22

In their search for solutions to health system bottlenecks, the authors of these two reports carry out a systematic analysis of five key, sequential determinants in the service chain: (1) Availability –services have to be available in a given area; (2) Accessibility –The service locations have to be physically accessible to users; (3) Utilization –potential users actually utilize the services; (4) Continuity –potential users utilize the services with complete schedules, such as three doses of DPT; and (5) Quality –potential users utilize the services in a correct and effective matter.

The reports' authors then identify alternative strategies that may help bridge gaps in service delivery. They compute their incremental costs and consequences in terms of improvements in health outcomes, and the ratio between the two to draw an incremental cost-effectiveness ratio (Figure 17). Table 8 illustrates the MBB approach used by the authors of the Mozambique report to assess the relative merits of 4 options aimed at reducing gaps in access to care and therefore to lower under-5 and maternal mortality rates. The MBB computerized tool contains empirical data from various developing countries on the impact of specific health interventions on health status –e.g., the reductions in under 5 mortality rates (U5MR) or in maternal mortality rates (MMR) that may result from an expansion in outreach ambulatory and obstetric health care. It also contains other behavioral assumptions supported by international empirical data (sometimes not specific to the country under analysis) on various factors affecting the effectiveness and efficiency of a health system, such as the propensity to demand services and on the costs of specific interventions (for a critical review of the MBB tool, see Bitran y Asociados, 2007).

**Table 8 Mozambique: Incremental cost-effectiveness analysis to select most cost-effective health service delivery strategy**

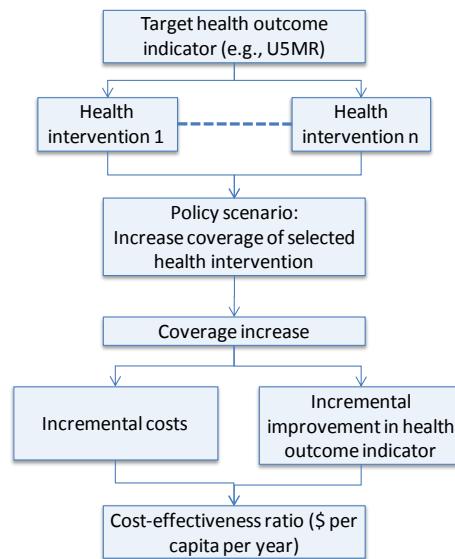
Option	Strategy	Reduction in U5MR	Reduction in MMR	Additional cost per capita
Option 1	Increase outreach services	7%	2%	0.64
Option 2 (ST coverage)	Increase community-based care	39%	2%	0.74
Option 3	Increase facility-based care	18%	26%	2.83
Option 4	Increase outreach services	9%	2%	1.00

## REPORTS OFFER POLICY ADVICE

All reports reviewed have as their end goal to offer policy advice to Bank client countries and to the World Bank itself. Policy recommendations tend to be grouped by areas, including financing, input generation, human resources delivery system. Figure 18 presents, as an example, the policy recommendations made by the authors of the Uganda report.

All 12 HSA reports reviewed here contain very specific policy recommendations narrowly grouped around one or a few policy problems. Some of them, however, also offer many

**Figure 17 Incremental cost-effectiveness analysis**



Source: World Bank (2006).

additional, sometimes vague recommendations scattered across a broad range of topics, sometimes making it difficult for the reader to know their relative relevance. The following are examples of such recommendations from the Ethiopia report (World Bank, 2005b):

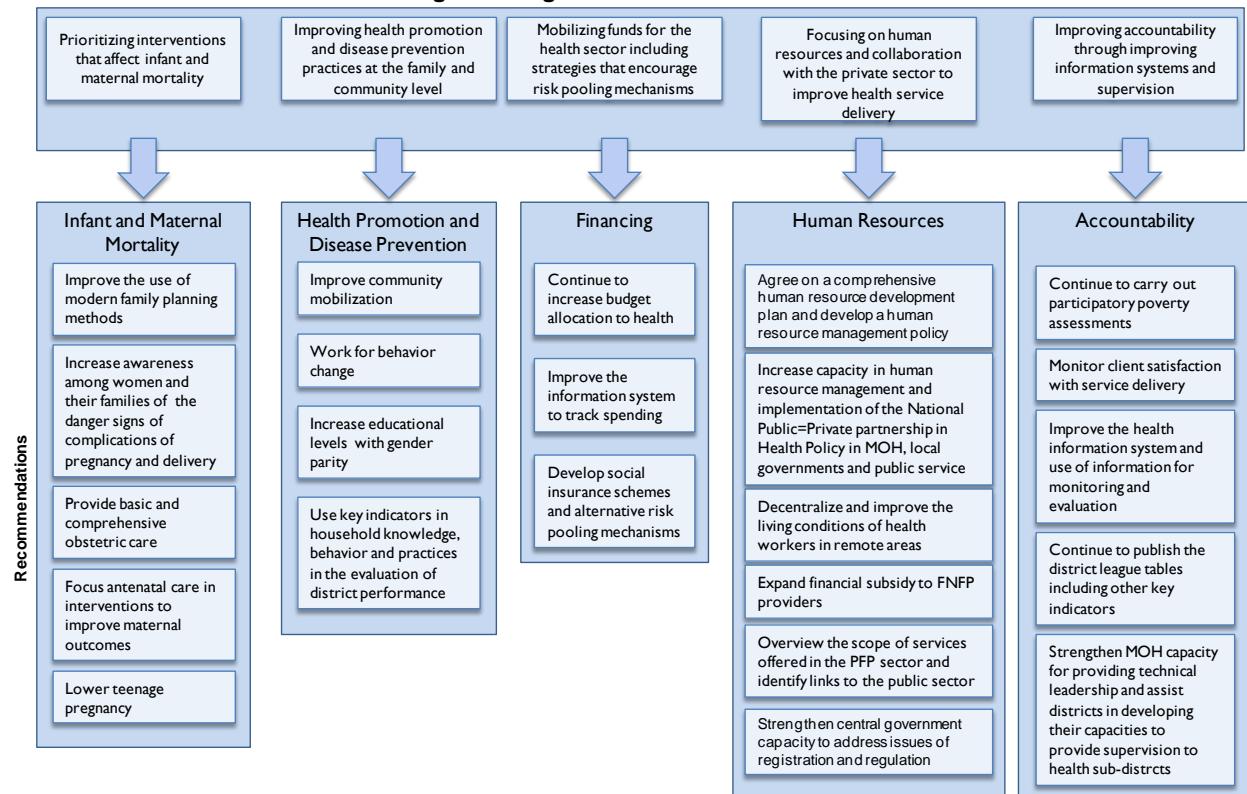
- “It is essential to work to maximize existing information and service delivery channels that are successful.”
- “Improvement of coordination among different health services is an issue to address.”
- “There is a need to achieve an adequate balance between expansion and maintenance of adequate service delivery standards.”
- “Ethiopia has a low per capita income and limited skilled human resources, and these facts must be recognized when discussing the need for supply and demand-side interventions.”
- “The roles of the private sector and NGO must be addressed.”
- “Nonprofit NGOs could benefit from a more enabling environment.”
- “The success of health sector interventions relies on the coordination between interventions in other sectors, particularly those taken to improve the status and role of women in Ethiopian society.”
- “Demand-side interventions also need to complement supply-side interventions.”

Such recommendations are not followed by specific implementation strategies and, to these consultants, they seem unnecessary.

### **POLICY RECOMMENDATIONS ARE AMBITIOUS**

The reports typically recommend a broad set of policy actions that are often ambitious: given their limited human and institutional resources, developing countries may find it hard to follow the entire set of prescriptions. This is illustrated in Figure 18 for Uganda. The first two recommendations are aimed at improving health status through interventions that promote awareness, behavioral changes, and demand, and also seek to prioritize the delivery of certain services in the public services. The recommendations shown in the middle under the heading of “Financing” seek to promote increased public spending on health services, the generation of information to track spending, and risk pooling. In the (combined) areas of human resources and the private sector, the report recommends the formulation of a master plan for the generation and human resources for health services, improved working conditions for government health workers in rural areas, and the prospect of greater private (for profit and not-for-profit) involvement in health services through public subsidies. There are also several recommendations in the area of accountability, including the conduct of client satisfaction surveys, the regular generation of information on health system performance, and the strengthening of supervisory capabilities of health authorities at the central and regional levels.

**Figure 18 Uganda: Recommendations**



Source: Authors from World Bank (2005).

#### **EVIDENCE BASE FOR POLICY RECOMMENDATIONS NOT ALWAYS WELL ARTICULATED AND ASSESSMENT OF FEASIBILITY NOT ALWAYS CLEAR OR SUFFICIENT**

In addition to being ambitious, some policy recommendations appear to be standard, emanating from common policy paradigms. This may in part reflect the existence of common problems found in study countries, such as a lack of qualified human resources, insufficient funding, untargeted spending, inefficient provision, and the like. But it may also be reflect the pervasive power of policy paradigms in the field. In fact some of these policy recommendations seem unsubstantiated. For them to look appropriate and worthy of implementation in the countries studied, they should not make sense only in theory; presenting evidence about their successful implementation in similar other settings seems necessary in the reports. Thus, report authors should describe such evidence, or make reference to it, discuss on the basis of lessons learned in other countries the enabling factors that will help the policy succeed, and the risks that may lead to failure. They should also review whether the said enabling factors are present in the country under analysis and, if not, recommend a strategy to overcome any difficulties that may get in the way of successful implementation. Finally, some recommendations seem too shallow, suggesting that the authors may not have envisioned the details involved in the actual change and the challenges that will arise during implementation. The following are examples of frequent policy advice found in the reports reviewed here. The countries where the advice is given are shown in parentheses, followed by an illustrative list of detail-related issues that report authors generally omit.

- *Government must address imbalances in human resources for health between urban and rural settings* (e.g., Uganda, Azerbaijan, and Turkey) –What the reports should add on this is: What countries have faced this same problem and been able to solve it? What has been the extent of their success? Exactly what have they done? How much did it cost and how long did it take them?
- *MOH must assume a greater role in policymaking* (Vietnam, Azerbaijan and Mongolia) – What other MOHs have succeeded in this? What were their resource requirements? Where were new institutions and human skills necessary? How long did it take them and how much did it cost?
- *The public sector must collaborate with the private sector* (India, Uganda) –What does this “collaboration” really mean? Does it mean that government should use public subsidies to purchase private services? If so, how would prices be established? Would there be competition among private providers for government contracts? Does collaboration mean that public and private providers should share resources? If so, would be the terms of such sharing? What countries have done this successfully?
- *Strengthen government regulation of private and public providers* (India, Azerbaijan) –What are the features of providers that need regulation? Are new institutions required for regulation? How long does it take to establish such institutions, what human and other resources do they need and how long does it take for them to operate? Will both public and private providers be equally regulated? Will the regulatory agency be public or will it be private and a public mandate?
- *Develop a package of priority health services* (Azerbaijan, Ethiopia) –What should be the prioritization criteria? Would public financing remain available for services not included in the prioritized benefits package? Will there be enough demand for the services to be included in the prioritized benefits package? If not, how can demand be promoted to achieve adequate levels of utilization? What is the cost of demand promotion? Will demand increase once the package is offered? Will a government subsidized package be offered to all citizens or only to some, and if the latter how will the subsidies be targeted?
- *Switch from government-financed historic budgets for public health care providers to payment for performance* (Azerbaijan, Mongolia). Will public providers receive their entire financing through a system of performance related payments, or just a part of it? If so, what part will remain financed via historic budget and what other parts will come from performance payments? How will the prices be established? How will fraud be controlled under a system of payments?

There are several problems with many of these recommendations. First, the reports generally fail to present evidence demonstrating that other countries facing similar problems were able to overcome them by adopting the recommended policy advice. Such evidence should be available if the authors are to recommend the policy, and it would be important to present it in the report, even briefly. Doing so will add substance to the advice and therefore make it more convincing.

Second, the recommendations are often too general for countries to follow. They tend to be formulated in terms of what countries need to do, but not how they should do it. Some may argue that these health system analyses and reports should remain at a general level and not illustrate the recommendations with examples from elsewhere or get into a discussion of enabling factors for implementation. The following example applies both to the generality and the lack of

specificity of recommendations: some reports recommend addressing the imbalance in the availability of medical doctors between urban and rural areas. That such an imbalance exists is typically made evident in the reports with data such as the number of doctors and other health care professionals per 1,000 inhabitants (the Azerbaijan and Turkey reports).

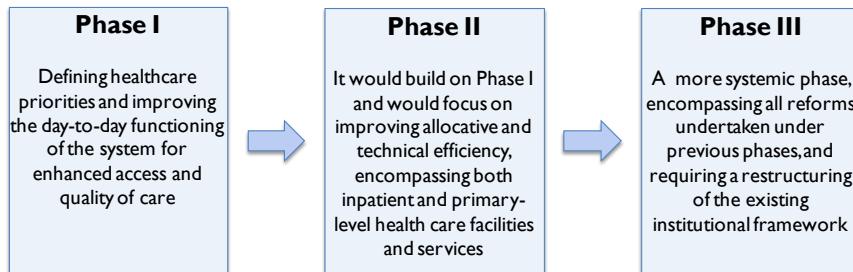
## PHASED RECOMMENDATIONS

Most authors of the reports reviewed recognize that their recommendations cannot be implemented all at once and that instead they ought to follow a sequence. Therefore they recommend that implementation take place in phases, as in

shown in Figure 19 for the case of Azerbaijan. In this particular example, the logic of the phasing is to begin in the short term with marginal but necessary changes in daily operations of the government health system, to improve access to and quality of care. It also includes the conduct of an effort to define priority health interventions to construct essential benefit packages for personal and collective health services.

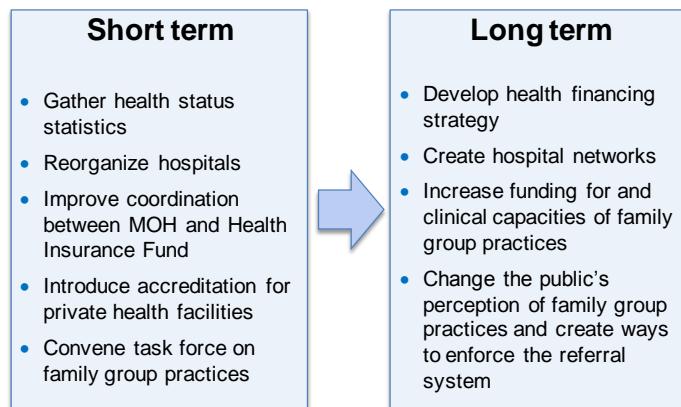
Phase II is intended to build but go beyond Phase I, focusing on measures to improve allocative and technical efficiency at all levels of care for government health providers. This phase calls for major additional capital investments in hospital infrastructure and equipment with a view toward rationalizing inpatient care facilities. These investments are to be accompanied by a sharp reduction in the number of hospitals and/or beds on the basis of a nationwide mapping and supply rationalizing exercise. While encompassing all reforms undertaken previously, Phase III involves structural, system-wide changes that require a restructuring of the existing institutional framework. The MOH is expected to revise its mandate, functions, roles and responsibilities within a new institutional framework. It would evolve mainly into a policy-making, planning, regulating and monitoring agency without direct involvement in the financing or provision of curative services, while keeping its responsibility for the provision of public health services.

**Figure 19 Azerbaijan: Phasing of recommendations**



Source: World Bank (2007).

**Figure 20 Mongolia: Phasing of recommendations**



Source: World Bank (2007).

## LOGICAL CONSISTENCY OF ANALYSIS AND RECOMMENDATIONS

Reports generally exhibit logical coherence: they start out with an analysis of problems that is followed by a search for causes and that ends with the formulation of recommendations to address the causes and overcome the problems. The following two tables illustrate this approach for the Turkey and the Mongolia reports.

**Table 9 Turkey: From problems to causes to solutions**

The main problems	
Problem 1:	Low health status and unequal access to health service, clean water, sanitation and education
Problem 2:	Low level of public spending on health and the available resources are not allocated efficiently and equitably
Problem 3:	Poor incentives for managers and providers in Public provision of health
Problem 4:	Delivery of health care is fragmented
Problem 5:	Potential of private sector is not fully realized
The main causes of the problems	
Cause 1:	Not all who are ill are able to get treatment, in particular the poor. Large segments of the population do not have adequate health insurance or any other form of financial protection
Cause 2:	Primary health care system is underfunded and ineffective. Many health centers are understaffed and there are huge gaps in the distribution of health personnel
Cause 3:	General hospitals run inefficiently
Cause 4:	Little or no coordination between Ministries of Health and Labor, who control most financing and provision of health care
Cause 5:	The distribution of public expenditures on health is not equitable and little is spent on preventive care and on maternal and child health
Main recommendations	
	<ul style="list-style-type: none"> <li>• Compulsory universal social health insurance (health Fund) with optional supplemental private insurance</li> <li>• Staffing rural health facilities</li> <li>• Strengthening delivery of primary care services</li> <li>• Adopt the concept and practice of family medicine</li> <li>• Reorganizing public hospitals and providing greater autonomy</li> <li>• Consolidating and redefining institutional responsibilities (MOH role in policy formulation and regulatory oversight and MOL role in universal health insurance system))</li> <li>• Epidemiological surveillance and data collection</li> <li>• Quality assurance and control</li> <li>• Developing a package of essential services (maternal and child health oriented, including determinants) and targeting public spending</li> <li>• Targeting delivery to the poor and to under-served regions</li> </ul>

**Table 10 Mongolia: From problems to causes to solutions**

The main problems	
Problem 1:	High rate of maternal mortality
Problem 2:	Rising rate of TB incidence rate
Problem 3:	Has failed to cope with the epidemiological transition and health outcomes for non-communicable diseases among adults are of growing concern (Adult mortality rates are on the rise)
The main causes of the problems	
Cause 1:	Low quality of care
Cause 2:	High levels of inefficiency
Cause 3:	Fragmented institutionalized system is gradually weakening the competence, authority and effectiveness of the MOH
Main recommendations	
	<ul style="list-style-type: none"> <li>• Develop clinical guidelines to improve quality of care</li> <li>• Introduce an accreditation system for private health facilities</li> <li>• Change the public's perception of Family Group Practice (FGP) and create ways to enforce the referral system</li> <li>• Reorganize the hospital network in Ulaan Bator by merging small, specialist hospitals into larger tertiary clinical hospitals</li> <li>• Recommendations to control high rate of inpatient</li> <li>• Set payment mechanism and incentives to providers for cost containment</li> <li>• Improve the coordination between the MOH and the Health Insurance Fund (HIF) and create unified information, payment, and quality systems.</li> </ul>

## HSA AND THE POLICY CONTEXT

Reports offer limited information about where they fit in the policy debate in the countries: they seldom explain what motivated the analysis and report, whether or not policymakers participated in the analysis leading to the report, to role that the report plays in the policy reform process, and the report's intended audience. The authors of this review contacted some of the authors in an effort to understand the policy context in which they conducted their analysis. They found that at least one report was written for internal use by World Bank staff, not for client countries. They also discovered that in at least one case the country health authorities had read the report and were not pleased with it (more on this in section 7)

## COSTING OUT OF RECOMMENDATIONS

Whereas all review reports offered considerable policy advice to countries, they seldom attempted to cost out their recommendations. The Turkey report (World Bank, 2003) is a noteworthy exception. After offering recommendations and their timing, the report presents cost estimates of each of the reform components. This information both for country policymakers wishing to assess the financial viability of the reforms proposed and for donors and development agencies interested in co-financing the reform.

**Table 11 Turkey: Estimated one-time costs of the measures proposed as part of the reform package**

Reform Measure	Significant Cost Items in the Proposed Reform Measure
Universal social health insurance (estimated cost US\$200 million)	<p>Most cost-intensive item in this reform measure: setting up of consolidated computerized database that will allow access to patient records, including utilization of health services and premium payment history. Including required hardware, this component could cost up to US\$2 per person, or about US\$140 million, in terms of fixed costs.</p> <p>Integration of all existing insurance systems. Including the logistics and all necessary hardware and software requirements, estimated cost: about US\$20 million.</p> <p>Staff training at the proposed Health Fund on all issues related to health insurance management, including claims evaluation, claims adjustment, financial and solvency management, strategic planning, purchase of health services, contract writing and attendant obligations. Estimated cost: up to US\$5 million.</p> <p>Remaining items of expenditure: (i) finalization of the scope of covered services, and compute unit (and per episode) costs of the covered services; (ii) establishment of the equalization formula for reallocation among regions based on income profile, population demographics and health needs (iii) setting up a system of complaints resolution, including patient grievances and provider complaints (iv) setting up a process of ongoing evaluation of the functioning of the universal health insurance system annually, with emphasis on financing (flow of funds analysis) and utilization of health services. Estimated cost: about US\$25 million.</p> <p>A sum of US\$10 million should be budgeted for miscellaneous expenditures associated with the introduction of universal social health insurance.</p>
Package of essential services and targeting delivery to under-served regions (estimated cost US\$50 million)	The main items of reforms under this component are: (i) development of the package of low-cost high-impact health interventions that meet the health needs of the urban and rural poor; (ii) establishment of protocols for delivering this package of essential services in a sustained manner; (iii) equipping cluster clinics with necessary supplies and transportation facilities; (iv) identification of agencies and assignment of responsibilities for delivering the package of essential services to the rural and urban poor and in under-served regions; and (v) involving other agencies and institutions as needed, including education, sanitation, public health engineering etc., in ensuring effective delivery of this package. Estimated cost: about US\$50 million in fixed costs.
Hospital autonomy and reorganization (estimated cost US\$150 million)	The main items under this reform measure are: (i) establishment of the legal basis for hospital autonomy; (ii) establishment of the legal basis for consolidating all MOH hospitals under one quasi-legal organization and all SSK hospitals under one quasi-legal organization, separate from their respective parent bodies; (iii) developing strategic business plans for each corporation and for each facility and training managerial staff; (iv) creating the two corporations and sustaining them for the first five years; (v) laying down measurable standards for accountability and good governance in each corporation; for autonomous public health facilities; and (vi) establishing protocols and baseline performance indicators to track benefits from autonomy. Providing support to the autonomous bodies, developing business plans for each facility, developing managerial capacity and supporting other technical elements associated with the introduction of hospital autonomy is expected to cost about US\$150 million.

**Table 11 Turkey: Estimated one-time costs of the measures proposed as part of the reform package**

Reform Measure	Significant Cost Items in the Proposed Reform Measure
Institutional consolidation and redefining institutional responsibilities (estimated cost US\$50 million)	The main items of reform under this component are: (i) establishment of a national advisory body on health comprising officials from Ministry of Health, Ministry of Labor and Social Security, State Planning Organization, and Universities, with broad responsibility for planning, coordination and monitoring health policies, indicators and status of the population; (ii) setting up protocols for enhanced and continuing cooperation and collaboration; (iii) developing regulatory and policy formulation capacity in MOH and setting up a regulatory agency; and (iv) developing the necessary capacity in MOLSS for providing general oversight to the insurance system. These and other technical elements associated with institutional consolidation and redefining institutional responsibilities are expected to collectively cost about US\$50 million in fixed costs.
Strengthening primary care (estimated cost US\$100 million)	The main items of reform under this component are: (i) development of family medicine practices and training medical personnel; (ii) development and implementation of a primary health care master plan; (iii) expansion and integration of clinical services with programs covering highly cost-effective interventions in preventive health such as immunization, vector control, family planning, prenatal, pregnancy and delivery care, neonatal care, AIDS prevention, STDs and TB control; and (iv) strengthening epidemiological surveillance. These and other elements associated with institutional consolidation and redefining institutional responsibilities are expected to collectively cost about US\$100 million in fixed costs.

Source: World Bank (2003).

### **ANALYSIS OF HEALTH STATUS AND ITS DETERMINANTS**

As already noted, all HSA reports reviewed here begin with an analysis of health status, examining trends over time, using different indicators for different population groups, comparing them across regions and with other, similar countries, and attempting to establish a causal relationship between determinants of health status, within and outside the health system (see Figure 5), and health status. The Uganda report (World Bank, 2005), which adopts the World Bank's PRSO Pathways framework to analyze the health system, probably offers the richest approach of all review reports to the analysis of health determinants. In its Chapter 2, "*Health, Nutrition, and Population Outcomes in Uganda: On Par but Below Potential*" this document presents a meticulous assessment of health determinants. Its statistical and graphical analysis of child mortality resorts to a review of trends and a comparison of different child-specific mortality rates (neonatal, infant, child), for Uganda and many other developing countries. This analysis is enriched with information about mortality by income quintiles, to assess the scope of inequality in Uganda and reference countries. It looks both at mortality and morbidity, focusing on the biggest contributors to the burden of disease (such as malaria, diarrheal disease, maternal mortality, and HIV/AIDS). It also examines adult health and its determinants. Unlike other reports, it devotes a full chapter to a review of "*Knowledge, behavior and practices affecting health*," hence setting the scope for a rich discussion of the "*Persuasion*" policy control knob. The report also examines patterns in use of preventive services. For its wealth, it should be used as a model for future HSA to be conducted by the Bank.

## SPECIFIC FINDINGS FROM HSA COUNTRY REPORTS

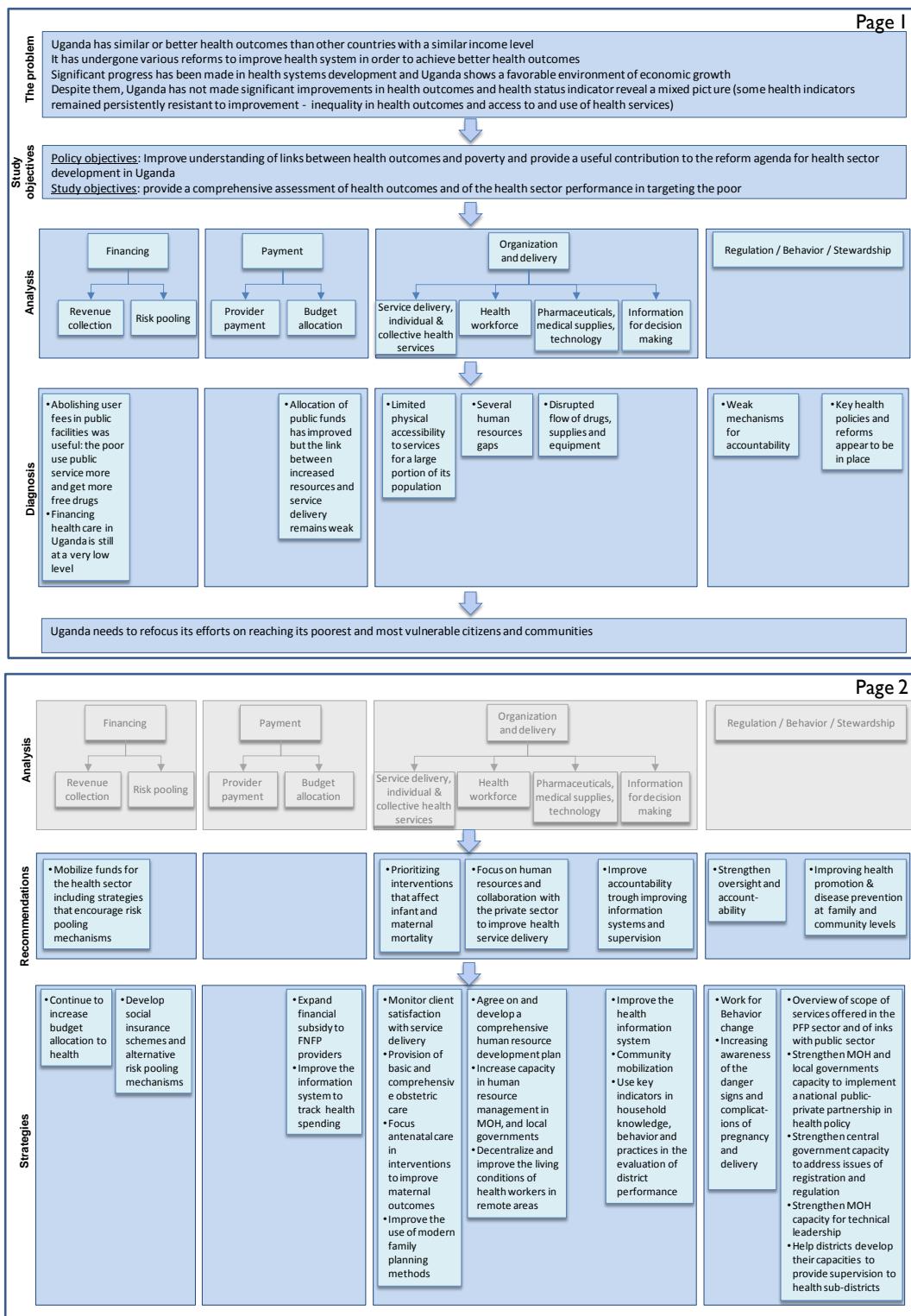
This chapter describes select aspects of the analysis presented in the review reports. In so doing, it attempts to illustrate with varying examples selectively extracted from each report how the World Bank conducts HSA. The description includes the kinds of information HSA authors collect, the analytical methods they adopt to assess problems and identify causes, and the way they extract policy recommendations and propose implementation strategies.

The presentation that follows comprises two parts for all but one report.<sup>2</sup> The first part is a 1-2 page narrative description, accompanied by tables and figures, of key features of the analysis, with a focus on HSA methods. The second is a 2-page diagram describing the policy problems that motivated the study, the study objectives, the diagnosis, the policy recommendations, and the suggested strategies for the implementation of recommendations. To structure the materials contained in the diagrams, the analysis, diagnosis, recommendations, and strategies were organized into four groups, where the groups attempt to match the health system functions described above in section 4. These groups are conceptually equivalent to the so-called “control knobs” of the Roberts et al. (2004) HSA approach or the so-called “building blocks” of a health system defined by WHO (2007). The first three groups are “Financing”, “Payment”, and “Organization and Delivery”. These three groups are kept as separate analytical elements because the reports reviewed generally dissect their analysis cleanly into these three groups. The fourth group, instead, lumps together three control knobs or building blocks – “Regulation / Persuasion / Stewardship” –, because the divide in the reports between these three knobs/blocks is not as clear. Within each of the four analytical groups just described, the diagrams include sub-groups that further categorize the specific contents of the control knobs/building blocks. Thus, for example, under the group “Financing” there are two subgroups, “Revenue Collection” and “Risk Pooling.” Likewise, under “Organization and Delivery” there are four subgroups, “Service Delivery”, “Health Workforce”, “Pharmaceuticals, Medical Supplies, Technology”, and “Information for Decision Making”. From Analysis to Strategies, the diagrams present as blue boxes the materials organized into the four groups just described.

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<sup>2</sup> The exception is the report on China (World Bank, 2004b), which is a desk review of issues that was written to serve as a background paper for subsequent sector work

**Figure 21 General diagram used in this report to summarize health system analysis work in the reports reviewed (example from Uganda report)**

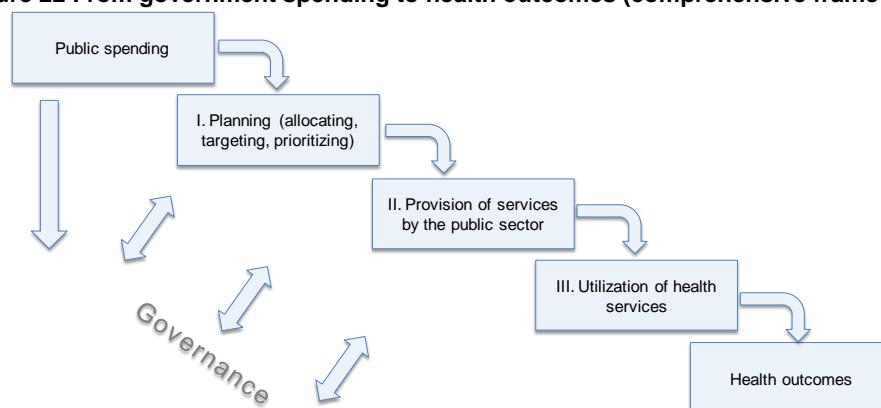


What follows is a presentation of the analyses contained in the 12 reports of this review, following the same order as that shown in

## MOZAMBIQUE: BETTER HEALTH SPENDING TO REACH THE MILLENNIUM DEVELOPMENT GOALS

The authors of the report *Mozambique: Better Health Spending to Reach the Millennium Development Goals* (2006) resort to international evidence to assert that higher health spending will not necessarily improve health outcomes in Mozambique. For such a link to exist, they claim that the health system must meet several conditions, lining up public spending on health with the planning process, the provision of services, and the actual demand for those services. They also state that a country's governance also influences health system performance (Figure 22). Using this framework, the authors proceed to an analysis of the situation in Mozambique.

**Figure 22 From government spending to health outcomes (comprehensive framework)**

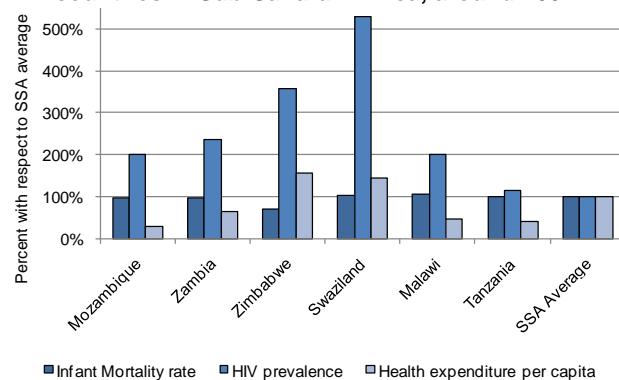


Source: World Bank (2006).

Their analysis begins with a review of selected health status indicators in Mozambique, and a comparison with other countries in Sub-Saharan Africa and the region's average (see Figure 23). Whereas they do not include per capita income in their comparative analysis of health status, they conclude that Mozambique has in recent years achieved significant health improvements, bringing it in line with its neighbors. They also note that the country does not spend as much on health as its neighbors and hypothesize that higher spending would likely bring about improved health outcomes. From this they carry out an analysis of various health indicators according to socioeconomic status using data from the most recent Demographic and Health Survey (DHS). They conclude that there are large inequalities in health outcomes in Mozambique (Figure 24).

The authors then explore the relationship that may exist between service delivery levels and health status in Mozambique's regions. For example, they contrast changes in mortality rates for children under 5 (U5MR) in the period 1997-2004 with changes in the vaccination rates over the same time interval (Figure 25). They conclude that higher increases in vaccination coverage tend

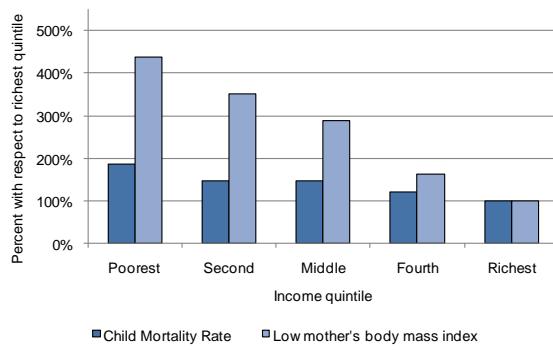
**Figure 23 Health indicators for Mozambique and other countries in Sub-Saharan Africa, around 2004**



Source: Authors, from data in World Bank (2006).

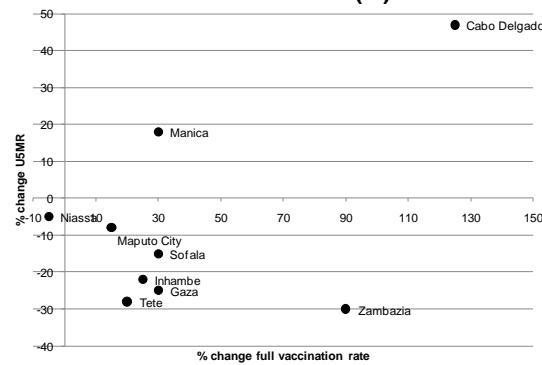
to be associated with the largest reductions in U5MR, but note the seemingly perplexing result that Cabo Delgado and Manica, while having had considerable increases in vaccination coverage have experienced a growing U5MR.

**Figure 24 Mozambique: Child mortality and low body mass index in mothers, around 2004**



Source: Authors, from data in World Bank (2006).

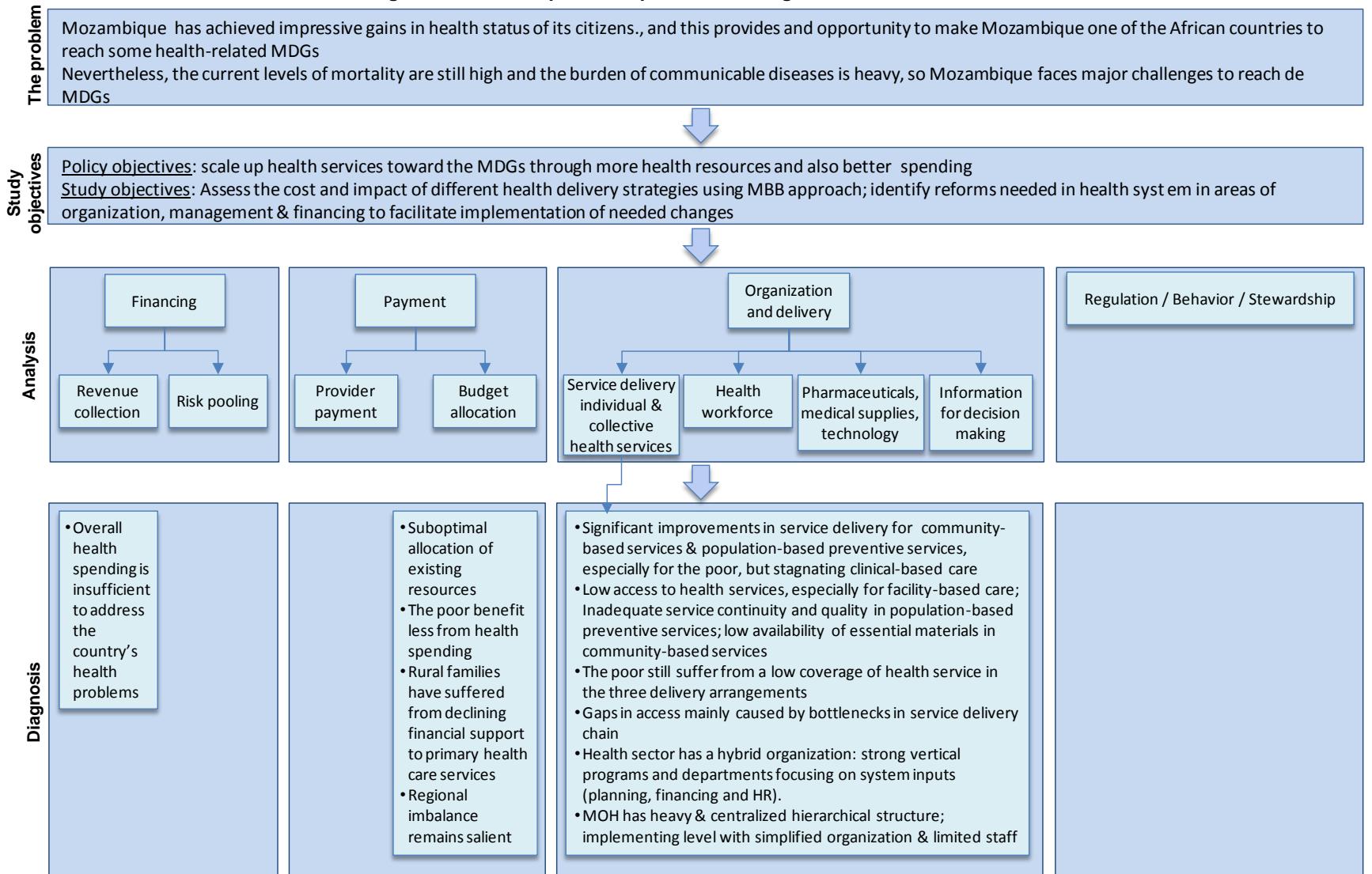
**Figure 25 Mozambique: Changes in under-five mortality rates and full vaccination rates, between 1997 and 2003 (%)**



Source: World Bank (2006).

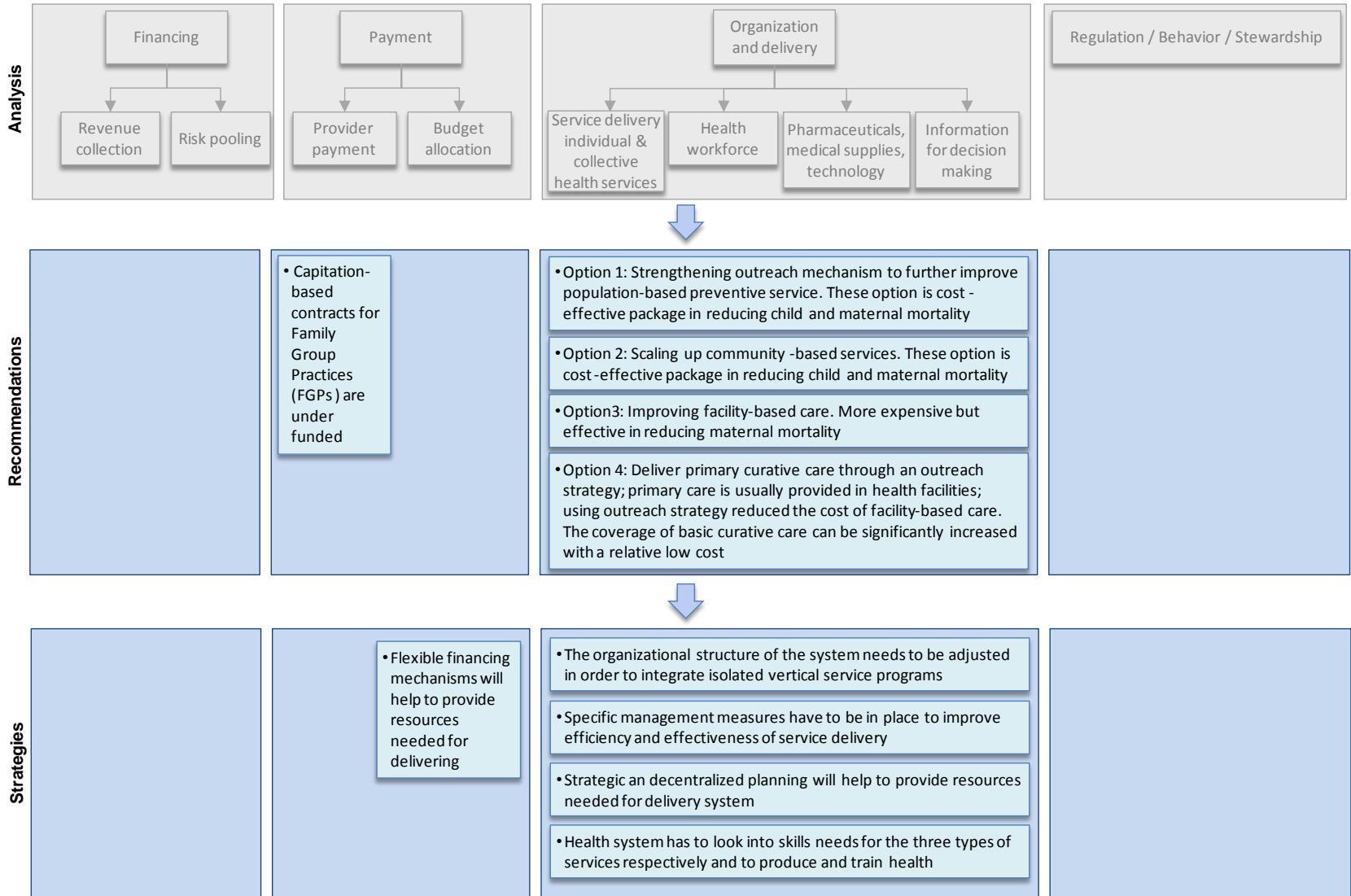
They apply the MBB framework to identify health system bottlenecks, from which they recommend four alternative options to strengthen the health system. The following two figures summarize their analysis and recommendations.

**Figure 26 Mozambique: From problems to diagnosis**



Source: Constructed by authors from World Bank (2006).

**Figure 27 Mozambique: Policy recommendations and strategies**



Source: Constructed by authors from World Bank (2006).

## UGANDA: IMPROVING HEALTH OUTCOMES FOR THE POOR

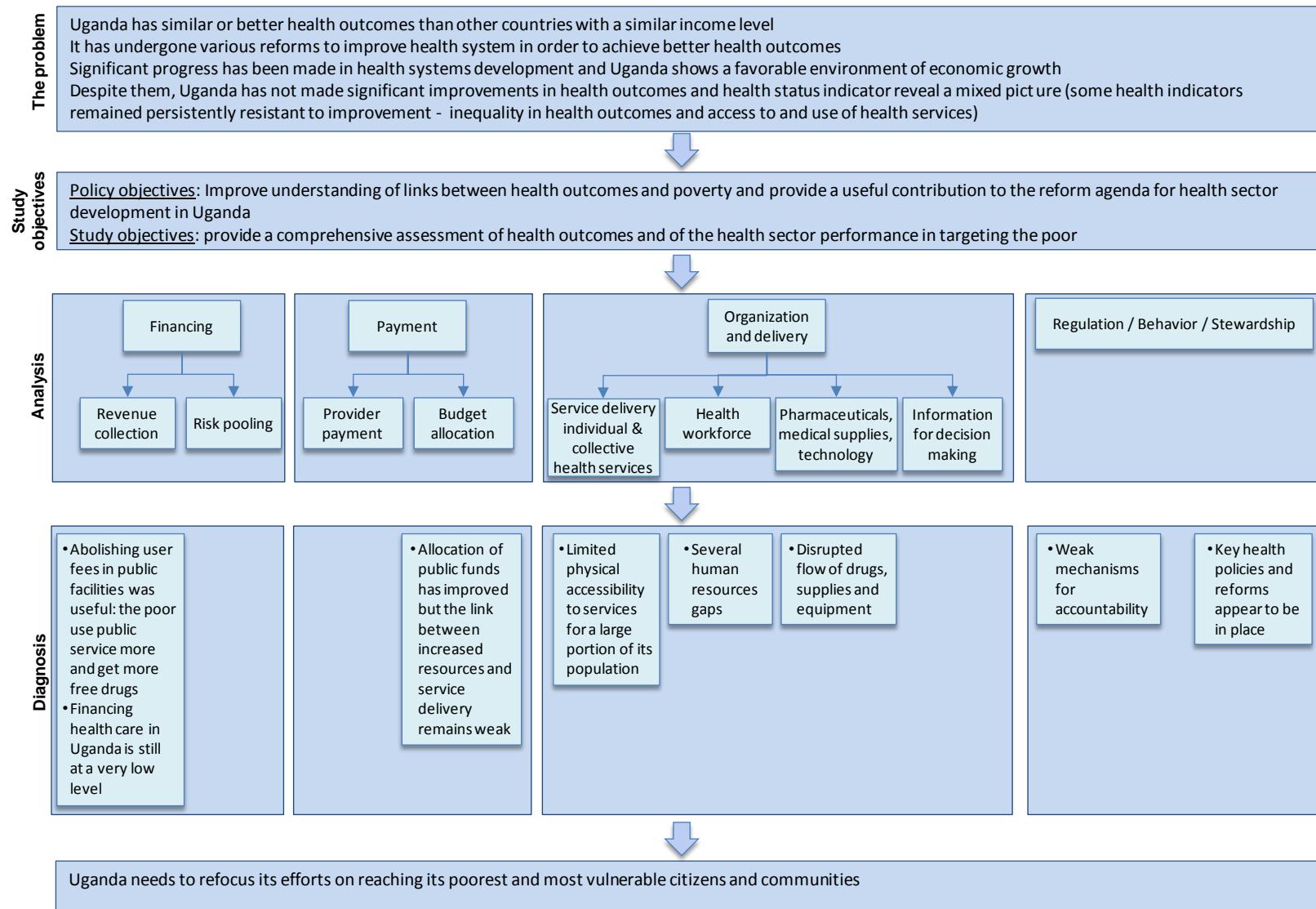
“Improving Health Outcomes for the Poor in Uganda” (2005) examines the reasons behind the lack of significant improvements in health status in Uganda, despite considerable progress in health systems development. The report identifies five major problem areas: physical inaccessibility, human resource gaps, disrupted flows of drugs, supplies and equipment, weak technical and political accountability and limited partnerships with other sectors that affect health outcomes. Figure 28 present’s in schematic form the problem that motivated the study, its objectives, and diagnosis. Figure 29 presents the policy recommendations and the implementation strategies. Table 12 shows the links that exist between the problems identified by the authors, their causes, and the associated recommendations.

**Table 12 Uganda: From problems to causes to solutions**

Uganda		
The main problems		
Problem 1:	Despite significant progress in health systems development and a favorable environment of economic growth, Uganda has not made significant improvements in health outcomes and health status indicator reveal a mixed picture	
Problem 2:	Inequality in health outcomes	
Problem 3:	Inequality in access to and use of health services	
Problem 4:	Some health indicators remained persistently resistant to improvement (child and maternal mortality and nutrition)	
Problem 5:	Uganda needs to refocus its efforts on reaching its poorest and most vulnerable citizens and communities	
The main causes of the problems		Main recommendations
Cause 1:	Physical inaccessibility of services for a large portion of its population and coverage of free services still limited	Prioritizing interventions that affect infant and maternal mortality Improving health promotion and disease prevention practices at the family and community level
Cause 2:	Human resources gaps in several parts of the health system	Focusing on human resources and collaboration with the private sector to improve health service delivery
Cause 3:	Disrupted flow of drugs, supplies and equipment	No explicit recommendations made in report
Cause 4:	Weak mechanisms for accountability	Improving accountability through improving information systems and supervision
Cause 5:	Financing health care is still at a very low level, particularly with the largest share from private out-of-pocket expenditure	Mobilizing funds for the health sector including strategies that encourage risk pooling mechanisms Harness considerable out-of-pocket spending on health and encourage development of social insurance and risk pooling

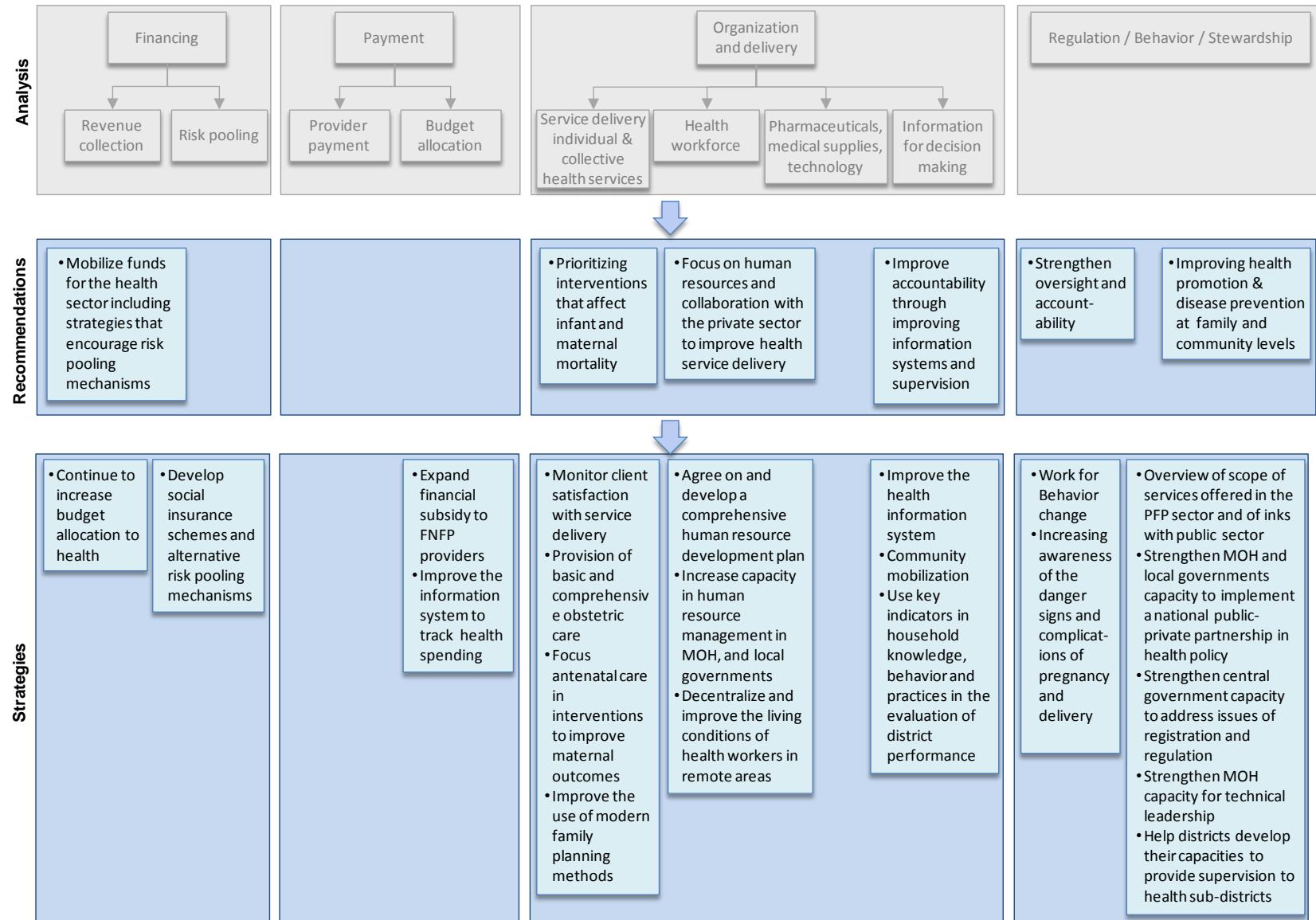
Source: Constructed by authors from World Bank (2005c).

**Figure 28 Uganda: From problems to diagnosis**



Source: Constructed by authors from World Bank (2005c).

**Figure 29 Uganda: Policy recommendations and strategies**

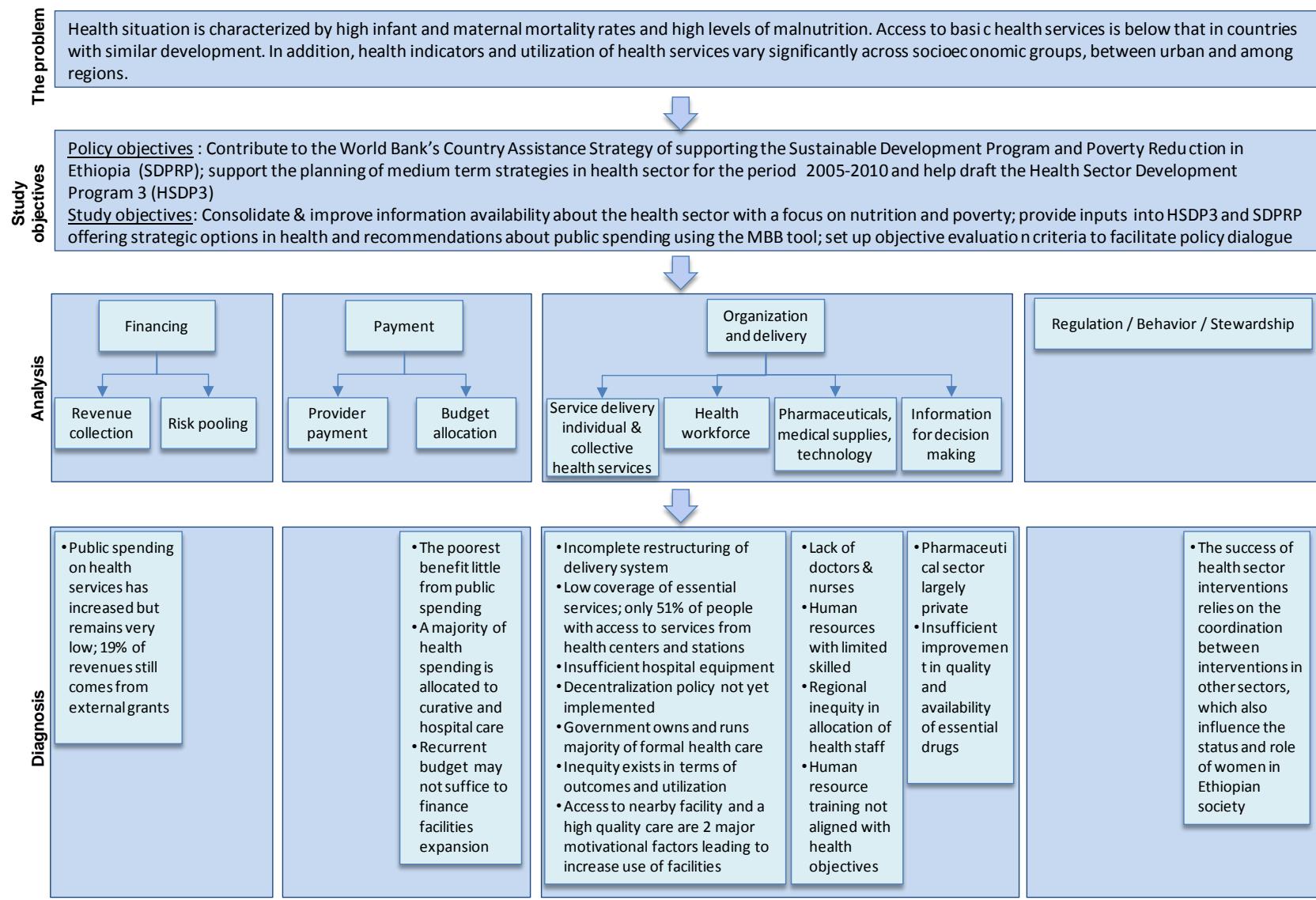


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## **ETHIOPIA: REPORT ON HEALTH AND POVERTY**

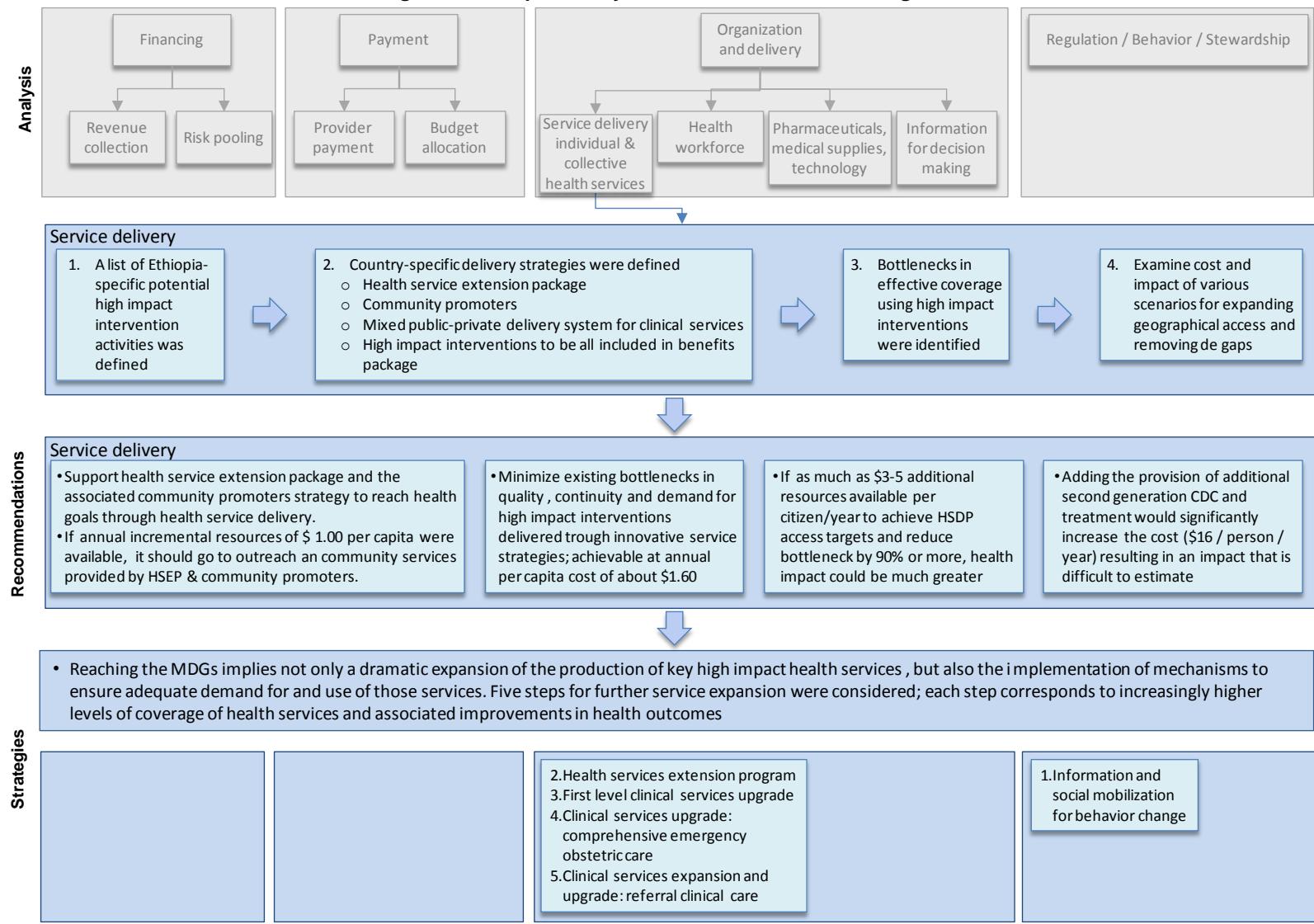
“*Ethiopia: A Country Status Report on Health and Poverty*” (2005) is a two-volume report designed to provide an overview of the current status of health and poverty in Ethiopia in order to improve these two conditions. Written with the MDGs in mind, this report addresses the key factors at the household, community and health systems levels that have an impact on health outcomes. Figure 30 presents study motivation, methods, and diagnosis, while Figure 31 presents recommendations and implementation strategies.

**Figure 30 Ethiopia: From problems to diagnosis**



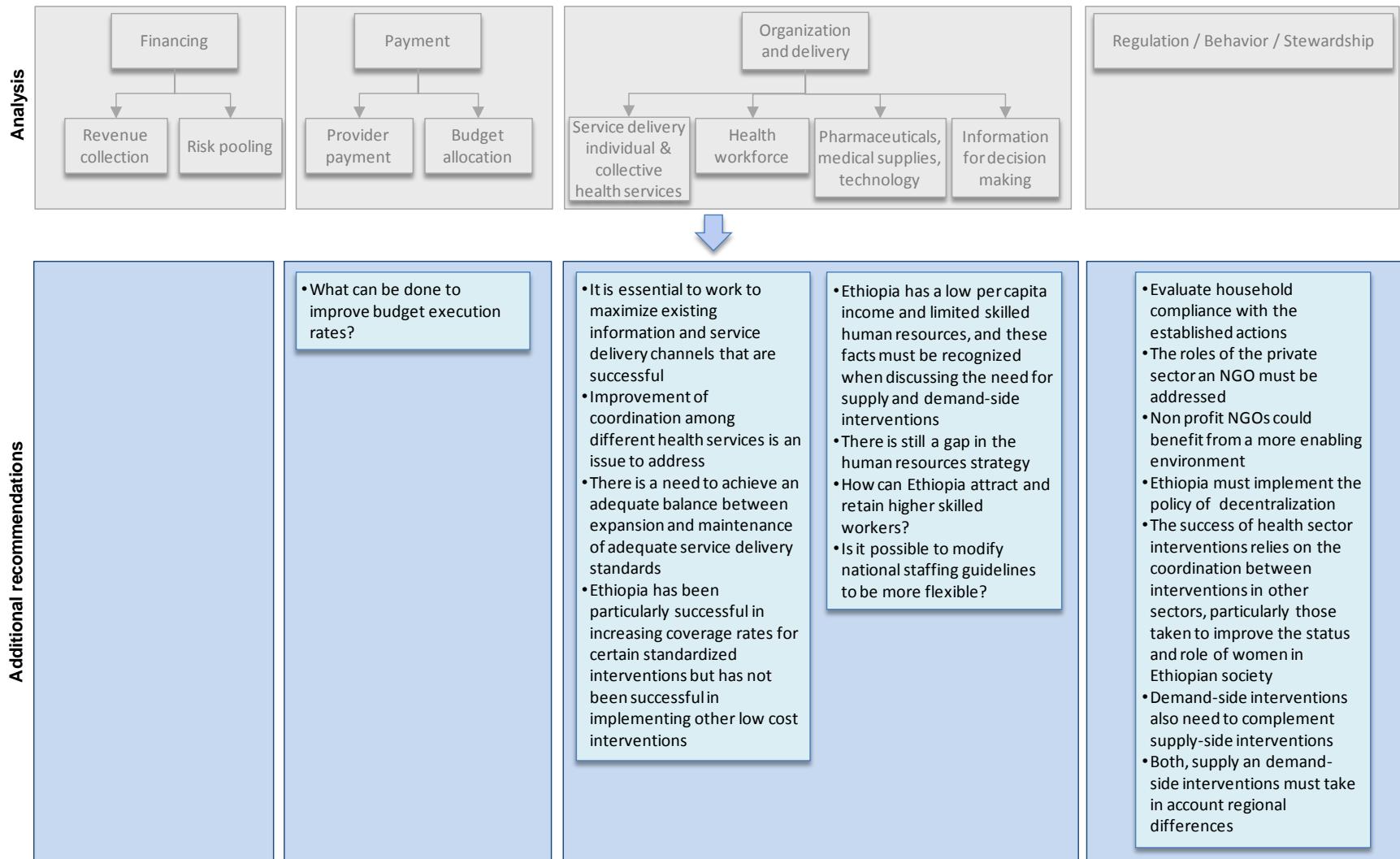
Source: Constructed by authors from World Bank (2005b).

**Figure 31 Ethiopia: Policy recommendations and strategies**



Source: Constructed by authors from World Bank (2005b).

**Figure 32 Ethiopia: Additional recommendations**

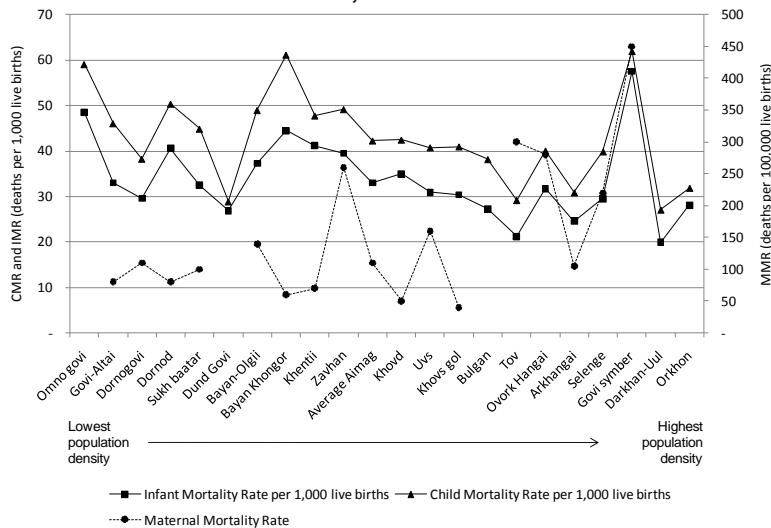


Source: Constructed by authors from World Bank (2005b).

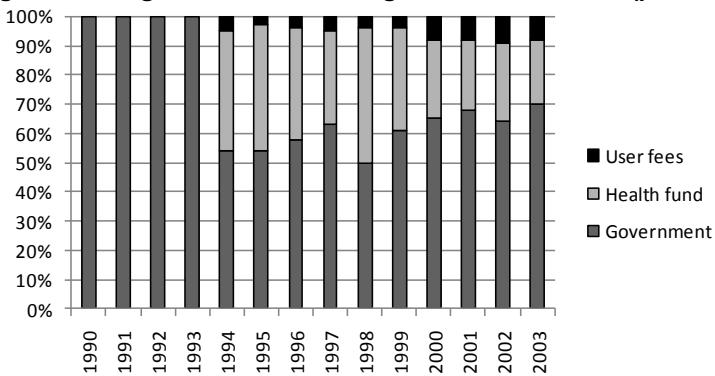
## MONGOLIA: HEALTH SYSTEM AT A CROSSROADS

The report “*The Mongolian Health System at a Crossroads: an Incomplete Transition to a Post-Semashko Model*” (2007) presents a relatively succinct review of Mongolia’s health sector. It was written to serve as a complementary resource for policymakers and practitioners during the implementation of the new Health Sector Strategic Master Plan 2006-2015. The report begins with an analysis of health status in the country, noting a lack of reliable health statistics. It concludes that while infant and maternal mortality seem to be declining, adult mortality rates are on the rise, as Mongolia enters an epidemiological transition. Cardiovascular disease, cancers, and injuries are the leading causes of mortality in Mongolia. Also, over the last decade the incidence of tuberculosis has doubled while smoking is on the rise, with already 50 percent adult males being smokers. The report highlights a fluctuating maternal mortality rate over time, partly as a result of inaccurate reporting but also as a consequence of deteriorating quality of care in public hospitals (over 90 percent of all births occur there) (Figure 33); it also mentions high socioeconomic and regional inequalities in health status.

**Figure 33 Mongolia: Maternal, child, and infant mortality rates by district, around 2004**



**Figure 34 Mongolia: Health financing sources, 1990-2003 (percent)**



Source: Authors from World Bank (2007).

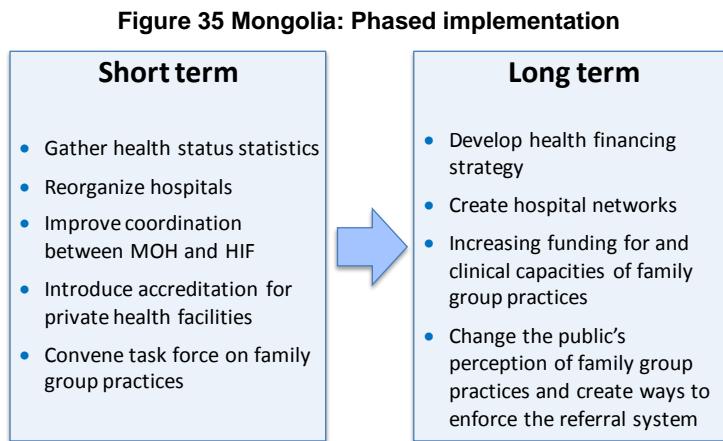
The authors also show changing health financing patterns in Mongolia, as the country underwent a significant reform starting in 1994, shifting from a national health service to one based on social security financing. They note that at 4.7 percent of GDP, government health spending is relatively high by regional standards, whereas user fees, including rising spending on pharmaceuticals, at 6.5 percent of total health financing sources, are still relatively small (Figure 34).

The report authors examine efficiency issues in Mongolia’s health system, particularly hospital efficiency. In the 1993-2002 decade, the total number of hospital beds dropped by 25 percent in the country. At the same time, the introduction of health insurance in 1994 led to an increase in hospital bed utilization rates. By 2002 Mongolia had a considerable smaller hospital bed-to-population ratio than both the Russian Federation and the Commonwealth of Independent States,

but one that was still 25 percent higher than the European Union's average of 611 hospital beds of 100,000 people. Hospital financing comes from historic public budgets and from a fixed payment per case by the health insurance fund, conveying conflicting incentives to hospital managers. A capitation-financed primary health care system known as Family Group Practice (FGP) was started in 1997. While well conceived, the FGP system several met implementation problems, chiefly a restricting legal status that limits competition and private action among FGPs and low pay for doctors.

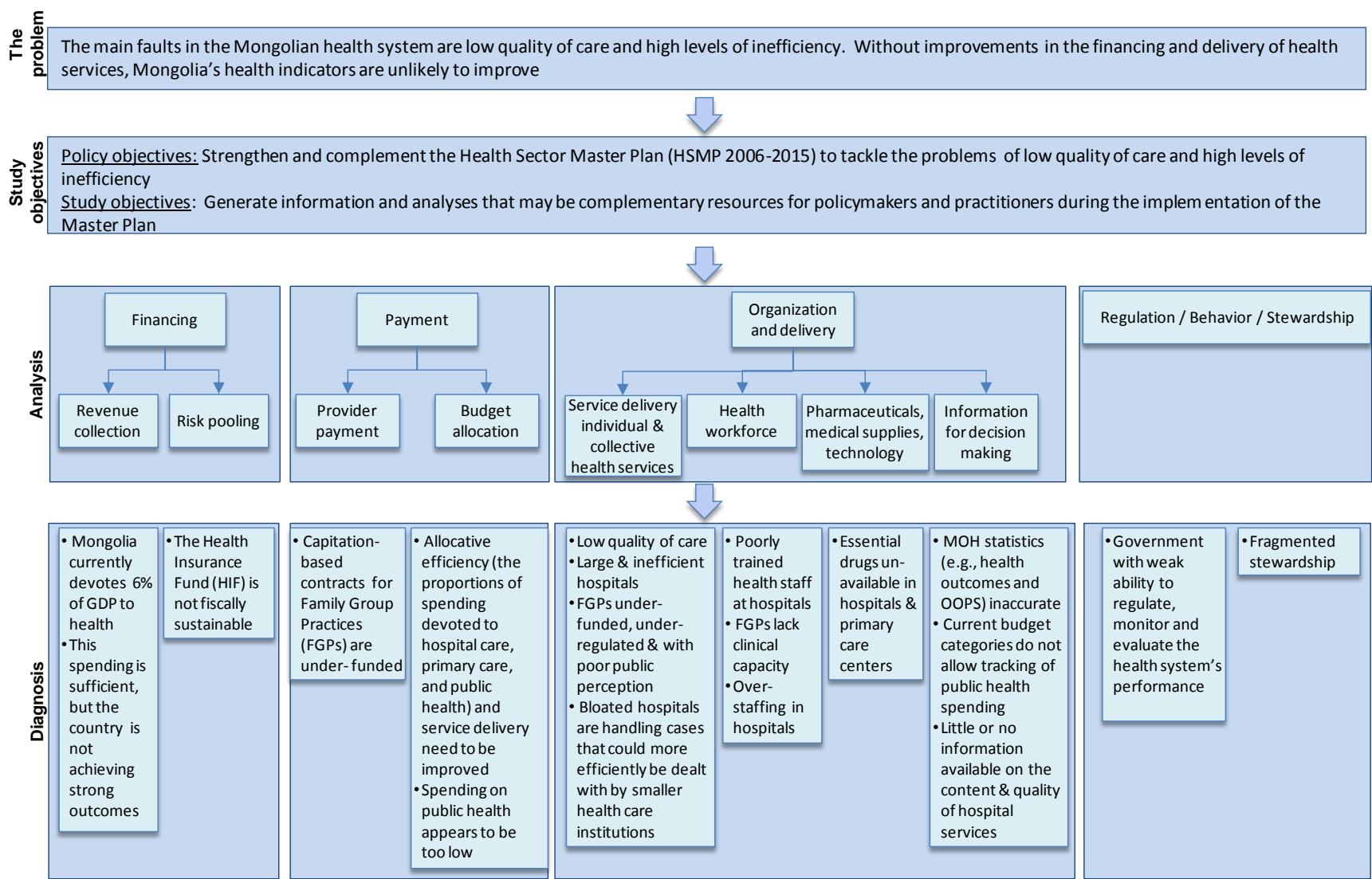
The report presents a discussion of regulatory issues in the health sector. It concludes that the regulation is weakened by fragmentation, that an unclear vision about the role of the public sector is resulting in limited and chaotic private growth, and that recent institutional reforms will likely help to overcome these and other problems.

Figure 35 short- and long-term recommendations from the Mongolia work. Figure 36 and Figure 37 depict the report's analysis, diagnosis, and recommendations in the areas of financing, organization, delivery, and pharmaceuticals. Figure 36 presents the main problems identified by report authors, the causes of these problems, and their associated recommendations. Finally, Figure 37 presents the main short- and long-term recommendations from this report.



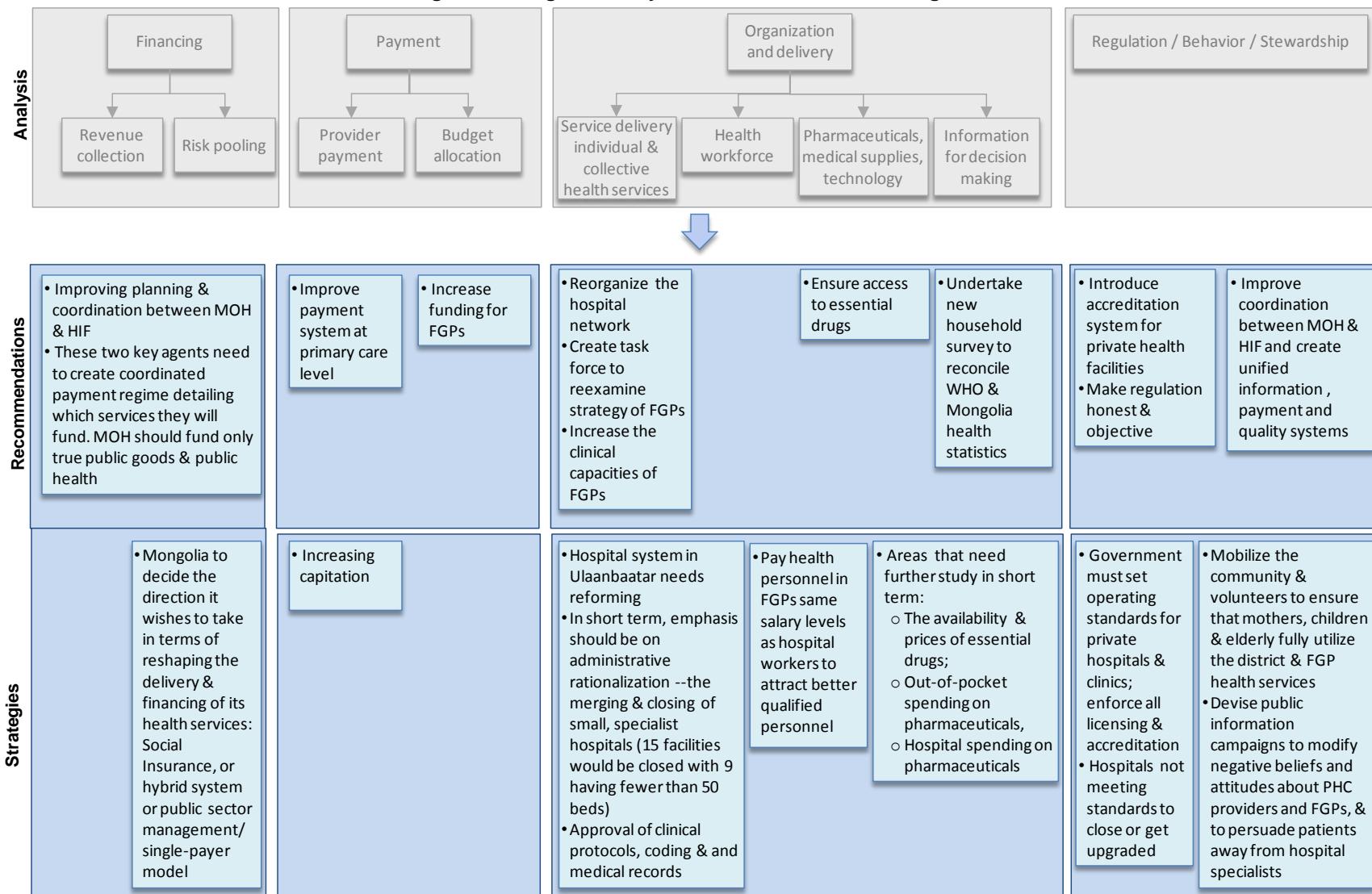
Source: Authors, from World Bank (2007).

**Figure 36 Mongolia: From problems to diagnosis**



Source: Constructed by authors from World Bank (2007).

**Figure 37 Mongolia: Policy recommendations and strategies**



Source: Constructed by authors from World Bank (2007).

## CHINA: POLICY AND INSTITUTIONAL REVIEW

The 2004 China report, entitled “*The Health Sector in China: Policy and Institutional Review*,” is a background paper for World Bank’s China Rural Health Study. It provides a comprehensive, orderly and factual description of China’s health sector with an emphasis on the post-reform era. It presents a general introduction to China’s health care system, including an overview of the organization structure and management, a discussion of health care finance and expenditure, an overview of health care delivery, an explanation of how financial resources are allocated, and an explanation of recent health care reforms. Table 13 shows this report’s full chapter and section outline.

This report is a background paper for the 2009 China Rural Health Study, which was fully reviewed as part of this study; therefore, the consultants did not review the 2004 report in the same way as other reports.

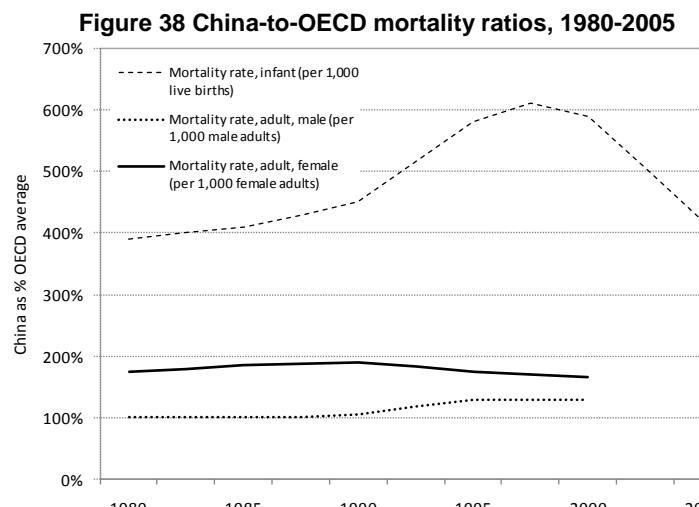
**Table 13 China 2004: A description of facts and issues**

Chapter and section	Chapter and section
1. Introduction	4.3 Primary health care
1.1 Overview of the country	4.4 Secondary and tertiary care
1.2 Historical development of the health care system	4.5 Human resources and training
2. Organization structure and management	4.6 Pharmaceuticals and health care technology assessment
2.1 Organization structure of the health care system	5. Financial resources allocation
2.2 Planning, regulation and management	5.1 Overview
3. Health care finance and expenditure	5.2 Government budget to health sector
3.1 Main systems of finance and coverage	5.3 Payments to hospitals
3.2 Health care benefits and rationing	5.4 Payments to physicians
3.3 Complementary sources of finance	6. Health care reforms
3.4 Health care expenditure	6.1 Health care delivery system reform
4. Health care delivery system	6.2 Health care financing reform
4.1 Overview	6.3 Governance
4.2 Public health services	7. Summary and concluding remarks

## CHINA: REFORMING THE RURAL HEALTH SYSTEM

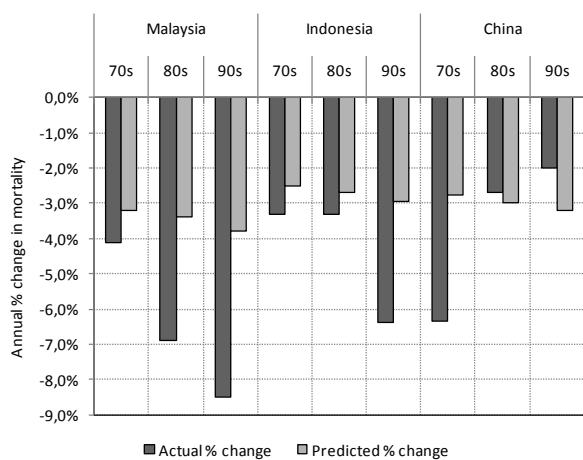
The China 2009 report, entitled ***Reforming China’s Rural Health System***, builds upon the 2004 background paper also included in this review. It was written at the end of a 5-year period of intense and varied World Bank engagement in health sector review activities in China. Written mainly for internal use at the World Bank, the report was an effort to summarize some key findings that emerged from the Bank’s advisory activities during those years. The clever use of information in this report warrants a detailed account of some of its analyses.

The report begins with a review of health status (mortality and morbidity) in China. It shows that between 1980 and 2000 infant and adult mortality rates continued to decline in China, but at lower pace than the much richer OECD countries (Figure 38). It also shows that whereas in the 1960s and 1970s China outperformed Malaysia and Indonesia in terms of child mortality reductions, in the 1980s and 1990s it lagged behind them (Figure 39 and Figure 40). Considering that by 1980 the OECD countries and Malaysia had already achieved much lower mortality rates than China, the failure by China to outperform the decline in mortality in the richer countries was a sign of poor performance. Data from the early 2000s on mortality from communicable diseases also presented a worrisome trend, with rising death rates from hydrophobia (Rabies) and viral hepatitis, in addition to HIV/AIDS and SARS.



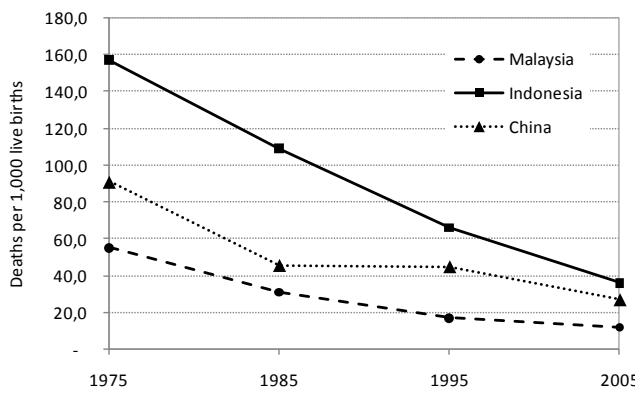
Source: World Bank (2009).

**Figure 39 Under-five mortality in China, Malaysia and Indonesia, 1970s-90s**



Source: World Bank (2009).

**Figure 40 Child mortality rates in China, Malaysia and Indonesia, 1975-2005**



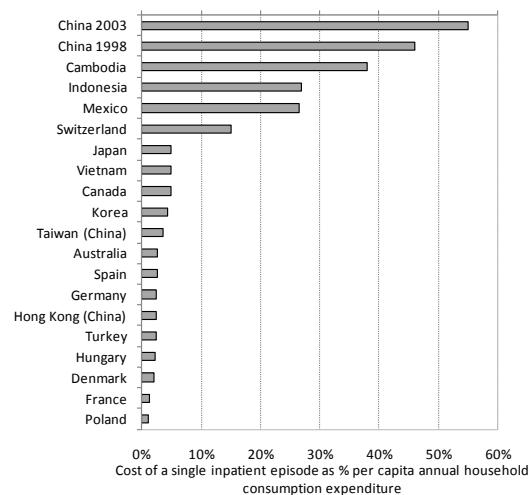
Source: Authors from [www.childinfo.org](http://www.childinfo.org)

During the 1990s inequalities in child and maternal mortality persisted, and the rates of malnutrition that were already high for international standards, widened between urban and rural areas.

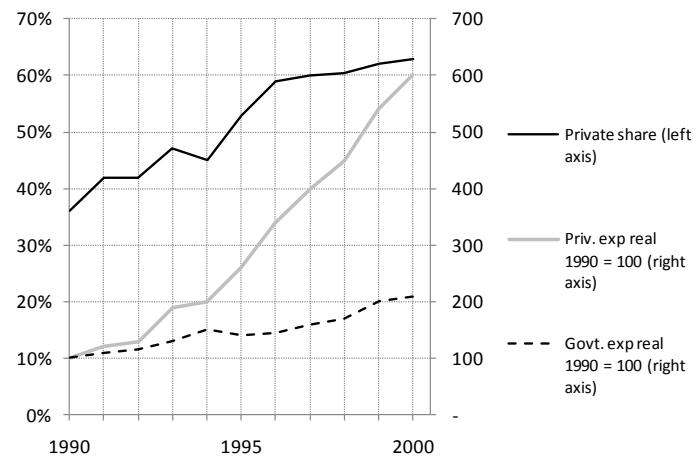
The report examines trends in out-of-pocket spending (OOPS) on health care to test the hypothesis that a growing financing burden on households may ration demand, hence resulting in poor performance in health. It notes that public providers of health services became increasingly reliant on OOPS. The report shows that household OOPS per hospitalization represented 55 percent of per capita annual household consumption expenditure, by far the highest amount in a

reference group that included both developed and developing countries (for example, it was about 5 percent in Vietnam and 3 percent in Turkey and 1.5 percent in Poland—see Figure 41). Between 1990 and 2000 OOPS grew from less than 40 percent of total health financing in China to 60 percent, a dramatic change in health financing patterns in a relatively short time span (Figure 42). The report shows that growth in OOPS responded to increased reliance by health care providers on patient payments, a decline in coverage by health insurance, and an increase in the cost of health care.

**Figure 41 Household cost of hospital care in China and other countries, around 2000**



**Figure 42 Out-of-pocket health spending in China, 1990-2000**



Source: World Bank (2009).

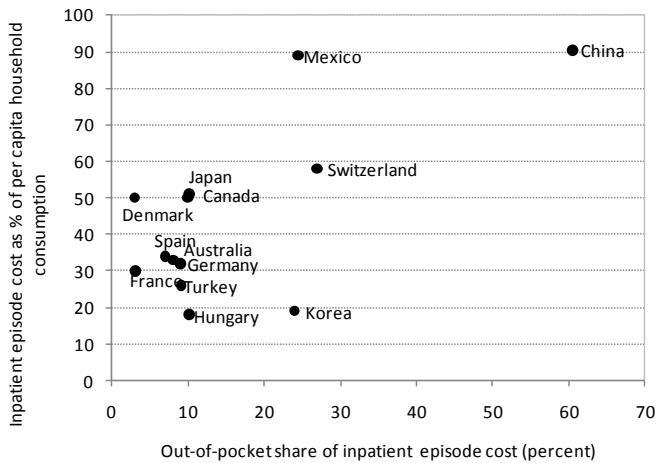
Households in China paid, on average, 60 percent of the hospital bill, as is shown in Figure 43. In the countries with the next highest rates, the out-of-pocket share was just over 20 percent at the time, and in most countries, the figure was much less. In addition, the vertical axis of this figure shows that the cost of care itself was high in China relative to per capita income.

The high cost of health care in China led the authors of the report to assess efficiency of the country's hospitals. They found that Chinese hospitals were being inefficiently used, with a relatively low bed occupancy rate and a low annual number of cases per bed (Figure 44). Excess hospital bed capacity was a source of inefficiency but not the only one. The authors also reported evidence of clinically unnecessary patient expenditures and one of the world's highest shares of pharmaceutical expenditure relative to total health expenditure. Another finding was that China was quickly adopting new medical technology, for example showing a relatively high rate of Magnetic Resonance Units (MRIs) per million citizens given its per capita income (Figure 45).

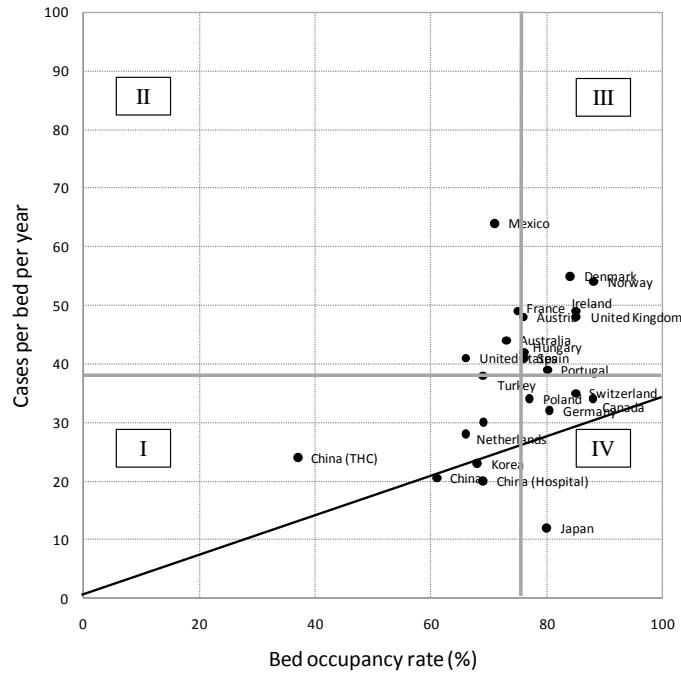
High OOPS also responded to a shift in the behavior of government health care providers who, to increase revenue while adhering to pricing policies, induced demand for drugs and high-tech treatments away from less profitable, low-tech services. The privatization of local government clinics also resulted in rising health care prices and demand inducement.

The high share of OOPS in health financing resulted in part from a contraction in health insurance coverage which, prior to the reforms of the 1980s, was nearly universal. Health insurance declined more dramatically in rural areas following the end of the commune-based rural cooperative medical scheme.

**Figure 43 Inpatient health care costs in China and other countries, around 2000**

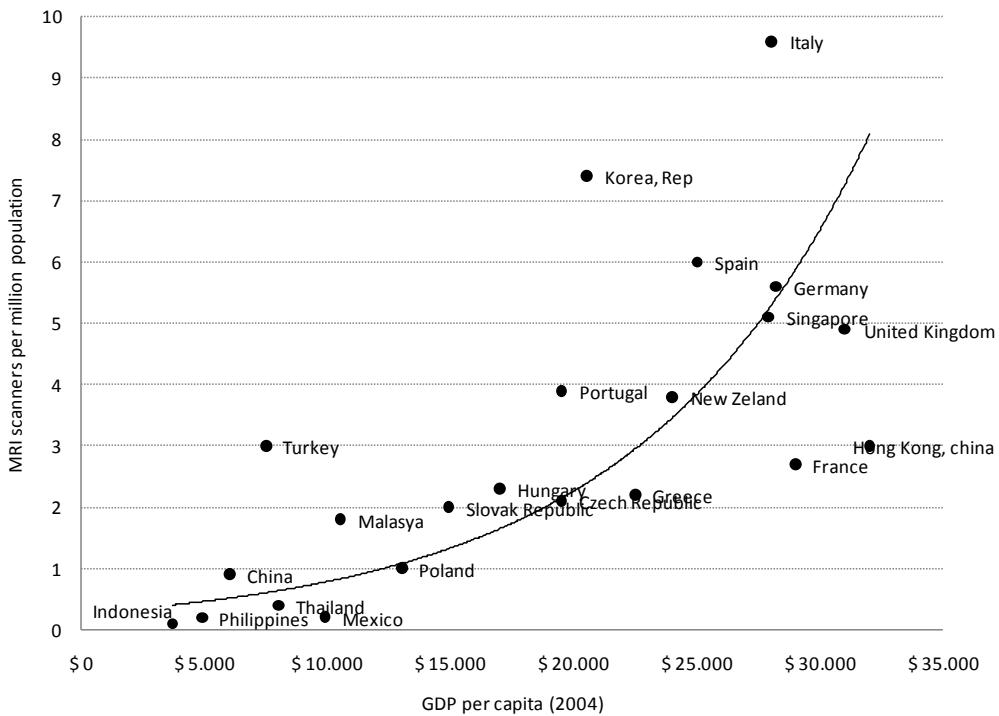


**Figure 44 Hospital Efficiency in China and OECD Countries, around 2000**



Source: World Bank (2009).

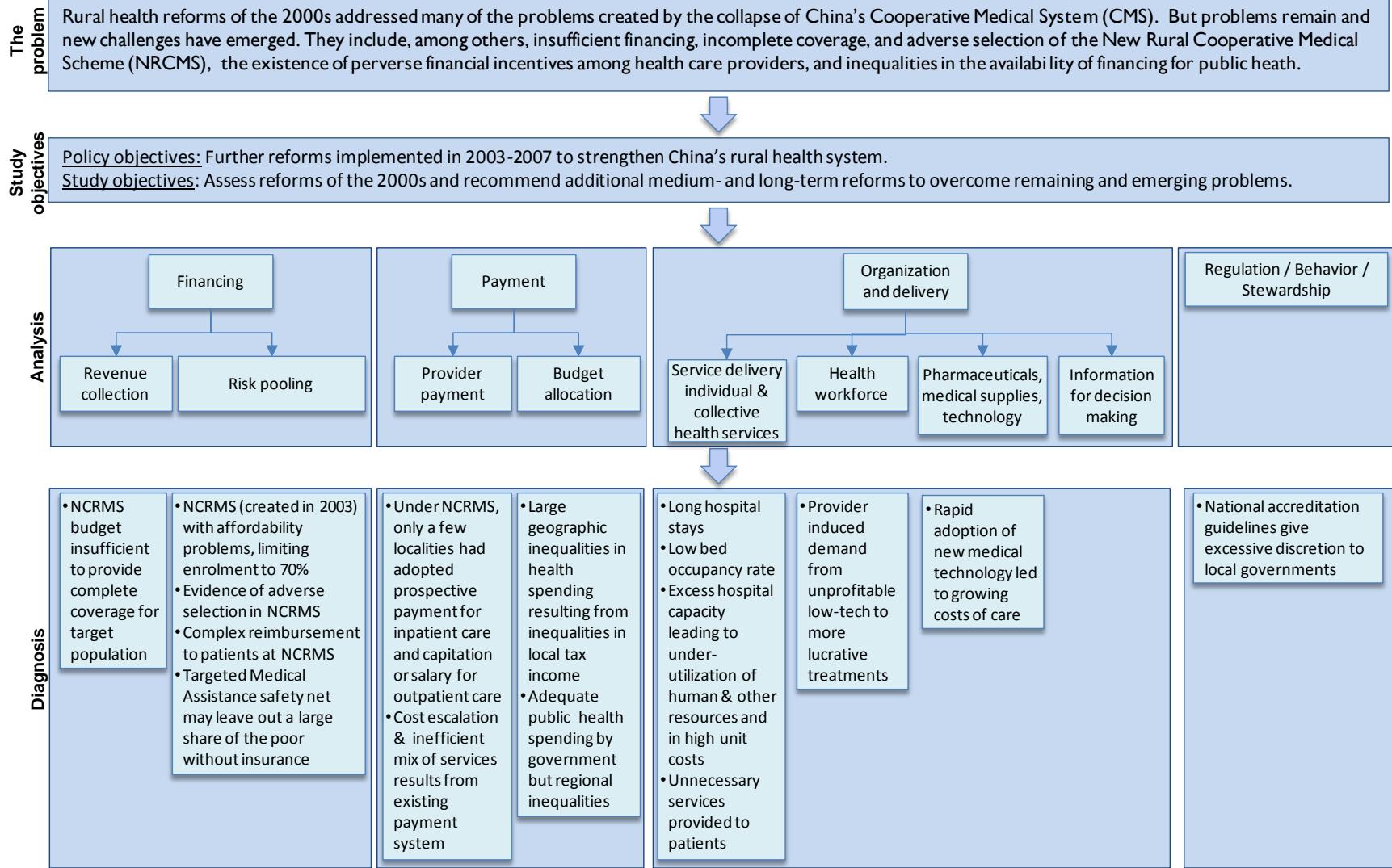
**Figure 45 Technology adoption in China and other countries, around 2000**



Source: World Bank (2009).

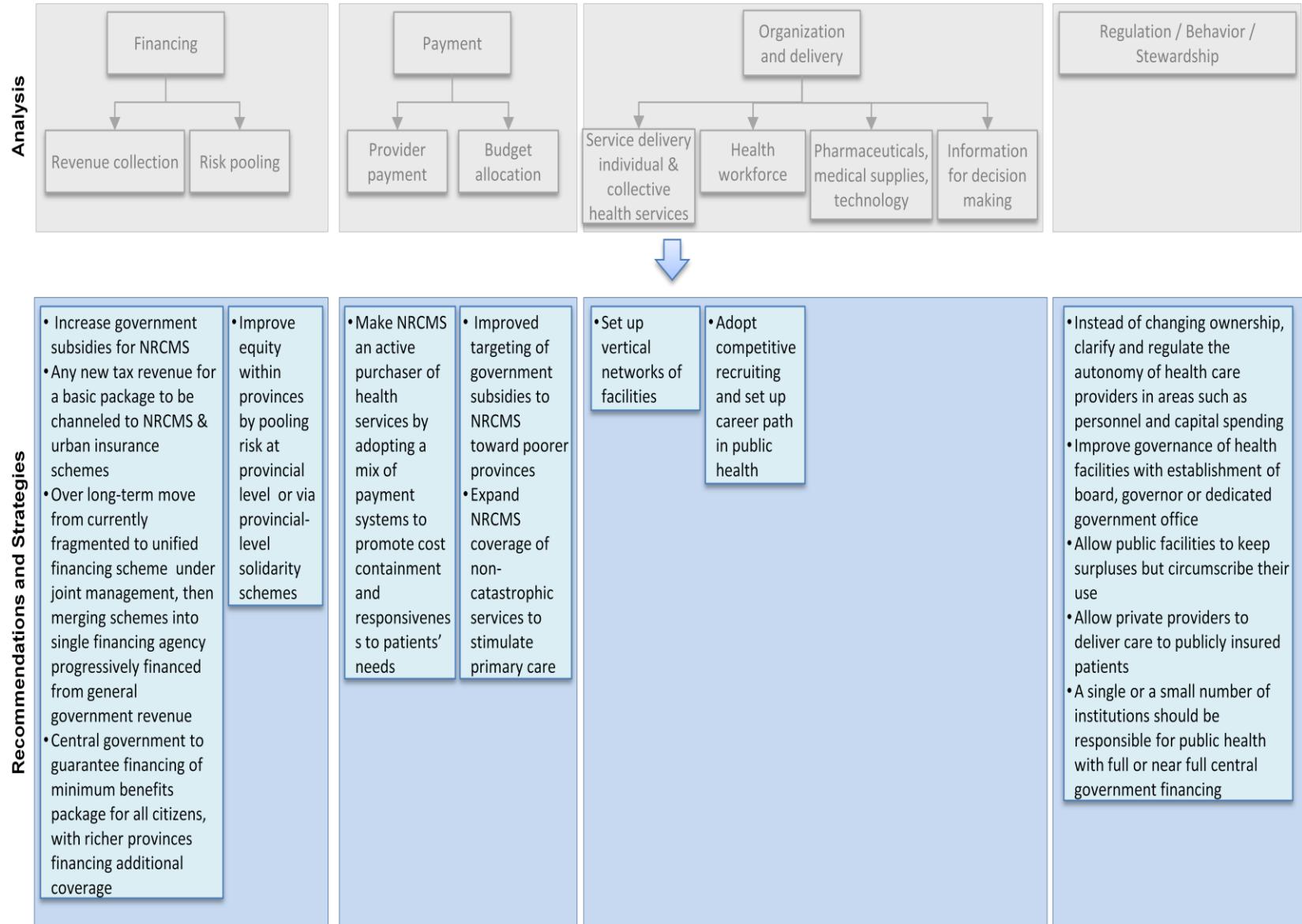
The problems that motivated this analysis and the diagnosis that resulted from it are summarized in Figure 46, below, while the recommendations and implementation strategies are described in Figure 47.

**Figure 46 China: From problems to diagnosis**



Source: Constructed by authors from World Bank (2009c).

**Figure 47 China: Policy recommendations and strategies**



Source: Constructed by authors from World Bank (2009c).

## VIETNAM: HEALTH FINANCING AND DELIVERY

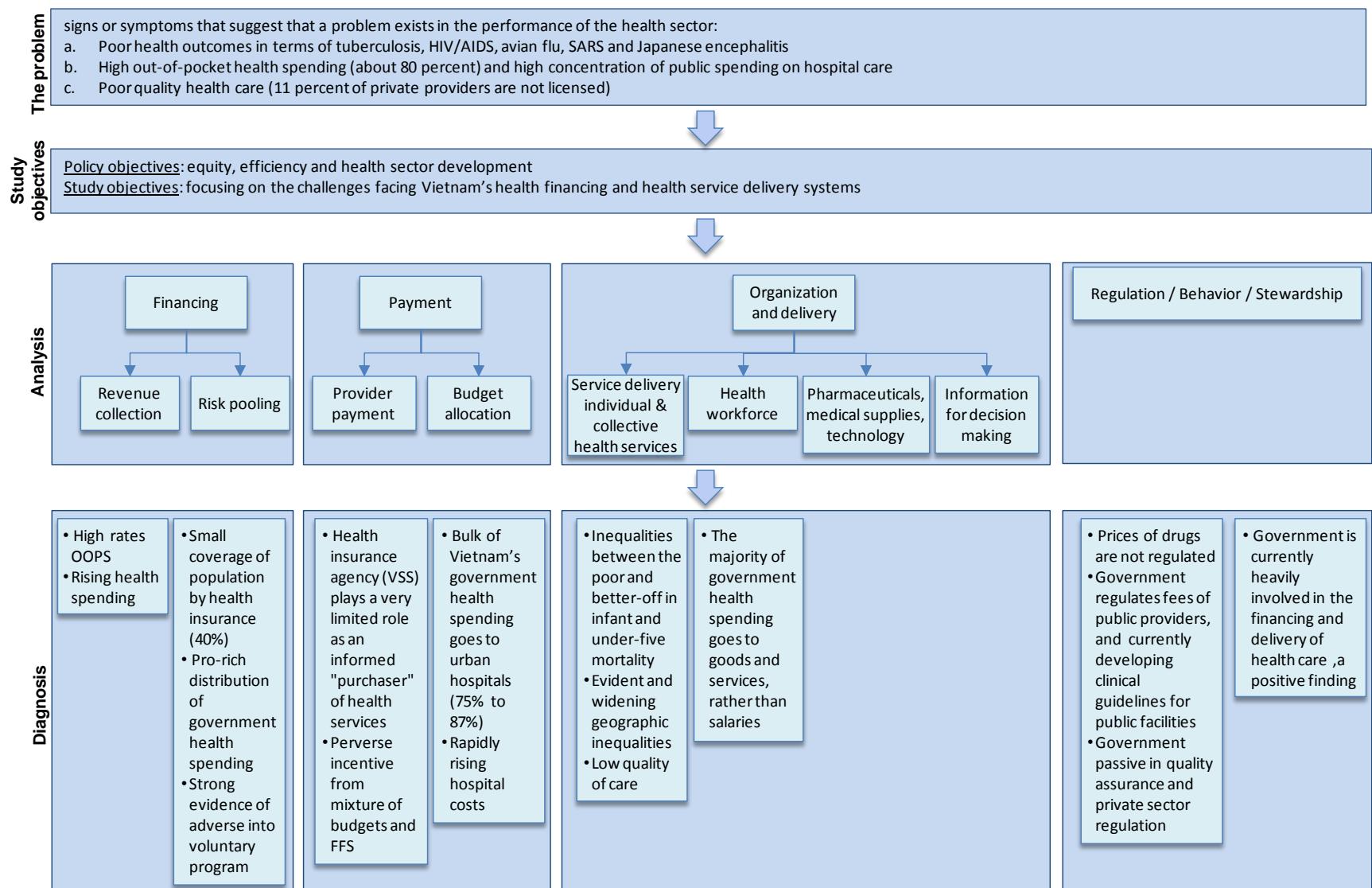
**“Health Financing and Delivery in Vietnam: Looking Forward”** is one of the most recent reports included in this review. Published in 2009 as part of the HNP Series, it was written to identify ways for improvement of health system performance in Vietnam, although the country has done, and continues to do, better than might be expected, given its per capita income. Vietnam has a high incidence of catastrophic, out-of-pocket household health spending and a low level of government health spending reaching the poor. People in Vietnam are receiving quite sophisticated care, but the country’s social health insurance program does not yet cover the entire population. Other major problems identified in the report are worrying trends in TB mortality and prevalence, new and reemerging communicable diseases comprising a rising share of the burden of diseases and inequalities in the reduction of infant mortality and immunization coverage. Main causes identified include low and no deep coverage for 40% of the population, providers’ inefficiency and provider performance. A comprehensive list of problems and causes discussed in the report is shown in the following table.

**Table 14 Vietnam: From problems to causes to solutions**

Vietnam	
The main problems	
Problem 1:	Recent trends in TB mortality and prevalence present a somewhat worrying picture
Problem 2:	Communicable diseases (new and reemerging) are comprising a rising share of the burden of disease in Vietnam.
Problem 3:	Data shows inequalities in reduction of infant mortality and immunization coverage
Problem 4:	Bad score in terms of degree to which government health spending reaches the poor (only 15%)
Problem 5:	High percentage of population recorded out-of-pocket health expenses that exceeded their discretionary income (high rates of catastrophic out-of-pocket health spending)
The main causes of the problems	
Cause 1:	Low and no deep coverage (40% population) Expanding coverage within existing policy framework Moving toward a mandatory contribution-based schemes for everyone, except the poor. Universal program with formal sector workers contributing according their earnings and everyone else coverage financed at taxpayer's expense
Cause 2:	Providers' inefficiency Asses incentives to providers Change payment mechanism switching from fee-for-service to some form of "prospective" system Gradual shift from supply-side financing to demand-side financing will strengthen the role of the insurer as a financing agency
Cause 3:	Provider performance Apply clinical guidelines improve qualifications of private sector providers

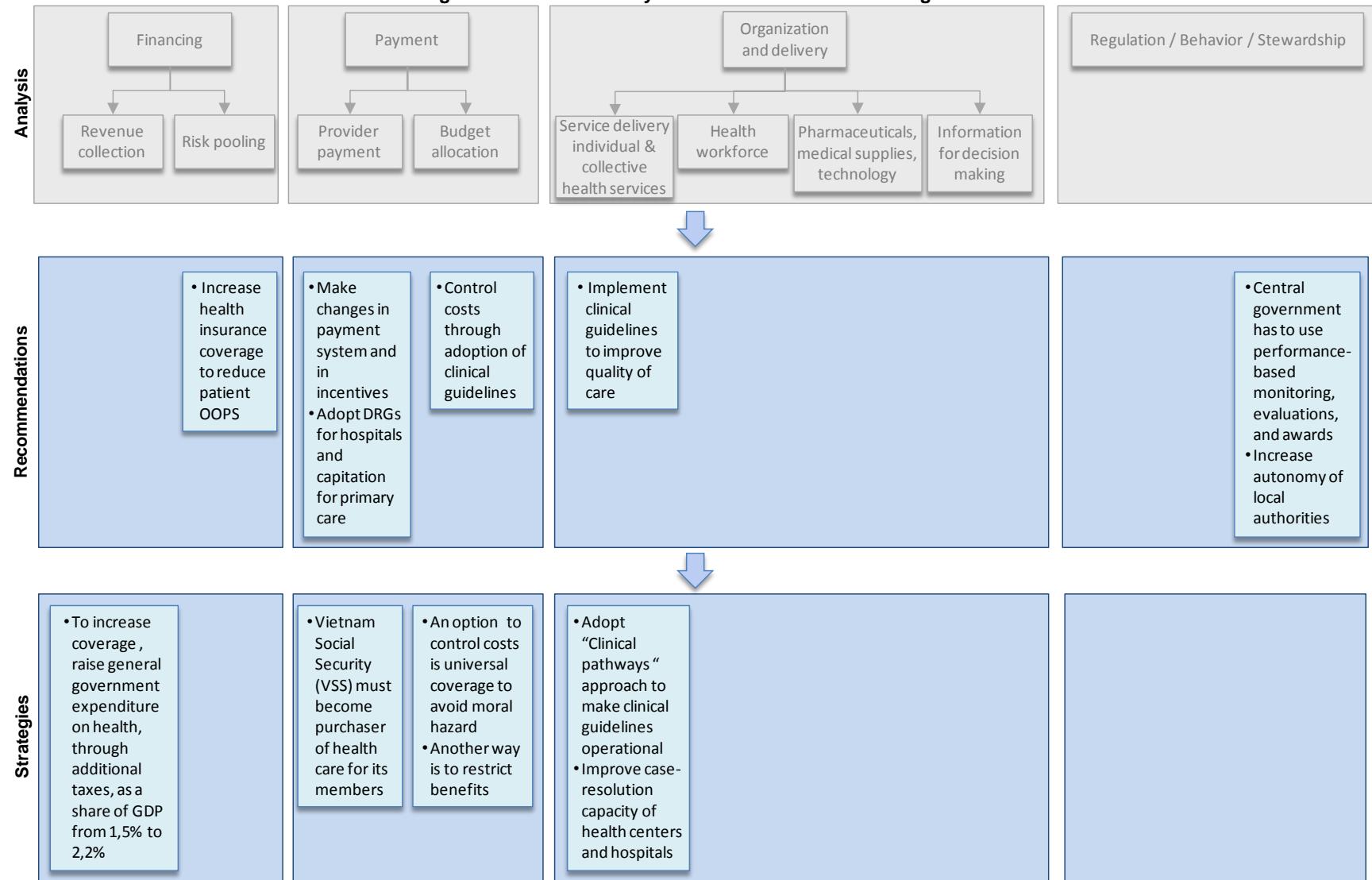
In their review, the consultants also identified the major areas of analysis included, a diagnosis in each area as well as policy objectives. This analytical approach is presented in Figure 48. Figure 49 outlines the report’s main recommendations.

**Figure 48 Vietnam: From problems to diagnosis**



Source: Constructed by authors from World Bank (2009b).

**Figure 49 Vietnam: Policy recommendations and strategies**

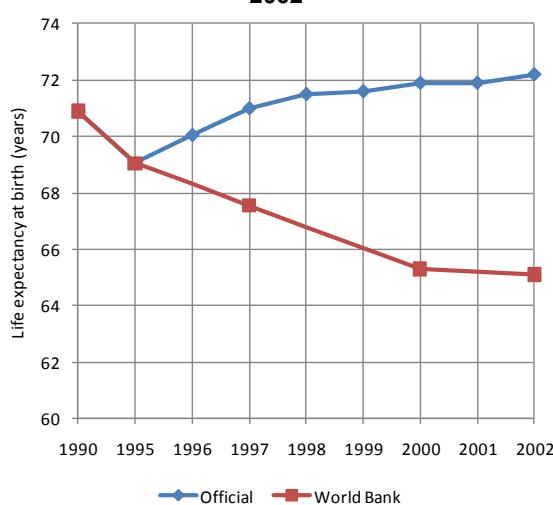


Source: Constructed by authors from World Bank (2009b).

## AZERBAIJAN: HEALTH SECTOR REVIEW NOTE

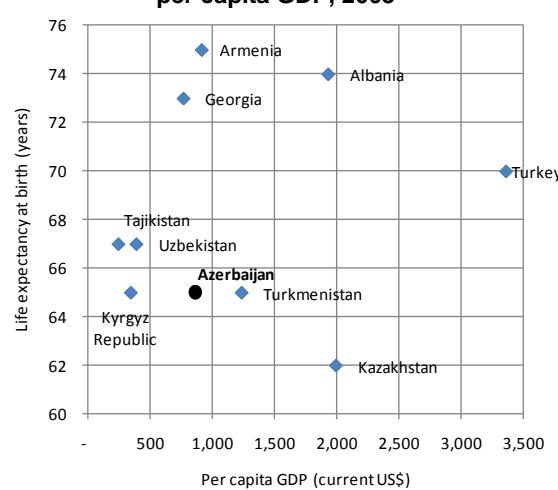
This report was motivated by a dramatic decline in health status in Azerbaijan between 1990 and 2002. As is shown in Figure 50, whereas official statistics showed an increasing life expectancy at birth (LEB), World Bank data revealed instead a 6 year drop in LEB during that period. The report also noted that Azerbaijan's health status indicators were on the low end relative to other Central Asian countries (Figure 51), and that if some of the downward trends seen in health status continued—for example rising infant and maternal mortality rates—the country could fail to meet some of its MDGs. The report was written to spur policymakers to consider a set of options for reforming the health system, thereby enabling them to embark on a long-awaited reform initiative to improve health outcomes. Of all the reports reviewed here, the Azerbaijan report adheres the most to a highly structured and thorough health system analysis.

**Figure 50 Azerbaijan: Life expectancy at birth according to official and World Bank estimates, 1990–2002**



Source: World Bank (2005).

**Figure 51 Selected countries from Europe and Central Asia: Average life expectancy at birth versus per capita GDP, 2003**



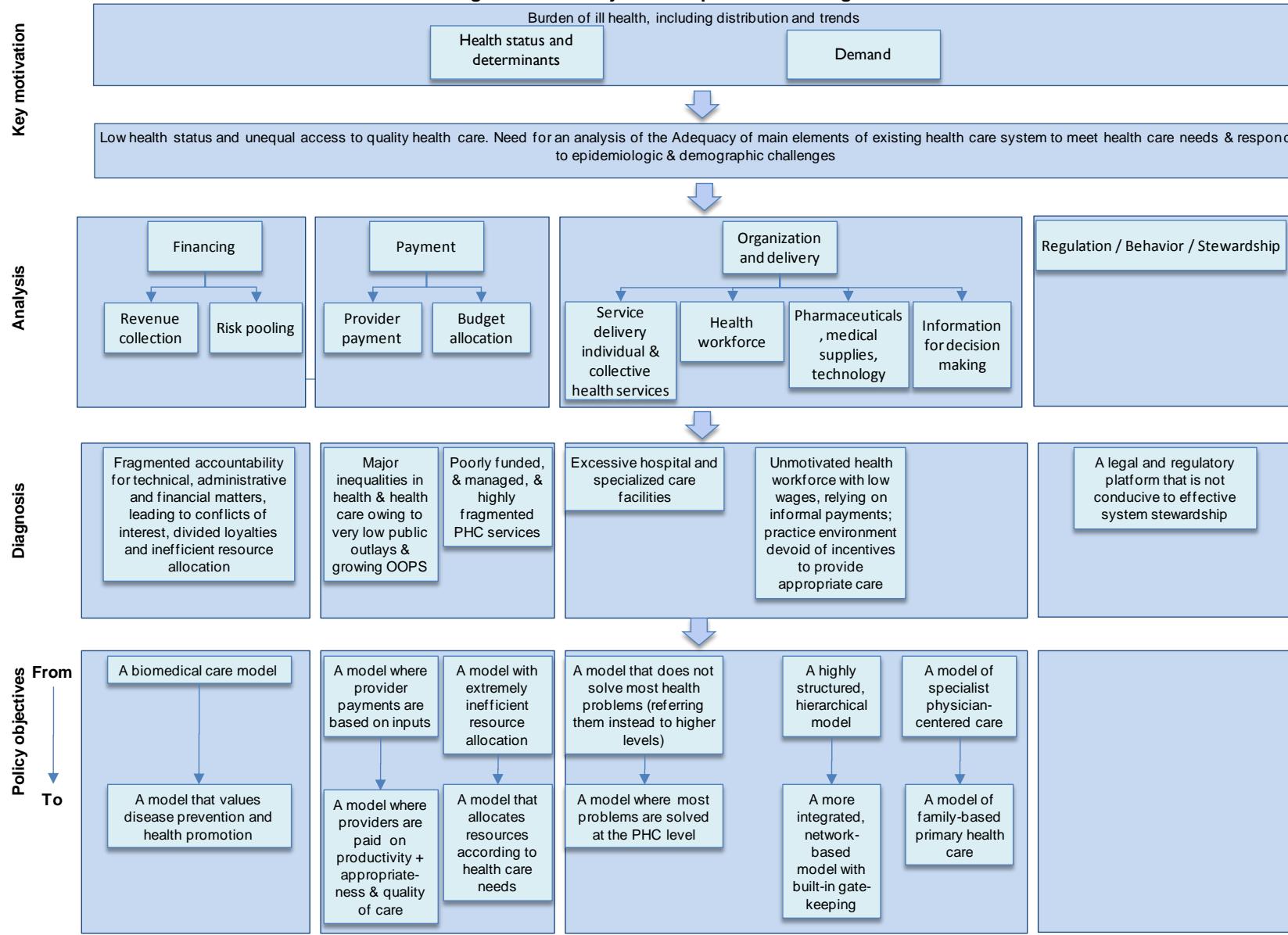
Source: Authors from World Bank (2005) and [www.worldbank.org](http://www.worldbank.org).

The Azerbaijan HSA report comprises 2 volumes. Volume 1 summarizes and integrates main study findings and proposes an agenda for reform; volume 2 provides the evidence for volume 1, compiling the following 7 chapter (each from a separate paper) and 2 annexes:

- Chapter 1. Health status, healthcare needs and determinants
- Chapter 2. Demand for and utilization of healthcare services
- Chapter 3. Health system stewardship
- Chapter 4. Financing health care
- Chapter 5. Human resources
- Chapter 6. Health services organization and delivery
- Chapter 7. Toward greater access to pharmaceuticals
- Annex 1. Achievement of MDG goals
- Annex 2. Demographic trends

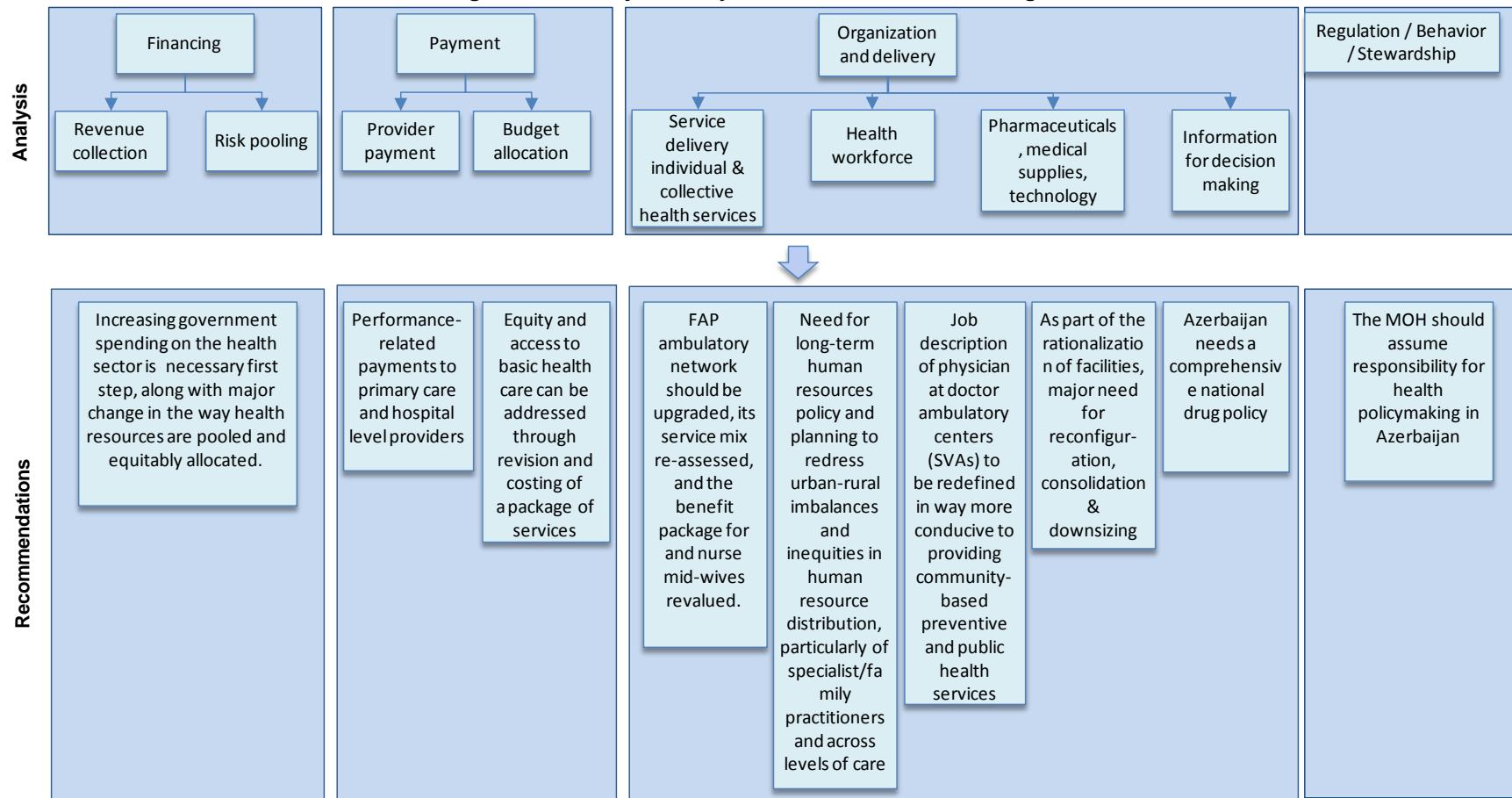
Figure 52 outlines the recommendations included in the report for each of 6 main health system functions: stewardship, financing, human resources, organization and delivery and pharmaceuticals.

**Figure 52 Azerbaijan: From problems to diagnosis**



Source: Constructed by authors from World Bank (2005a)

**Figure 53 Azerbaijan: Policy recommendations and strategies**

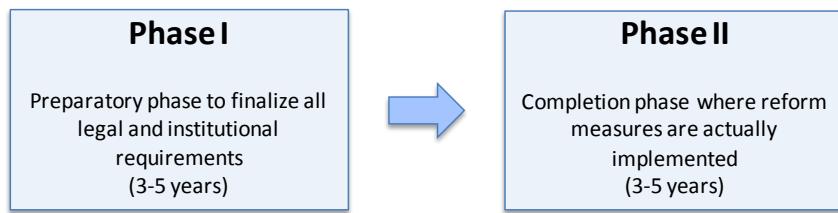


Source: Constructed by authors from World Bank (2005a)

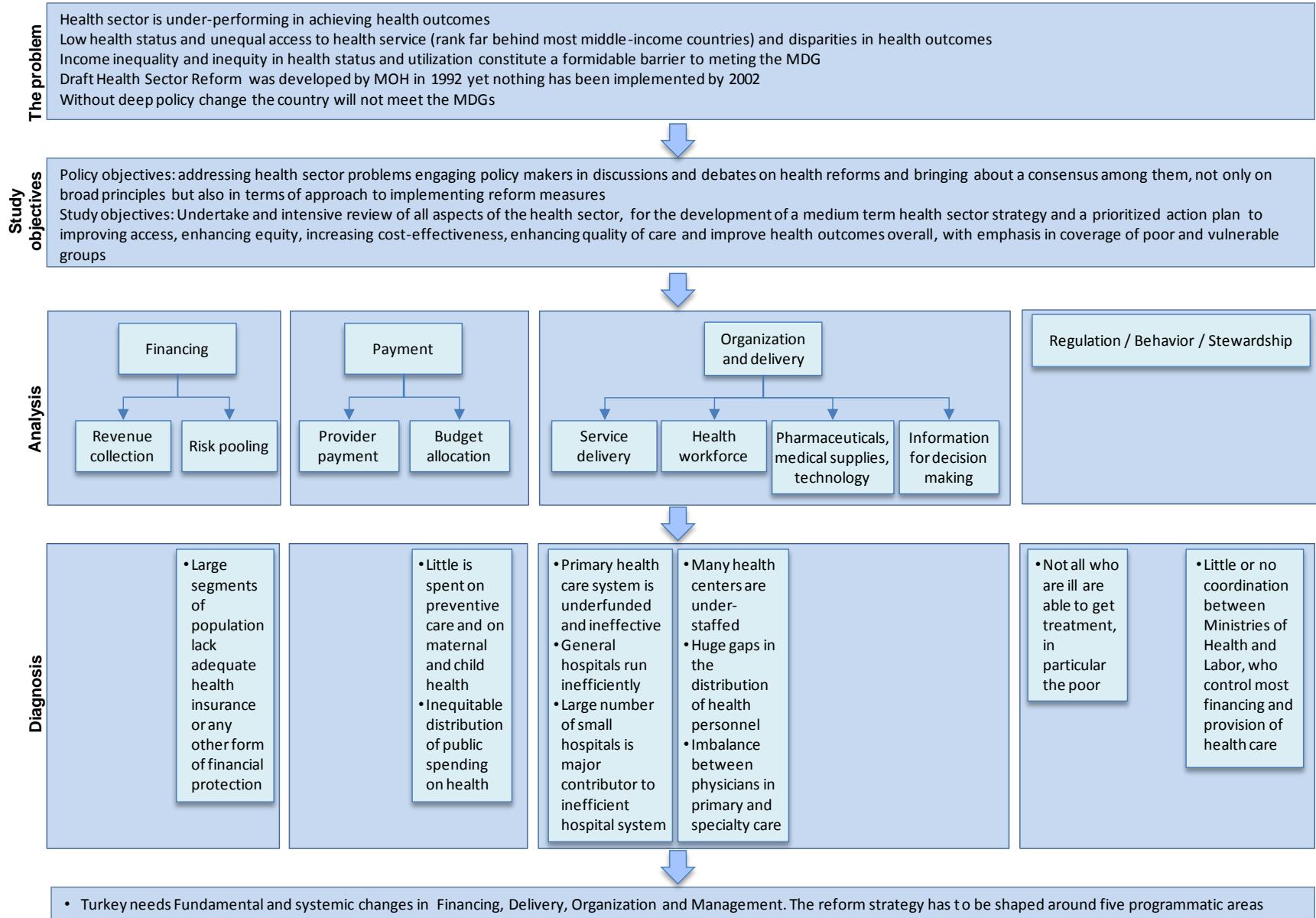
## TURKEY: REFORMING THE HEALTH SECTOR FOR IMPROVED ACCESS AND EFFICIENCY

“*Reforming the Health Sector for Improved Access and Efficiency*” (2003) is a two-volume report about Turkey’s low health status and poor outcomes, unequal access to health services and fragmented and underperforming health sector. It includes two volumes: a main report and a series of background papers. The report identifies key trends in health status, production, finance, delivery and organization. Together, the two volumes review aspects of the country’s health sector to develop a medium-term health sector strategy and priorities action plan. Figure 55 describes in detail the analytical approach used. The reform strategy is shaped around five programmatic areas, as seen in Figure 56. Also included in this report was a costing of reform components and a time table for implementing the recommendations in two phases, as seen in Figure 54.

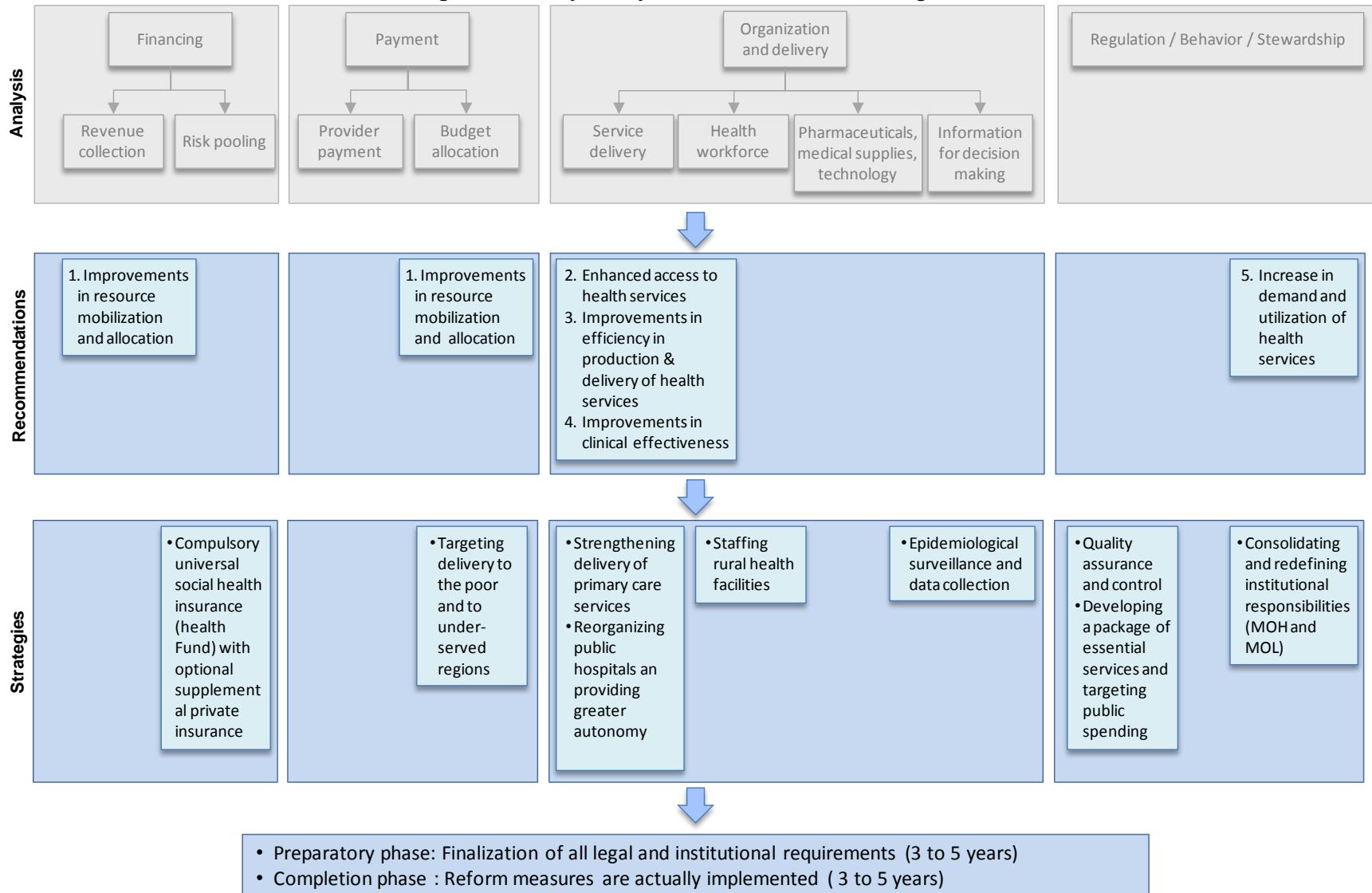
Figure 54 Turkey: Phased implementation



**Figure 55 Turkey: From problems to diagnosis**



**Figure 56: Turkey: Policy recommendations and strategies**



## EGYPT: HEALTH SECTOR REFORM AND FINANCING REVIEW

The report “*Egypt’s Health Sector Reform and Financing Review*” (2004) was written to provide the Government of Egypt and its development partners with a critical assessment of experience to date with the Health Sector Reform (HSR) Pilot Project, which began in 1997 as a phased set of three pilots. This report examines the performance of the reform to date, with a focus on the pilots. Hence, unlike the other reports of this review, it is not a comprehensive HSA. Figure 57 outlines the policy background of the Egypt report, which reviews the two main components of the pilot projects and their subcomponents (Figure 58).

The authors concluded that the HSR Pilot Project has had its successes and its limitations. Its service delivery component succeeded in increasing provider satisfaction and productivity through the use of performance-based incentive systems. It also succeeded in increasing patient satisfaction and demand for PHC services by utilizing a holistic family health approach to patient care. Yet the financing component of the HSR Pilot Project had limited success. Financing of the services under the HSR Pilot Project remained fragmented and the bulk of the costs of the Family Health (FH) providers were still covered by their mother organizations, with the role of the Family Health Funds (FHF) limited to disbursement of provider incentives. The financing component of the HSR Pilot Project failed to create new sustainable funding sources. FH services continued to be financed through the traditional sources of public financing. The additional costs of operating the FHF and of disbursing provider incentives remained fully financed through donor funds. Thus, even within their limited scope of operations, the financial outlook for the FHF looked unfavorable.

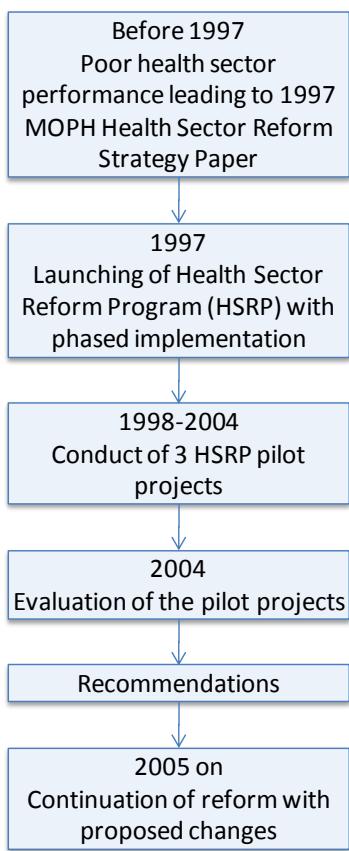
Short- and medium-term strategies recommended included to: (i) to scale up successful service delivery component; (ii) reform and then replicate financing component; and (iii) merge FHF into Health Insurance Organization (covering 46 percent of Egyptians). The long-term strategy recommended was to rely on health insurance organizations to achieve universal insurance, and to improve several dimensions of performance within HIO. The report also carried out a sustainability analysis, which looked at both institutional and financial sustainability as well as design and implementation aspects of the reform (Table 15).

**Table 15 Egypt: Sustainability analysis**

Institutional sustainability	Financial sustainability	Design and implementation
<ul style="list-style-type: none"> <li>• FHF not autonomous</li> <li>• Expected laws not passed</li> <li>• FHF not viable as vehicle for universal health insurance</li> <li>• Failed reform principles: <ul style="list-style-type: none"> <li>◦ Separation of financing and provision</li> <li>◦ Integration of service delivery (parallel MOPH and HIO providers)</li> <li>◦ Provider competition</li> <li>◦ District approach</li> <li>◦ Coordination of delivery and financing</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Donor funding indispensable to sustain pilots</li> <li>• Private funding will not increase because: <ul style="list-style-type: none"> <li>◦ Limited BP</li> <li>◦ Voluntary enrollment</li> </ul> </li> <li>• Unaffordable public costs of BP expansion</li> <li>• Reform benefits hard to assess</li> <li>• Overall: reform as implemented in pilots is not financially sustainable</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of initial political economy analysis leading to lack of political support</li> <li>• Weak institutional design</li> <li>• Risk management not considered</li> <li>• BP does not cover financial risk</li> <li>• Failed integration of vertical health programs into pilots</li> <li>• Missing monitoring &amp; evaluation system</li> <li>• Regional variations in income &amp; other factors remain to be considered in design</li> <li>• Keep implementation structures simple</li> <li>• Donor support remains indispensable</li> </ul>

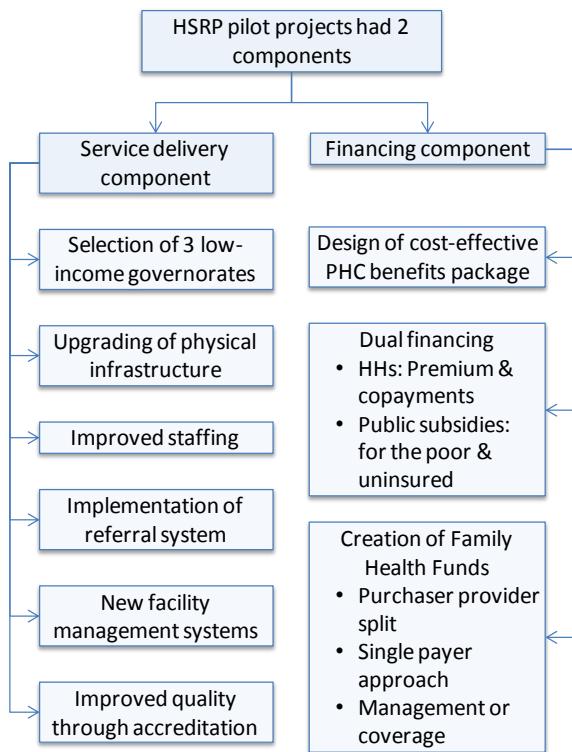
Source: Authors from World Bank (2004a).

**Figure 57 Egypt: Health sector reform background and pilot tests**



Source: Authors from World Bank (2004a).

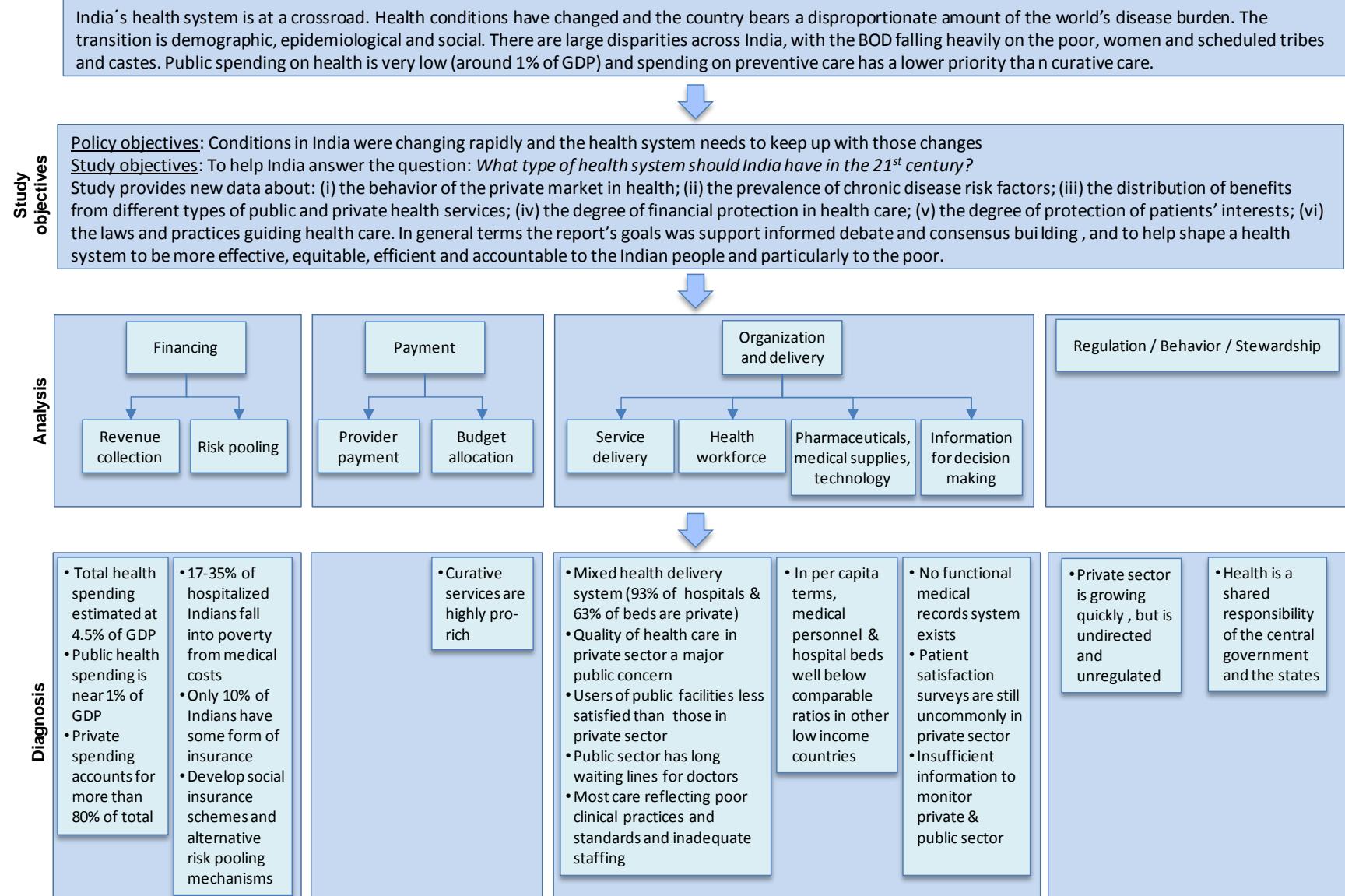
**Figure 58 Egypt: Components and subcomponents of HSRP pilot projects**



**INDIA: BETTER HEALTH SYSTEMS FOR THE POOR**

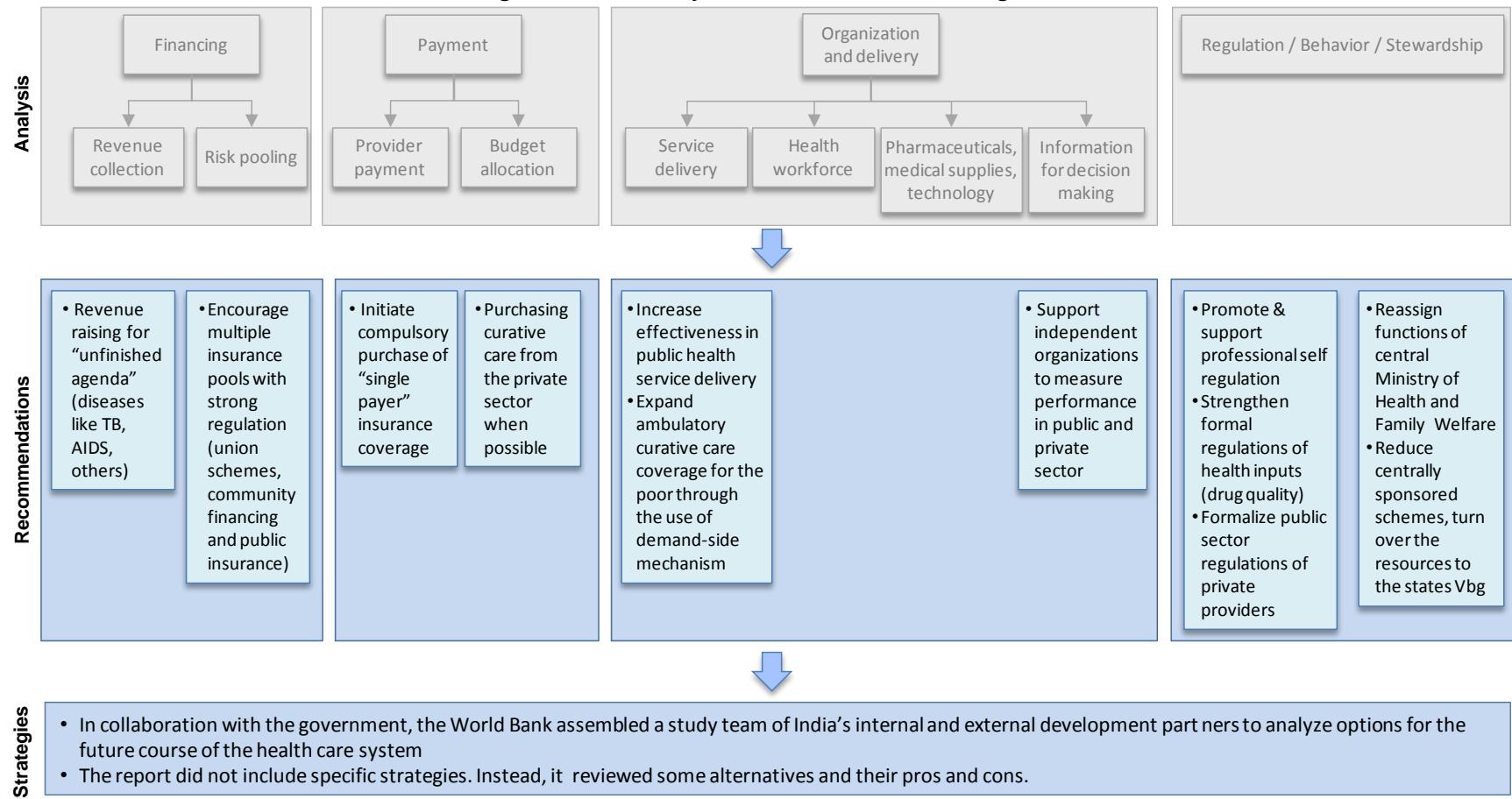
“**Better Health Systems for India’s Poor**” (2002) discusses how India can meet the health needs of the most vulnerable segments of its population and how to structure the roles of the public and private sectors to better finance and deliver health services. A vast set of background papers were prepared for this work (see Box 5). Figure 59 outlines the specific analytical approach employed; Figure 60 depicts the policy recommendations in the five key areas of oversight, public health service delivery, ambulatory curative care, inpatient care and health insurance.

**Figure 59 India: From problems to diagnosis**



Source: Constructed by authors from World Bank (2002b).

**Figure 60 India: Policy recommendations and strategies**



Source: Constructed by authors from World Bank (2002b).

**Box 5 List of background papers commissioned for “Better Health Systems for India’s Poor” (2002)**

1. Garg, C. “Implications of Current Experiences in Health Insurance in India.”
2. Mahal, A. “Private Entry into Health Insurance in India: An Assessment.”
3. Ferreiro, A. “Private Health Insurance in India: Would Its Implementation Affect the Poor?”
4. Nandraj, S. “Accreditation System for Hospitals in India.”
5. Mahal, A., J. Singh, F. Afridi, V. Lamba, A. Gumber, and V. Selvaraju. “Who ‘Benefits’ from Public Sector Health Spending in India? Results of a Benefit Incidence Analysis for India.”
6. Nandraj, S. “Contracting and Regulation in the Health Sector: Concerns, Challenges, and Options.”
7. Muraleedharan, V.R. “Private-Public Partnership in Health Care Sector in India: A Review of Policy Options and Challenges.”
8. Baru, R.V., I. Qadeer, and R. Priya. “Critical Review of Studies on the Private Sector in Health.”
9. Indian Law Institute. “Legal Framework for Health Care in India: Experience and Future Directions.”
10. Misra, B., and P. Kalra. “The Regulatory Framework for Consumer Redress in the Healthcare System in India.”
11. Pearson, M. “International Experience of Hospital Autonomy.”
12. Pearson, M. “Overview Paper: Hospital Autonomy in India.”
13. Administrative Staff College of India. “The Indian Pharmaceuticals Industry.”
14. Govindaraj, R., and G. Chellaraj. “Pharmaceuticals Sector in India: Issues and Options.”
15. Kilpauk Medical College, Department of Community Medicine. “Pharmaceutical Study on Drug Policy: Tamil Nadu.”
16. Benaras Hindu University. “Drug Policy Assessment Study: Uttar Pradesh.”
17. JSS College of Pharmacy. “Drug Policy Assessment Study: Karnataka.”
18. Mahal, A., A. Yazbeck, D.H. Peters, and G.N.V. Ramana, “The Poor and Health Service Use in India.”
19. Peters, D.H., A. Yazbeck, G.N.V. Ramana, and R. Sharma. “Public-Private Partnerships in Health, Background Paper: Issues and Options.”
20. Institute of Health Systems. “Private Health Sector Market Analysis in Andhra Pradesh.”
21. Indian Institute of Management—Lucknow. “Private Health Sector Market Analysis in Uttar Pradesh.”

Source: Authors from World Bank (2002b).

## SUMMARY AND CONCLUSIONS

This review sought to assess the World Bank's experience with health system analysis in the past decade, by examining 12 HSA reports written since the year 2000 on countries from all Bank regions excepting LAC.

This body of work makes up a rich and fairly unique source of data and analysis on national health systems, their performance, their functioning, and strategies for system reform. Overall, we feel that this area of work is a major contribution of the World Bank to the enterprise of health system strengthening. Given the increasing global interest in this area, this is an excellent time for the Bank to take stock of its work (as well as the work of others) in this field and to put in place steps to improve these efforts.

The following summarizes some of the main findings from the review:

- The Bank produces comprehensive analyses of a country's health sector, systematically assessing in detail the various parts, actors, or functions that compose it.
- Probably no other development agency in the world produces such complete and systematic analyses of health systems for low- and middle-income countries, and few countries in that group carry out their own assessments as rich as the Bank's.
- Whereas the Bank has not formalized or standardized its methods for HSA, it tends to replicate more or less similar methods everywhere. Replication may occur in some informal way –for example with Bank officers asking staff and consultants to emulate some previous HSA report that they consider a model– since the Bank does not have written HSA guidelines.
- The Bank's standard HSA method essentially has two chief characteristics. One is the dissection and separate analysis of a system's health parts, followed by some form of integration. The other is the logic of the analysis.
- *Dissecting for separate analysis of a health system's parts:* The Bank generally conducts comprehensive health system analyses by partitioning and examining in detail the system's components or functions, including (a) *financing* (revenue collection and risk pooling); (b) *payment to providers* (payment method and budget allocation criteria); (c) *organization and delivery* (functioning of health care providers, health workforce, the markets for pharmaceuticals/medical supplies/technology, the use of health-related information for decision-making); and (d) *regulation* (by government, professional groups or industries), government's *stewardship* capacity through policymaking, and government's ability to modify consumer and provider behavior through *persuasion*.
- *The logic of the analysis:* The departure point everywhere is a review of health status for infants and children, fertile age women, adults, the elderly, those afflicted by specific conditions, or other groups. This review first examines levels and trends in health status, and compares them with other countries of similar characteristics, or across the regions of the same country. Whether the health status indicators appear out of line with other countries or regions at similar levels of development, or are unlikely to improve fast enough to meet the MDGs, or are not improving as much as their presumed potential, the analysis that follows typically follows a similar logic. It first involves an assessment of determinants of health outside of the health sector, such as safe water, sanitation, education, nutrition, housing, and

lifestyles. It then continues with an assessment of health determinants within the health sector, a task that proceeds by parts, where the parts are those listed above, from (a) to (d).

- These HSAs then typically move to the identification of problems or opportunities for improved health system performance, and the formulation of related policy recommendations both for governments and development agencies.
- All HSA reports reviewed here emphasized the goal of improving health status. Yet only the reports which relied heavily on the MBB methodology (two out of the 12 reviewed here) tried to predict the consequences that the recommended policy changes may have on health outcomes. All other reports did not advance far in linking recommendations to outcomes.
- The HSA analyses tended to propose four major kinds of opportunities for improved performance: *efficiency* –the improvement in health status with existing, or with any needed new resources; *equity* –the reallocation of existing resources or the injection of additional resources to reduce socially unacceptable inequalities in access to health services, in health status, or in the financial burden of health care to families; *quality of care* –the availability of qualified human resources, medicines, and other inputs, and the medically correct combination of these resources for the delivery of services; and *financial protection* –the existence of enough risk pooling and insurance coverage to allow individuals and households to live their lives without the fear of impoverishment or financial catastrophes from health shocks.
- The production of HSA often involves large research and consulting operations that generate primary information through surveys or that resort to secondary information to produce a rich array of datasets and reports.
- It was difficult to ascertain in detail who the users of these reports are, beyond the Bank and the studied countries themselves, or how the reports were actually used. Because it was difficult to reach the reports' authors to respond to their interviews or to interview in-country informants (policymakers, researchers, consultants) the authors of this report will be producing a companion report with the results of interviews that were carried out after completion of this document. .
- The Bank's HSA are mostly financed with the Bank's own resources in the form of non-reimbursable technical analysis funds or grants from third parties. Governments may also finance some of the data collection costs as well as the costs of in-country processes. The consultants could not obtain much information about the cost of these reviews, but from the little information that they did get it seems that they cost from \$150,000 upwards. HSAs as complex and rich as those that involve the production of a large volume of separate consulting reports, such as the ones for India, Turkey, Azerbaijan, and Ethiopia, may cost up to \$ 1 million.
- There is some concern about whether these exercises, especially those that are more costly, provide value for money. We noted also that this wealth of information constitutes a valuable public good that would not become available otherwise, so that the value of these exercises should not be seen solely in terms of the specific policy processes taking place in a particular country at a particular point in time.
- It is unclear from the review how often these HSA are repeated in a single country, or whether they are repeated at all in the same form. Repetition would enable the Bank, other donors, and the countries themselves to track change over time.

- The ability of others (the studied countries themselves and other development agencies) to benefit from this information, seem to justify the joint-financing of HSA of this sort by various donors or development institutions, when Bank resources alone are insufficient.
- The separate examination of the health systems' parts, in the form of targeted consulting reports, is typically followed by some effort to integrate the findings into a single volume. Hence, several of the HSA reports reviewed here are in the form of two volumes, one with a collection of separate staff or consultant reports, each addressing a separate part of the health system, and another volume which integrates and summarizes the findings from those reports and which issues policy recommendations and a more or less coherent plan of action. The success of the integration volume to put together the parts and, especially, to consider the links among them, varies from report to report. Summary volumes may fail to capture the complex set of interrelationships and contextual detail among various parts of a health system that are evident from the more detailed volumes.

The review also turned up a number of specific gaps or areas of potential improvement, which could provide the basis for the Bank's work in this field going forward. The following is a list of recommendations arising from this review:

- Given the high cost of these HSAs, the prospects for insight that they offer, and the observed variability in methods, it may be useful for the Bank to consider expanding internal efforts to strengthen technical approaches and exchange of information about HSA methods and experiences, in order to enhance its HSA capabilities.
- One approach might be to provide training to Bank staff and clients (country counterparts) to improve planning, implementation, and use of HSAs. Short courses or course modules associated with the *Flagship Course on Health Sector Reform and Sustainable Financing* could be developed to familiarize the Bank's staff and clients with HSA methods. Seminars held during the production of this consulting report, to present preliminary findings, were received with considerable interest by Bank staff. It allowed them to learn about new techniques of analysis or about similarities and differences in analytical methods and policy approaches to health system problems in different countries and regions.
- The internal effort could also include the production of technical notes, guidelines, and measurement tools to build up areas of HSAs that are less technically developed. Some areas of analysis are already well developed. For example, reports make use of relatively standardized measures of health outcomes and health status and often draw on standardized data sources such as Demographic and Health Surveys. Health financing and expenditure analysis benefits from widely used methods such as national health accounts and public expenditure reviews. However, several other areas of work became clear in the process of writing this review where the technical bases for HSA are less developed. These include:
  - More focused analysis of health system performance and strengthening issues related to health-problem-specific programs such as HIV/AIDS, Malaria, TB, Maternal and Child Health, Non-communicable diseases, etc. In principle, these should be embedded within larger health system analyses, but the system-wide HSAs may not provide details on these subordinate areas of system performance in ways that would allow problem-specific strategies to be developed and embedded within larger system strengthening strategies. In light of recent debates about "vertical versus horizontal approaches", HSAs could better help address these issues.

- Analysis of the organization of health care delivery and development of reform strategies to improve its performance. HSAs often analyze elements of the service delivery area within countries, such as human resources, pharmaceuticals, and information systems (all “building blocks”), but may not go much beyond enumerating facilities at the level of service delivery providers. Better approaches are needed to understanding the determinants of service delivery performance, the role of the private sector, and alternative strategies for service delivery.
  - Institutional and governance analysis in public systems and perhaps comparison with other large systems is often poorly developed in HSAs. There does not appear to be a common conceptual framework for institutional and governance analysis that is being used so that it is difficult to draw lessons from better and worse performers within and across countries.
  - Systematic approaches to the planning, dissemination, and use of HSAs could potentially be enhanced with better guidance on HSA processes and how best to engage with clients and development partners in different settings.
  - The linkage between health systems analysis and outcomes is often poorly articulated. Answers to questions such as “if we do this, what will happen” could be developed better in HSAs. This kind of analysis could be pursued in terms of health outcomes (perhaps also in terms of intermediate indicators like utilization, quality, and cost) as well as in terms of financial protection.
- Another area of concern is reliability of HSA recommendations. Put another way, would different teams of competent analysts, given the same information, come up with the same conclusions about system performance, its causes, and appropriate action plan? The Bank should consider whether some type of expert review could help address this concern, beyond the current mechanism of peer reviewers usually selected by the task team leader. It could be helpful to have one or two members of a common experienced review team invited to review many different HSAs in a “quality enhancement review” type process.
- The Bank would greatly benefit from the systematic tracking over time of policy and related health system events in the study countries after an HSA has been completed. This would enable it to determine which of its predictions were correct and which incorrect, which of its policy recommendations were applied and which ones were not, what were the consequence of applying some of its recommendations, what was the actual cost and timing required to implement some change, and what factors facilitated or hindered. There were almost no second or third round HSAs. Repeat HSAs not only provide an opportunity for developing new operations and policy advice, but also for learning about the value-added of previous work.
- The Bank may want to maintain a database with standard information about its HSA reports such as data, authors, cost, background reports, and so on the allow better future tracking of this important area of work.

## BIBLIOGRAPHY

- Bitran y Asociados (2007). External review of the Marginal Budgeting for Bottlenecks Toolkit. Consulting report prepared for Unicef and The World Bank.
- Fair, M. (2008) *From Population Lending to HNP Results: The Evolution of the World Bank's Strategies in Health, Nutrition and Population*. IEG Working Paper 2008/3. World Bank, Washington, D.C.
- Hsiao, W. and B. Siadat (2008) *Health Systems: Concepts and Deterministic Models of Performance*. Unpublished manuscript. Harvard School of Public Health.
- Mills, A. F. Rasheed, and S. Tollman (2006) *Strengthening Health Systems in Jamison et al. (Eds.) Disease Control Priorities in Developing Countries*, Second Edition. Oxford University Press and The World Bank.
- Murray, C. and D. Evans (2003) *Health Systems Performance Assessment: Debates, Methods and Empiricism*. World Health Organization, Geneva.
- Ruger, J.P. (2005) *The Changing Role of the World Bank in Global Health*. American Journal of Public Health. January; 95(1): 60–70.
- WHO (1999) *The analysis of health systems in crises*. World Health Organization, Geneva.
- WHO (2007) *Everybody's Business: Strengthening Health Systems To Improve Health Outcomes*. Who's Framework For Action. World Health Organization, Geneva.
- WHO (2010). [http://www.who.int/pmnch/topics/economics/costing\\_tools/en/index12.html](http://www.who.int/pmnch/topics/economics/costing_tools/en/index12.html).
- World Bank (1997) *1997 HNP Sector Strategy Paper the Bank*. World Bank, Washington, D.C.
- World Bank (2002a) *A Sourcebook for Poverty Reduction Strategies* (2-volume set). World Bank, Washington, D.C.
- World Bank (2002b) *Better Health Systems for India's Poor*. Washington, D.C.
- World Bank (2003) *Turkey: Reforming the Health Sector for Improved Access and Efficiency*. Washington, D.C.
- World Bank (2004a) *Egypt's Health Sector Reform and Financing Review*. Washington, D.C.
- World Bank (2004b) *The Health Sector in China: Policy and Institutional Review*. Washington, D.C.
- World Bank (2005a) *Azerbaijan Health Sector Review Note*. Washington, D.C.
- World Bank (2005b) *Ethiopia: A Country Status Report on Health and Poverty*, Vols. I and II East Asia & Pacific. Washington, D.C.
- World Bank (2005c) *Improving Health Outcomes for the Poor in Uganda: Current Status and Implications for Health Sector Development*. Washington, D.C.
- World Bank (2006) *Mozambique Better Health Spending to Reach the Millennium Development Goals*. Washington, D.C.
- World Bank (2007) *The Mongolian Health System at a Crossroads: An Incomplete Transition to a Post-Semashko Model*. Washington, D.C.
- World Bank (2009a) *Benin Santé, Nutrition et Population: Rapport Analytique Santé Pauvreté*. Washington, D.C.
- World Bank (2009b) *Health Financing and Delivery in Vietnam: Looking Forward (HNP Series)*. Washington, D.C.
- World Bank (2009c) *Reforming China's Rural Health System*. Washington, D.C.



## **APPENDIX A. TERMS OF REFERENCE FOR REVIEW**

Review objectives: Complete assignment

1. Analyze the conceptual framework, the data and the methods used in each of the report to be reviewed to design and carry out the analysis of the health system:
  - The criteria that the report authors used to decide that what aspects of the health system to include or exclude from the analysis.
  - The rationale or model underlying their analysis.
  - The kinds of information they collected for their analysis, the sources of this information, and its quality.
  - The analytical methods they adopted to conduct their analysis –how they defined and identified health system problems, how they determined their likely causes, and how they recommended viable and effective solutions to them.
  - Other aspects of the written review.
2. Critically describe the process by which the Bank undertook its health systems analysis:
  - The extent to which the Bank involved staff and consultants to conduct its analyses.
  - The definition by the Bank of clear terms of reference or guidelines for each analysis
  - The degree to which the Bank involved government clients (ministries of health and other government institutions), civil society, and other partners and actors in the analysis (including other development agencies, local and international universities and think tanks).
3. Determine the use that the Bank made of its health system analyses:
  - The kinds and nature of the recommendations made from the analyses (were recommendations clear and feasible?)
  - The relationship between the analysis conducted and the Bank's subsequent actions in the health sector of the respective region or country.
  - Describe the activities undertaken by the Bank to disseminate in health system analysis:
  - Presentation of findings and dissemination.
  - Policy implications or messages from the findings. Did the analysis provide clear short term, medium term policy options

## APPENDIX B. ADDITIONAL COUNTRY SUMMARY SHEETS: FROM PROBLEMS TO CAUSES TO SOLUTIONS

**Table B. 1 Ethiopia: From problems to causes to solutions**

The main problems		
		Main recommendations
<b>Problem 1:</b>	Wealth-based differentials in health status and service indicators	
<b>Problem 2:</b>	Urban/rural and regional differences in health status and service indicators	
<b>Question 1:</b>	Data shows inequalities in reduction of infant mortality and immunization coverage	
<b>Question 2:</b>	Bad score in terms of degree to which government health spending reaches the poor (only 15%)	
The main causes of the problems		
<b>Cause 1:</b>	Low coverage of health and nutrition services	<ul style="list-style-type: none"> <li>Reaching the MDGs implies not only a dramatic expansion of the production of key high impact health services, but also the implementation of mechanisms to ensure adequate demand for and use of those services: five steps for further service expansion have been considered; each step corresponds to increasingly higher levels of coverage of health services and associated improvements in health outcomes</li> </ul>
<b>Key finding 1:</b>	New approach of the Health Service Extension Package is main outreach vehicle delivering population-oriented services to most Ethiopians. The comparisons between the generic list and the Ethiopia specific list of interventions through the three delivery models show that most high impact interventions are already included in Ethiopia's intervention package with one exception only	<ul style="list-style-type: none"> <li>The health service extension package and the associated community promoters strategy should be supported if health services are to significantly contribute to reaching health goals</li> <li>Potential impact and cost of various health service delivery options:</li> <li>Ethiopia needs to maximize the reduction of existing bottlenecks in quality, continuity and demand for high impact interventions delivered through innovative services strategies; tackling these bottleneck only (without expansion of access) could potentially achieved at an annual cost of about us \$ 1,6 per capita.</li> <li>If resources could be mobilized up to US \$ 3 or 5 annual per capita in order to achieve HSDP access target and reduce bottleneck by 90% or more, health impact could be much better</li> </ul>
<b>Key finding 2:</b>	The "community promoters" approach has been tested for the delivery family/community-oriented health services	Potential impact and cost of various health service delivery options: <ul style="list-style-type: none"> <li>If an annual incremental US \$ 1.00 per capita can be mobilized for Ethiopia health services, resulting investment should be channeled towards outreach and community services provided by the HSEP and community promoters</li> </ul>
<b>Key finding 3:</b>	In clinical care in the public sector HCs, Hospitals and health station all deliver clinical services; in the private sector NGO clinics, pharmacist and traditional healers are also delivering	<ul style="list-style-type: none"> <li>Adding the provision of additional second generation CDC and treatment would increase the cost significantly (US \$ 16 per person per year) resulting in an impact that is difficult to estimate</li> <li>Adding clinical care services will provide some benefits but will also incur significant additional cost; however, the marginal benefits of adding these services is limited.</li> </ul>
<b>Cause 2:</b>	Inequity exists in terms of outcomes and utilization	<p>Steps of health service expansion</p> <ul style="list-style-type: none"> <li>Information and social mobilization for behavior change</li> <li>Health services extension program</li> <li>First level clinical services upgrade</li> <li>Clinical services upgrade: comprehensive emergency obstetric care</li> <li>Clinical services expansion and upgrade: referral clinical care</li> </ul> <p>Building on existing strengths and addressing policy issues for</p> <ul style="list-style-type: none"> <li>Improved health outcomes</li> </ul>

Source: Bitran & Asociados (2009).

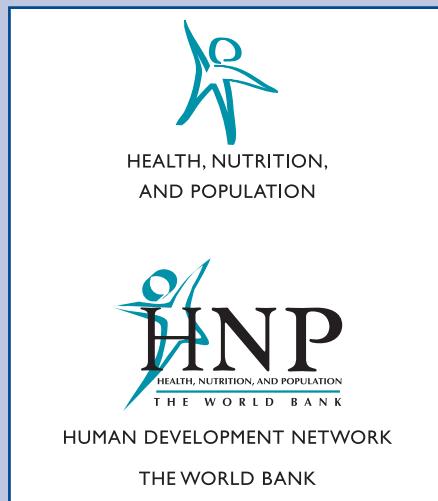
**Table B. 2 From problems to causes to solutions: Mozambique**

The main problems		
Problem 1:	Despite its impressive results in improving the health status of its citizens, the current levels of mortality are still high and the burden of communicable diseases is heavy	
Problem 2:	Mozambique faces major challenges to reach de MDGs	
The main causes of the problems		
<b>Cause 1:</b>	Mozambique's service delivery system have improved significantly in the community-based services and in the population-based preventive services, -especially for the poor,- while clinical-based care has stagnated	<ul style="list-style-type: none"> <li>• Strengthening outreach mechanism to further improve population-based preventive service</li> <li>• Scaling up community-based services</li> <li>• Improving facility-based care</li> </ul>
<b>Cause 2:</b>	The overall amount of health spending is not enough to address the country health problems	<ul style="list-style-type: none"> <li>• Deliver primary curative care through an outreach strategy; primary care is usually provided in health facilities; using outreach strategy reduced the cost of facility-based care</li> </ul>
<b>Cause 3:</b>	The allocation of the existing resources has not been optimal	<ul style="list-style-type: none"> <li>• Strategic and decentralized planning and flexible financing mechanisms will help to provide resources needed for delivering the recommended services</li> <li>• Health system has to look into skills needed for the three types of services respectively and to produce and train health professionals with the right skills to deliver the services</li> </ul>
<b>Cause 4:</b>	Major gaps in health service coverage: Wealth-based, rural-urban and regional differential and inequity	<ul style="list-style-type: none"> <li>• Strengthening outreach mechanism to further improve population-based preventive service</li> <li>• Scaling up community -based services</li> <li>• Improving facility-based care</li> </ul>
<b>Cause 5:</b>	Bottlenecks in the service delivery chain: access to health services in facility-based care, inadequate service continuity and quality in population-based preventive services, and availability of essential materials in community -based services	<ul style="list-style-type: none"> <li>• The organizational structure of the system needs to be adjusted in order to integrate isolated vertical service programs and to create incentive for horizontal collaboration</li> <li>• Specific management measures have to be in place to improve efficiency and effectiveness of service delivery</li> </ul>

Source: Bitran & Asociados (2009).







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