

# Synopsis of Health Systems Research Across The World Bank Group From 2000 to 2010

Stephanie Weber, Katherine Brouhard, Peter Berman

November 2010





**SYNOPSIS OF HEALTH SYSTEMS RESEARCH ACROSS  
THE WORLD BANK GROUP FROM 2000 TO 2010**

**Stephanie Weber, Katherine Brouhard, Peter Berman**

**November 2010**

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

This series is produced by the Health, Nutrition, and Population (HNP) Family of the World Bank's Human Development Network (HDN). The papers in this series aim to provide a vehicle for publishing preliminary and unpolished results on HNP topics to encourage discussion and debate. The findings, interpretations, and conclusions expressed in this paper are entirely those of the author(s) and should not be attributed in any manner to the World Bank, to its affiliated organizations or to members of its Board of Executive Directors or the countries they represent. Citation and the use of material presented in this series should take into account this provisional character.

Enquiries about the series and submissions should be made directly to the Editor, Martin Lutalo ([mlutalo@worldbank.org](mailto:mlutalo@worldbank.org)). Submissions undergo informal peer review by selected internal reviewers and have to be cleared by the Task Team Leader's Sector Manager. The sponsoring department and author(s) bear full responsibility for the quality of the technical contents and presentation of material in the series.

Since the material will be published as presented, authors should submit an electronic copy in the predefined template (available at [www.worldbank.org/hnppublications](http://www.worldbank.org/hnppublications) on the Guide for Authors page). Drafts that do not meet minimum presentational standards may be returned to authors for more work before being accepted.

For information regarding the HNP Discussion Paper Series, please contact Martin Lutalo at [mlutalo@worldbank.org](mailto:mlutalo@worldbank.org) or 202-522-3234 (fax).

© 2011 The International Bank for Reconstruction and Development / The World Bank  
1818 H Street, NW Washington, DC 20433  
All rights reserved.

# Health, Nutrition and Population (HNP) Discussion Paper

## Synopsis of Health Systems Research Across The World Bank Group from 2000 to 2010

Stephanie Weber<sup>a</sup> Katherine Brouhard<sup>b</sup> Peter Berman<sup>c</sup>

<sup>a</sup> University of California, Berkeley, USA

<sup>b</sup> Abt Associates, Washington DC, USA

<sup>c</sup> Harvard School of Public Health, Harvard University, Boston, USA

Paper prepared for the First Global Symposium on Health Systems Research  
hosted by the World Health Organization in Montreux, Switzerland, Nov.16-19, 2010

### Abstract:

**Background:** Policymakers and researchers around the world are working to identify the ‘how to’ aspect of health systems strengthening. However, there is neither consistency nor clarity on what makes a ‘good’ health systems study with regard to research design, methodology, etc. This synopsis of health systems research carried out by the World Bank highlights the scale and scope of the Bank’s knowledge contributions to this important field over the last 10 years. We hope this review will stimulate the Bank and other development partners to strengthen efforts to create knowledge to improve health systems.

**Purpose:** To describe the research on health systems that has taken place across the World Bank Group over the last 10 years.

**Methods:** A systematic search of the Bank’s websites and publications database to collect studies executed as well as financed from January 2000 to September 2010.

**Findings:** The World Bank is a big contributor to research on health systems. The search identified 664 reports, policy research working papers, discussion papers, books, book chapters, how-to manuals, guides, briefs, policy notes and journal articles on health systems published over the last 10 years. Health systems research is widely distributed across the Bank, and much of it is carried out by region-based staff and their colleagues and clients in countries. The Bank’s health systems research covers a wide scope. We have considered work which is both problem-specific—focused on specific diseases, health problems, or outcomes but with substantial health systems content – as well as cross-cutting in terms of specific health system “control knobs.” We lack a very precise definition of health systems. This review highlights the important contributions of the World Bank’s partners. The Bank engages researchers in its client countries, partners from academic institutions, development agencies, and knowledge organizations.

**Keywords:** health systems research, health system, health policy, health reform, developing countries, international health

**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.

**Correspondence Details:** Daniel Cotlear, 1818 H St. NW, Washington DC., 20433 USA, tel: 202-473-5083, fax: 202-522-3234, email: [dcotlear@worldbank.org](mailto:dcotlear@worldbank.org), website: [www.worldbank.org/hnp](http://www.worldbank.org/hnp) and Peter Berman, Harvard School of Public Health, 677 Huntington Avenue, Boston, MA 02115, email: [pberman@hsph.harvard.edu](mailto:pberman@hsph.harvard.edu)

## **Table of Contents**

<b>ACKNOWLEDGMENTS .....</b>	<b>VII</b>
<b>PREFACE.....</b>	<b>IX</b>
<b>I. WHAT IS A HEALTH SYSTEM AND WHAT DO WE MEAN BY HEALTH SYSTEMS RESEARCH?: .....</b>	<b>1</b>
<b>II. METHODS .....</b>	<b>2</b>
<b>III. RESULTS OF THE SYSTEMATIC SEARCH .....</b>	<b>3</b>
<b>IV. DISCUSSION:.....</b>	<b>6</b>
<b>V. EXAMPLES OF WORLD BANK HEALTH SYSTEMS RESEARCH.....</b>	<b>7</b>
<b>VI. CONCLUSION .....</b>	<b>14</b>
<b>REFERENCES.....</b>	<b>15</b>





## ACKNOWLEDGMENTS

The authors would like to thank Adam Wagstaff, Jack Langenbrunner, Jerry La Forgia, Alex Preker, April Harding, Ok Pannenburg and Magnus Lindelow for their feedback on the Health Systems Research [Database](#), and thoughtful contributions to the “Examples” section of this report. The authors would also like to thank the World Bank’s Health, Nutrition and Population Sector Managers for their assistance in locating materials produced by the Regions for inclusion in the database. Special thanks to Damini Bansal for her assistance with the database and Candy Pareja for her assistance with the database and preparation of this draft.

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

To access the Health Systems Research Database, please click this [Database](#).



## **PREFACE**

Policymakers and researchers within the World Bank and around the world are working to identify the ‘how to’ aspect of health systems strengthening through a variety of research methods and projects. The purpose of this report is to describe the research on health systems conducted across the World Bank Group from January 2000 to September 2010. This report is accompanied by a database with web links for accessing the research online. This report and database were prepared for distribution at the First Global Symposium on Health Systems Research hosted by the World Health Organization (WHO) in Montreux, Switzerland November 16 – 19, 2010. Further analysis of the Bank’s health system research is expected to follow this initial review.



## **I. WHAT IS A HEALTH SYSTEM AND WHAT DO WE MEAN BY HEALTH SYSTEMS RESEARCH**

Over the last ten years, various definitions of what constitutes a health system have been put forth by scholars and development agencies. The World Health Organization (WHO) defines health systems as comprised of “...all organizations, institutions and resources devoted to producing actions whose primary intent is to improve health”, and proposes the strengthening of six health system “building blocks” (WHO, 2007). The 2007 Health Nutrition and Population strategy of the World Bank (World Bank, 2007) emphasizes putting together the right chain of events (financing, regulatory framework for private-public collaboration, governance, insurance, logistics, provider payment and incentive mechanisms, information, well-trained personnel, basic infrastructure, and supplies) to ensure equitable access to effective HNP interventions and a continuum of care to save and improve people’s lives. In order to improve the performance of the health system, Roberts et al. (2003) conceive of five “control knobs” – or policy levers – that reformers can use (adjust) to improve system performance and achieve system goals and objectives. The control knobs represent five critical policy categories that can be used to change system and health outcomes. The control knobs are: financing, payment, organization, regulation, and behavior/persuasion. The control knobs framework is used in a training program on health systems organized by the World Bank Institute.

In 2009, the WHO defined health systems research (HSR) as “the purposeful generation of knowledge that enables societies to organize themselves to improve health outcomes and health services” (WHO 2009). This definition is a good starting point, but it may not go far enough to help the reader understand more tangibly what HSR means. Another definition of HSR is by Mills et al. (2008). They define HSR as research “concerned with how health services are financed, delivered and organized and how these functions are linked within an overall health system with its associated policies and institutions.” This definition gives us more contextualization and detail as to what HSR means and what subjects might fall under the umbrella of HSR. Building on these definitions, we concur that HSR is a broad topic covering a wide range of health systems functions. We also agree that HSR is concerned with how these functions operate together within the health system. In this paper we rely specifically on the control knobs framework to establish the scope for what we consider research on health systems.

## II. METHODS

To identify current and past health systems research across the World Bank Group, we systematically searched the Bank's websites and publications databases to collect studies the Bank executed as well as financed from January 2000 to September 2010. We searched the "Publications & Reports" pages of every department across the World Bank Group and recorded any studies that fit our definition of health systems research based on their title and abstract. Specifically, we looked at the websites of the following groups within the Bank: Development Economics (DEC); the Human Development Network (HD); the Poverty Reduction and Economic Management Network (PREM); the Sustainable Development Network (SD); the Financial and Private Sector Development Network; the six Regions of the World Bank; the World Bank Institute (WBI); and the Independent Evaluation Group (IEG). We also looked at Bank websites that contained relevant studies that were not listed under "Publications and Reports" pages, such as those by the Human Development and Public Services Teams. Additionally, we surveyed by email the Chief Economists of the Regions, the Health Systems Global Expert Team (HSGET), the Poverty Reduction and Economic Management Network (PREM), the Sustainable Development Network (SD), and the World Bank Institute (WBI) to solicit studies we may not have captured through our web review. This email solicitation yielded approximately 200 pieces of research we had not included. The majority of this research was journal articles and book chapters, as these categories are not adequately captured in World Bank databases.

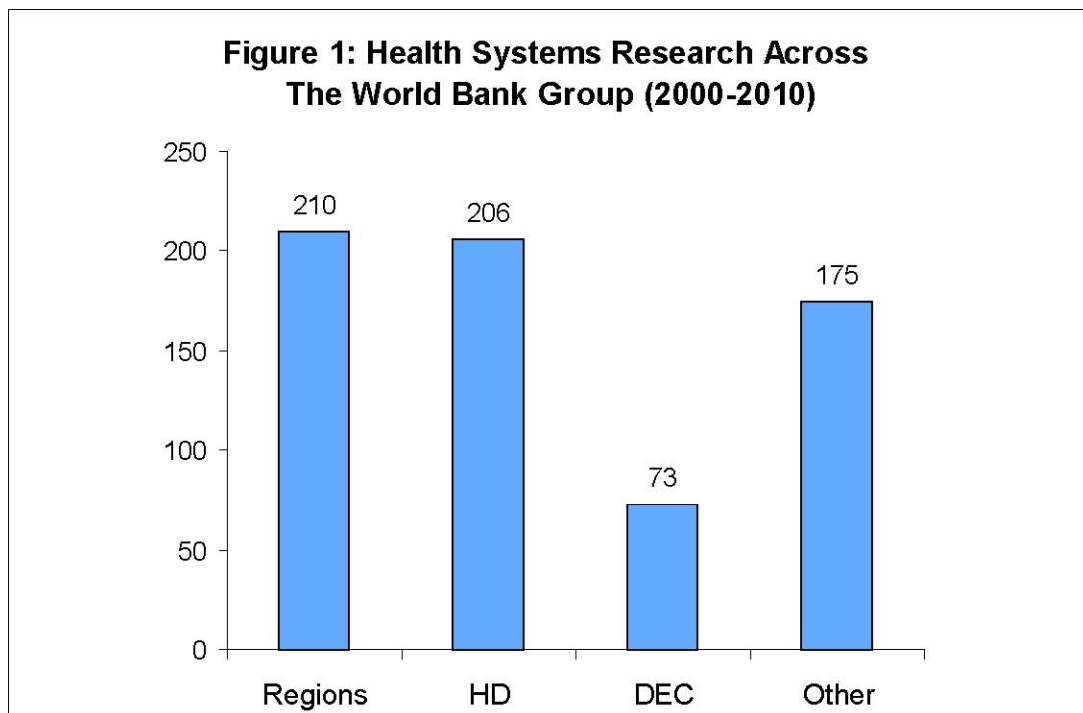
We included studies that examined health system functions, health system performance determinants, and use of functions, such as regulation and taxation, to improve health outcomes. We also included studies that sought to develop new methods for studying health systems. We included reports, policy research working papers, discussion papers, books, chapters in books, how-to manuals, guides, briefs, policy notes and journal articles. We excluded operational documents and analytic work done in preparation for specific Bank projects. We included work by Bank staff that was financed by the Bank; work by Bank staff that was externally financed; work by consultants that was financed by the Bank; and work by Bank staff that was published in non-Bank journals.

Since this search was largely web-based, there is a bias toward publications that were issued as part of a formal series and have a publication number. Items that were not part of a formal series or did not have a publication number might not have been included in the database. To this end, we did not include work that was part of broader frames, such as health chapters in public expenditure reviews (PER), unless these were issued as a separate piece. We also likely missed a number of other pieces of 'grey literature.'

After identifying all known studies, we solicited recommendations for "examples" of World Bank health systems research from the HS GET. Specifically, we wanted research pieces that had influenced policy. We also wanted pieces that reflected the topical, methodological, and geographical range of the Bank's health systems research portfolio. From these recommendations, we present 14 examples of World Bank publications. These publications are presented in this report as short cases. See page seven.

### III. RESULTS OF THE SYSTEMATIC SEARCH

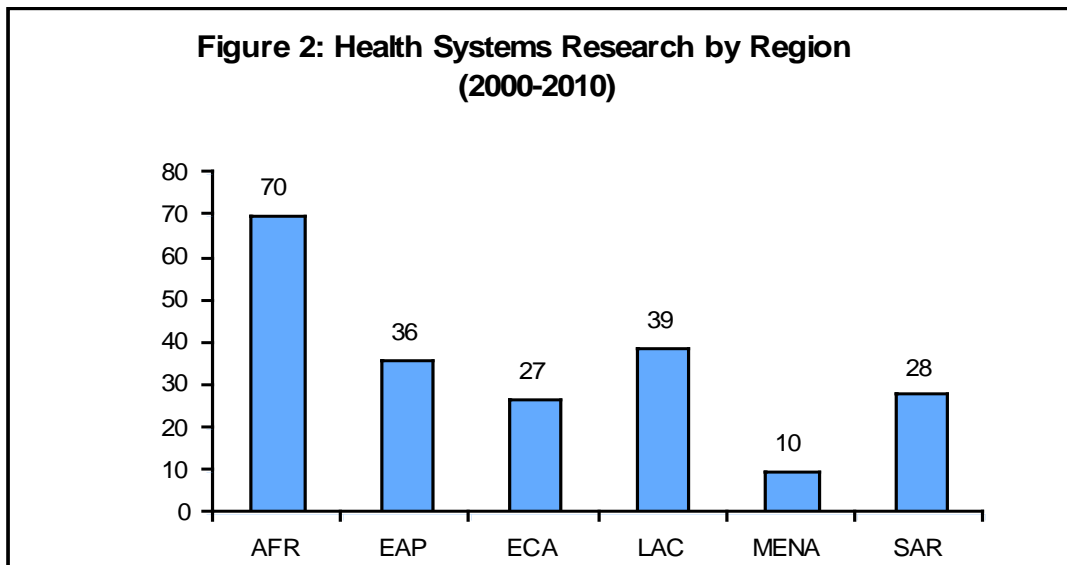
The World Bank is a big contributor to research on health systems. Across the World Bank Group, we identified 664 reports, policy research working papers, discussion papers, books, chapters in books, how-to manuals, guides, briefs, policy notes, and journal articles on health systems published from January 2000 to September 2010. Figure 1 shows the distribution of this research across the World Bank. The majority of the research is produced in three parts of the Bank—the Human Development Network (HD), the six World Bank Regional Departments, and Development Economics (DEC). ‘Other’ represents the remaining departments of the World Bank, who, collectively, produced 30 pieces of research on health systems. ‘Other’ also includes external books, chapters in books, and journal articles that were written by Bank staff but published outside the Bank.



HD produced 206 pieces of research. Within HD, 183 pieces were published by the Health, Nutrition and Population (HNP) Unit. The HIV/AIDS unit published 20 pieces and Social Protection published 3. Collectively, the six World Bank Regional Departments produced 210 pieces of research. DEC produced 73 pieces.

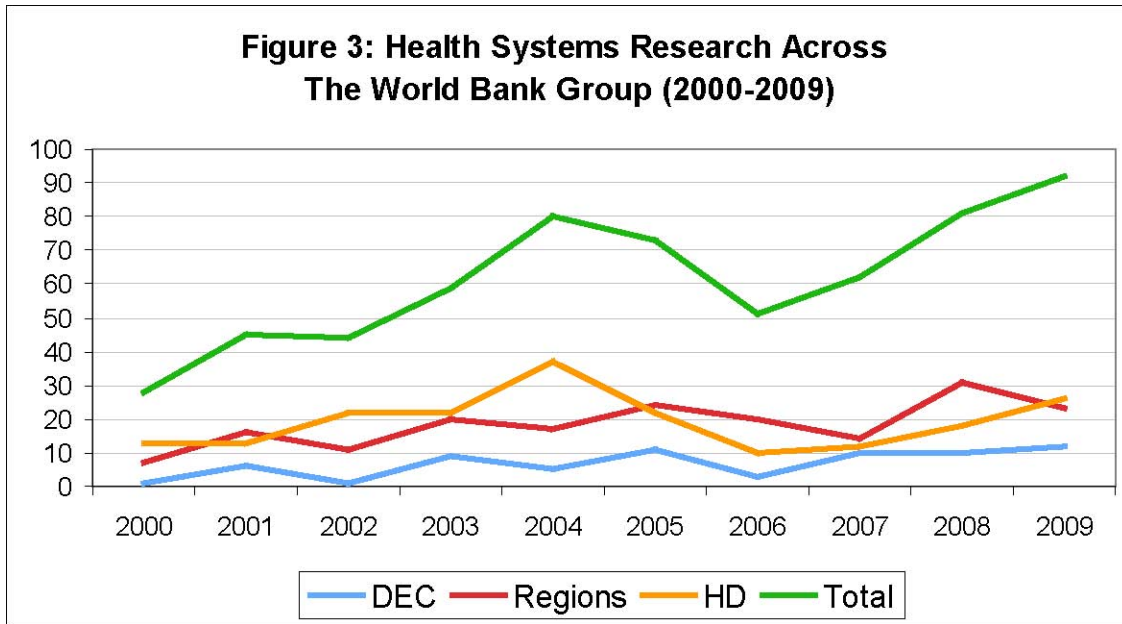
The Regions produce a significant amount of health systems research. Among the six Regions, the Africa Region (AFR) produced 70 pieces of research over the last ten years. Latin America and the Caribbean (LAC) published 39 pieces. East Asia and Pacific

(EAP) produced 36. The South Asia Region (SAR) published 28 pieces. Europe and Central Asia (ECA) produced 27; and the Middle East and North Africa (MENA) produced 10 studies. It is important to note that many HNP documents—HNP discussion papers as well as products in the formal series—are produced jointly with the Regions and are therefore also listed in the “Publications & Reports” pages of the Regions. In this paper, we did not double count documents; a document was attributed to either HNP or the Region.



From January 2000 to September 2010, the number of studies on health systems has increased steadily, with the exception of 2004-2006. We found the following studies: 28 pieces of research on health systems in 2000; 45 pieces in 2001; 44 in 2002; and 59 in 2003. The number of publications continued to climb in 2004 to 80, but then declined to 73 in 2005 and 51 in 2006. From 2006 to 2009, there was a steady increase in the number of publications, which peaked at 92 in 2009. As of September 2010, there were 49 publications. We predict this number will continue to grow throughout 2010.





Based on our categorization of publications, the number of pieces in HD grew the most from 2000 to 2004. In 2000, there were 13 pieces and 37 in 2004. The number of pieces peaked in 2004. Since then, the number of studies published by HD has fluctuated between 22 in 2005 and 26 in 2009. As of September 2010, we recorded 11 studies.

When looking at the aggregate number of studies from the Regions, there is a pattern of increase in the volume of studies from 2000 to 2010, with the exception of 2004, 2006, and 2007. However, disaggregated data from the Regions show no clear patterns in publication volume. Virtually every region experiences ebbs and flows of studies published from 2000 to 2010.

Our systematic search revealed health systems research in every geographic region of the world. The research looks at health system issues within countries – at both the national and sub-national level—across countries, within a region, and across regions. The country with the highest volume of research was India. Not including the categories of “Books,” “Book Chapters”, and “Journal Articles,” there were approximately 39 pieces on India. Indonesia had the second highest volume of research (26 pieces). China was third with 18 pieces. Brazil had 17; Ethiopia had 13; and Rwanda had 11.

Health systems research is occurring across almost all areas of the World Bank Group. Although the research is concentrated among the HNP Unit in the HD anchor, the Regions, and DEC, we found research pieces in virtually every area of the organization. We also found examples of research developed collaboratively with other development organizations—such as WHO and the United States Agency for International Development (USAID)—and universities around the world.

## IV. DISCUSSION

The World Bank’s health systems research portfolio is broad in scope. Analysis of the database reveals that the World Bank has published research on a wide range of topics. Examples include: research on the various mechanisms for financing access to health services; payment reform; the organization of health services—including the health workforce; the use of regulation to influence behavior—both at the organization and individual level; and the use of regulation to enact policy reforms, to name a few topics. Additionally, a number of studies look at distribution issues in health, such as income, geography, and gender. Other studies are specific to health system issues around maternal and child health, nutrition, communicable disease, and non-communicable disease.

Much of this research looks at two or more control knobs. For example, the 2009 HNP Discussion Paper, “Ethiopia—Improving Health Service Delivery,” examines how certain regulations, such as the decentralization of authority, impacted the organization of health services and how individual behavior influenced the effective implementation of these reforms (regulations). At the sub-national level, decentralization was found to be more effective in regions that strengthened management and institutional capacity, and where regional governments set priorities and adapted the strategies to local needs (El-Saharty et al. 2009). Another 2009 publication, “Working in Health: Financing and Managing the Public Health Workforce,” addresses all five control knobs. This report presents evidence describing how health wage bill budgets in the public sector are determined, how this action is linked to overall wage bill policies, and how it affects the ability of governments to increase staffing levels in the health sector. The report looks at how well health wage bill resources are used in the public sector (Vujicic et al. 2009).

The research employs a wide range of methodological tools and strategies. Studies in the World Bank’s HSR portfolio apply quantitative, qualitative, and mixed methods approaches. For studies using quantitative analysis, household surveys are a common source of data. Other sources of data include: facility surveys, panel data, and accounting data. Studies using qualitative methods rely on literature and document reviews as sources of data. Fewer studies use in-depth interviews and observations. Some pieces were case studies that used both quantitative and qualitative approaches. In terms of type of study, we found descriptive pieces that review health systems and pieces that evaluate health systems. We also found studies that review methods and others that develop new methods for studying health systems.

## V. EXAMPLES OF WORLD BANK HEALTH SYSTEMS RESEARCH

This section presents 14 examples of health systems research from the last ten years that have both been impactful and influenced policy. The first seven pieces are either books or guides and are listed in chronological order. The eighth piece is an HNP Discussion Paper, and the last six pieces are examples of research from the Regions. These examples are neither exhaustive nor completely representative. They are presented to give a sense of the breadth and content of the World Bank's HSR.

**Baeza C, Packard T. (2006) *Beyond Survival: Protecting Households from Health Shocks in Latin America*.** Washington, DC: The World Bank Group. Publication 36801.

---

*Beyond Survival* encourages policy makers to look at both financial protection and health outcomes when setting priorities for their health systems. The book reviews evidence on the mechanisms and magnitude of the impoverishing effect of health events and the public policy options for preventing such impoverishment. This is particularly important given that health shocks are one of the most frequent reasons for households in the lower-income quintiles, that are not already poor, to fall into poverty as a consequence of both high out-of-pocket expenditures and lost income.

**Berman P, Waldo D: coordinating technical editors. (2003) *Guide to Producing National Health Accounts: with Special Applications for Low-income and Middle-income Countries*.** Produced jointly by The World Bank, World Health Organization, and the United States Agency for International Development. Geneva, Switzerland: World Health Organization.

---

*The Guide to Producing National Health Accounts (with special applications for low-income and middle-income countries)* adapts the International Classification of Health Accounts published in the OECD's "A System of Health Accounts" to include classifications suited to low and middle-income countries. This Guide outlines the process of acquiring and evaluating data and provides step-by-step examples of how to turn raw data into information useful for policy analysis and development.

The *Guide* is the practical output of years of country-based health systems research. It was financed in part by the World Bank but was developed in collaboration with many partners. The Guide broke new ground and is still influencing the development of OECD and global health accounting rules.

**Gwatkin D, Wagstaff A, Yazbeck A [Eds]. (2005) *Reaching the Poor with Health, Nutrition, and Population Services: What works, What doesn't and Why*. Washington, DC: The World Bank Group. Publication 34716.**

---

*Reaching the Poor with Health, Nutrition, and Population Services* builds on earlier work documenting disparities in health service use and coverage. This volume shows that the health services supported by governments and agencies like the World Bank too often fail to reach the disadvantaged groups who need them most. The studies presented in this report point to numerous strategies that can help health programs reach the poor much more effectively than at present. The studies strongly reinforce the messages of the 2004 World Development Report and other publications about the importance and possibility of making services work better for poor people. The report discusses strategies that are most promising for a particular setting. It describes characteristics of successful projects that reached the poor and how the Bank's Task Team Leaders (TTLs) and clients can build these characteristics into their work. The two messages from this report are that better performance in reaching the poor is both needed and feasible.

**Gottret P, Schieber G. (2006) *Health Financing Revisited: A Practitioner's Guide*. Washington, DC: The World Bank Group. Publication 37091.**

---

*Health Financing Revisited* is a seminal book in an area of the World Bank's comparative advantage. The book updates early work by the World Bank and others to provide an overview of health financing tools, policies and trends, while focusing on the challenges facing developing countries. The book discusses health financing goals in the context of the underlying health, demographic, social, economic, political and demographic analytics, as well as the institutional realities of developing countries. It assesses policy options in the context of global evidence, the international aid architecture, cross-sectoral interactions, and countries' macroeconomic frameworks and overall development plans.

**Harding A, Preker P [Eds]. (2003) *Innovations in Health Service Delivery: the Corporatization of Public Hospitals*. Washington, DC: The World Bank Group. Publication 26100.**

---

The question of how best to run hospitals has been a subject of intense interest for decades especially over the past 20 years. Hospital care is the largest expenditure category in the health systems of both industrialized and developing countries. Although hospitals play a critical role in ensuring delivery of health services, less is known about how to improve the efficiency and quality of care provided.

*Innovations in Health Service Delivery* is a well-documented collection of case studies that attempt to examine the design, implementation, and impact of reforms that introduced market forces in the public hospital sector. Each case study tries to answer three questions: a) what problems did this type of reform try to address?; b) what are the core elements of their design, implementation, and evaluation?; and c) is there any evidence that this type of reform is successful in addressing problems for which they were intended? *Innovations in Health Service Delivery* also provides insights about

trends in the reform of public hospitals, with an emphasis on organizational changes such as increased management autonomy, corporatization, and privatization.

*Innovations in Health Service Delivery* provides an innovative framework for analyzing key elements of organization reform in hospitals, and examples of how this has worked in practice. The volume fills a gap in the literature, as there is virtually nothing else in existence on hospital reforms in developing countries. Today, seven years later, it is still virtually the only effort in the English language on hospital organization and management reform in developing countries.

*Innovations in Health Service Delivery* is also an example of a product that responds to explicit demand from World Bank country clients and operational staff. The volume is used by country clients beyond World Bank engagement. For example, the Chinese National Health Development Research Center has undertaken to translate the volume into Chinese, and the framework and other information in the book has been used in designing different modalities of hospital reforms in China.

One of the reasons the volume has been so successful is that the presentation and framing of the content was refined through policy and capacity building seminars with policy makers. These seminars provided critical opportunities for interaction and feedback about the content. Additionally, in developing the case studies, the editors involved authors with policy making experience, not just researchers. The editors also paired the country expert with World Bank staff when developing the case studies. This approach made the material useful across country contexts and created a base for spreading the knowledge inside and outside the World Bank Group.

**Loevinsohn B. (2008) *Performance-Based Contracting for Health Services in Developing Countries: A Toolkit*. Washington, DC: The World Bank Group. Publication 37091.**

---

*Performance-based contracting for health services in developing countries* provides practical advice about performance-based contracting of health services with non-state providers in developing countries. Experts directly involved in contracting on a large scale have contributed to the development of this toolkit. It provides background on contracting, types of services that can be contracted, how contracting relates to other ways of organizing health services, and which contracting approaches work in different settings. The toolkit also provides a systematic way of thinking about contracting and its application. It looks at seven aspects of the contracting process from initial dialogue with stakeholders through the bidding process and managing contracts. The toolkit reviews the evidence for and against contracting in developing countries and discusses its successful application. Overall, it provides practical guidance for TTLs and clients on how to design, write, and manage contracts—skills that are very timely given the interest in results-based financing (RBF) and working with NGOs.

**Wagstaff A, Lindelow M, Wang S, Zhang S. (2009) *Reforming China's Rural Health System*. Washington, DC: The World Bank Group. Publication 37091.**

---

*Reforming China's Rural Health System* is an excellent analysis of the health system determinants of performance problems in China, especially in the areas of financing and incentives. The book was written in 2003 during the initial formulations of China's 11th Five-Year Plan: 2006-10. During the period, the rural health Analytic and Advisory Activities (AAA) team analyzed the health sector and debated reform options with government officials and scholars. This process has helped the government in its extensive reform efforts over the past few years.

*Reforming China's Rural Health System* can serve two important functions: to provide an analytical framework for thinking about what happened in China's rural health system and why, and to present a global perspective on how to further strengthen the sector. China is well on its way to achieving a modern, equitable, and well-functioning rural health sector, but this is not an easy task for any country. This book can provide a useful reference for policy makers in the next phase of health reform and beyond.

**Mills S, Bos E, Lule E, Ramana GNV, Bulatao R. (2007) "Obstetric Care in Poor Settings in Ghana, India and Kenya." Health, Nutrition and Population Discussion Paper (Working Paper 41873). Washington, DC: The World Bank Group.**

---

HNP Discussion Papers are produced by the Health, Nutrition and Population Family of the World Bank's Human Development Network. The papers in this series provide a vehicle for publishing preliminary and unpolished results on HNP topics to encourage discussion and debate. HNP Discussion Papers are shorter than formal publications.

*"Obstetric Care in Poor Settings in Ghana, India and Kenya"* is an exemplary HNP Discussion Paper that explores maternal mortality in developing countries. The study uses research carried out in poor areas of Ghana (Kassena-Nankana district), India (Uttar Pradesh state), and Kenya (Nairobi slums) to explore why maternal mortality continues to be so high in developing countries, and why emergency obstetric services are under utilized. *"Obstetric Care in Poor Settings in Ghana, India and Kenya"* uses both quantitative (household surveys, verbal autopsies, and health facilities surveys), and qualitative (focus groups and in-depth interviews) methods. Among the three settings, maternal mortality ratio was highest in the Nairobi slums, followed by Uttar Pradesh, while the Kassena- Nankana district had the lowest. It is intriguing that among the three settings, Nairobi slums had the highest proportion of women (70 percent) who sought professional assistance during delivery, and yet the highest maternal mortality. One possible explanation is the different extent of legality of induced abortion in these three countries. Of the major causes of maternal mortality, the largest contrast among the study areas involved complications of abortion, which were almost four times higher in the Kenya slums than in the north of Ghana or in Uttar Pradesh. A large proportion of health facilities assessed in the three study areas were not capable of providing all six elements of basic emergency obstetric care.

## A Selected Publication from each Region

### Africa Region

**Jack W, De Laat J, Hanson K, Soucat A. (2010) *Incentives and Dynamics in the Ethiopian Health Worker Labor Market*.** Washington, DC: The World Bank Group. Publication 55834.

---

The supply and geographic distribution of health workers are major constraints to improving health in low-income countries. A number of recent studies have highlighted the shortage of skilled health workers in many settings, the impact shortages have on health outcomes, and the risk shortages pose for the achievement of the Millennium Development Goals. However, there is limited evidence about what sorts of policies will attract nurses and doctors into medical training, improve the retention of trained health workers, and encourage health workers to work in rural areas where problems of inaccessibility of services are most acute.

*Incentives and dynamics in the Ethiopian health worker labor market* presents evidence from a new survey of Ethiopian health workers. Detailed data was collected from nearly 1,000 health workers to answer fundamental questions, such as: (i) how do compensation levels vary with location, training, experience etc.?; (ii) what kinds of incentive packages are potentially most effective in attracting workers to underserved rural areas?; and (iii) what can we learn about the health worker labor market when new graduates are assigned to their first jobs via a lottery? The rigorous study methodology and policy relevant findings presented in *Incentives and dynamics in the Ethiopian health worker labor market* are important for all those working to improve the allocation of human resources for health in the developing world.

### East Asia and Pacific Region

**Rokx C, Schieber G, Harimurti P, Tandon A, Somanathan A. (2009) *Health Financing in Indonesia: a reform road map*.** Washington, DC: The World Bank Group. Publication 50174.

---

Indonesia has embarked upon major reforms of its social security and health systems. One of the key areas of these reform efforts is the transition to universal health insurance coverage for all Indonesians. The government has provided coverage to an estimated 76 million poor and near poor people through the government funded *Jamkesmas* Program. Yet, over half of the population still lacks coverage, and the full fiscal implications of both the *Jamkesmas* expansion and the costs of universal coverage need to be carefully assessed as part of the reform process.

This study, based on both the Indonesia-specific and global evidence bases, provides a critically needed road map for the reform effort. Its analytical assessment of the strengths and weaknesses of the current Indonesian health system provides the health policy baseline for reform. Based on the goals of maximizing health outcomes, financial protection, and consumer responsiveness, *Health Financing in Indonesia* assesses key policy parameters and plausible transition options. The results provide the government

with an extremely valuable guide for moving the reform forward at this critical juncture in its reform process. The study also provides useful inputs to Indonesia's next Five-Year Development Plan.

#### **Europe and Central Asia Region**

**Cashin C, Koettl J, Djordjevic A, Schneider P, Djukic P, Mojsilovic M. (2009)**  
***Serbia - Baseline Survey on Cost and Efficiency in Primary Healthcare Centers Before Provider Payment Reforms.*** Washington, DC: The World Bank Group. Health Study 45111.

---

The purpose of this study was to conduct a baseline survey on the cost and efficiency of Primary Health Care (PHC) Centers in Serbia to inform the implementation of provider payment reforms spearheaded by the Serbian Ministry of Health and the Health Insurance Fund. The results of this survey helped to establish a baseline on health sector performance including utilization, quality, cost, and efficiency against which the impact of the reforms could be assessed in a follow-up survey. The methodology used in this baseline survey includes descriptive analysis of key performance measures in PHC centers, and an econometric analysis of the current production and cost functions in PHC centers. The analysis aims to provide insight into the current level of efficiency as well as the determinants of the factors that influence efficiency. The report presents the data and methodology used in this survey to evaluate the cost and efficiency performance in Dom Zdravljas (health centers). Results are presented and discussed. Based on the findings, the report proposes several reform measures to support the effect of the provider payment reform.

#### **Latin America and Caribbean Region**

**Bogue RJ, Hall CH, La Forgia GM. (2007) *Hospital Governance in Latin America: Results From a Four Nation Survey.*** Washington, DC: The World Bank Group. Working Paper 39914.

---

The objective of this research was to identify the different types of hospital governance in Latin America and to examine whether and how these governance types are associated with hospital performance. The authors also sought to explore hospital governance conceptually and contextually within national and international experience. The research was based on a survey of nearly 400 hospitals in Argentina, Brazil, Colombia and Mexico. The authors conducted a cluster analysis of the results identifying four governance types based on organizational elements theorized to affect hospital behavior: (1) budgetary unit of government; (2) autonomous unit of government; (3) corporate unit of a private conglomerate or broader, private hospital system; and (4) a private and autonomous unit. These types were compared in five analyses: (a) administrators' ratings of their own hospital's performance; (b) hospital performance indicators, such as occupancy and costs per bed; (c) performance tracking vis-à-vis standards; (d) ratings of criteria for selecting leadership; and (e) hospital administrators' qualifications.



### **Middle East and North Africa Region**

**Elgazzar H, Raad F. (2010) *Who Pays? Out-of-pocket Health Payments and Equity Implications in the Middle East and North Africa.* (in process)**

Washington, DC: The World Bank Group.

---

Out-of-pocket (OOP) payments in countries in the Middle East and North Africa Region represent a substantive portion of total health care financing, accounting for an average of 33 percent of total national health expenditure. This paper examines the scope of OOP expenditures and their implications on living standards from six MENA countries. Quantitative analyses were conducted using microdata from representative household surveys from Yemen, the West Bank and Gaza, Egypt, Iran, Tunisia, Lebanon, Libya. The paper presents empirical findings on: (i) the scope of OOP payments as a percentage of total health spending in MENA countries, and as a percentage of monthly household spending; (ii) the distribution of OOP payments by health care service as a percentage of total household spending; (iii) the distribution of OOP payments across socioeconomic and insurance status; (iv) the incidence and intensity of payments that are considered particularly high, or catastrophic; and (v) the impoverishing effect of OOP payments.

### **South Asia Region**

**Moses S, Blanchard J, Kang H. (2006) *AIDS in South Asia: Understanding and Responding to a Heterogeneous Epidemic.* Washington, DC: The World Bank Group.**

Publication 37093.

---

South Asia is facing a severe HIV epidemic in magnitude and scope. The epidemic is not homogenous and requires evidence-based, prioritized and effective responses to prevent further spread of HIV in South Asia. The future size of South Asia's HIV epidemic will depend on an effective two-pronged approach. First, it will depend on the scope and effectiveness of HIV prevention programs for sex workers and their clients, injecting drug users and their sexual partners, and men who have sex with men and their other sexual partners. Second, it will depend on the effectiveness of efforts to address the underlying socio-economic determinants of the epidemic, and to reduce stigma and discrimination towards people engaging in high risk behaviors, who are often marginalized in society, as well as people living with HIV and AIDS. This report attempts to provide the basis for rigorous, evidence-based HIV policy and programming.

## VI. CONCLUSION

This synopsis of health systems research carried out by the World Bank highlights the scale and scope of the Bank's knowledge contributions to this important field over the last 10 years. In assembling this review, the authors were surprised at the volume of contributions which emerged. The work required to assemble this information and the accompanying database exceeded expectations. In order to complete a review in time for the 1st Global Symposium on Health Systems Research (Montreux, Switzerland, Nov.16-19, 2010), a more in-depth analysis of content, methods, and the impact of contributions was not possible. We hope to follow up this initial synopsis with further work that could help improve the impact of these contributions to HNP results.

The World Bank is a decentralized organization. Our health systems research is widely distributed across the Bank's regions and much of it is carried out by region-based staff and their colleagues and clients in countries. This flexibility is likely to be important in assuring that our research is tailored better to the specific concerns and conditions in countries, as well as more likely to be used to improve health systems.

In terms of content, the Bank's health system research covers a wide scope. We have considered work which is both problem-specific—for example focused on specific diseases, health problems, or outcomes but with substantial health systems content—as well as cross-cutting in terms of specific health system “control knobs” without necessarily focusing on a specific disease or health problem. We lack a very precise definition of health systems, but our review suggests that health systems issues are widely present and applicable in our work to improve outcomes.

This review also highlights the important contributions of the World Bank's partners. Health systems research is often a team enterprise. The Bank engages researchers in its client countries, both in government and outside, as well as a wide range of partners from academic institutions, other development partners, and other knowledge organizations. The potential impact of this work extends beyond the Bank's own staff and projects.

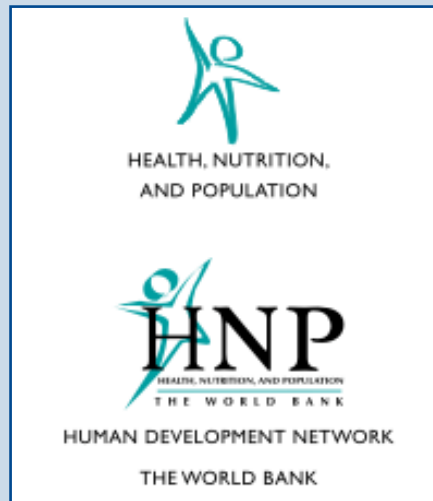
Knowledge creation through research is a means to improving health systems performance. To this end, research and new knowledge must be sound, and must be disseminated and used. We hope this review will stimulate the Bank and other development partners to strengthen our efforts to improve health systems.

## REFERENCES

- Baeza C, Packard T. (2006) *Beyond Survival: Protecting Households from Health Shocks in Latin America*. Washington, DC: The World Bank Group. Publication 36801.
- Bogue RJ, Hall CH, La Forgia GM. (2007) *Hospital Governance in Latin America: Results from a Four Nation Survey*. Washington, DC: The World Bank Group. Working Paper 39914.
- Cashin C, Koettl J, Djordjevic A, Schneider P, Djukic P, Mojsilovic M. (2009) *Serbia - Baseline Survey on Cost and Efficiency in Primary Health Care Centers Before Provider Payment Reforms*. Washington, DC: The World Bank Group. Health Study 45111.
- El-Saharty S, Kebede S, Dubusho P, Siadat B. (2009) "Ethiopia: Improving Health Service Delivery," Health, Nutrition and Population Discussion Paper. Washington, DC: The World Bank Group.
- Gottret P, Schieber G. (2006) *Health Financing Revisited: A Practitioner's Guide*. Washington, DC: The World Bank Group. Publication 37091.
- Gwatkin D, Wagstaff A, Yazbeck A [Eds]. (2005) *Reaching the Poor with Health, Nutrition, and Population Services: What works, What doesn't and Why*. Washington, DC: The World Bank Group. Publication 34716.
- Harding A, Preker P [Eds]. (2003) *Innovations in Health Service Delivery: The Corporatization of Public Hospitals*. Washington, DC: The World Bank Group. Publication 26100.
- Jack W, De Laat J, Hanson K, Soucat A. (2010) *Incentives and Dynamics in the Ethiopian Health Worker Labor Market*. Washington, DC: The World Bank Group. Publication 55834.
- Loevinsohn B. (2008) *Performance-based Contracting for Health Services in Developing Countries: A Toolkit*. Washington, DC: The World Bank Group. Publication 37091.
- Mills A, Gilson L, Hanson K, Palmer N, Lagarde M. (2008) "What Do We Mean by Rigorous Health-Systems Research?" *The Lancet*. 372. pp. 1527-9.
- Mills S, Bos E, Lule E, Ramana GNV, Bulatao R. (2007) "Obstetric Care in Poor Settings in Ghana, India and Kenya." Health, Nutrition and Population Discussion Paper (Working Paper 41873). Washington, DC: The World Bank Group.

- Moses S, Blanchard J, Kang H. (2006) *AIDS in South Asia: Understanding and Responding to a Heterogeneous Epidemic*. Washington, DC: The World Bank Group. Publication 37093.
- Reich M, Takemi K, Roberts M, Hsiao W. (2008) “Global Action on Health Systems: A Proposal for the Toyako G8 Summit,” Viewpoint. *The Lancet*. 371: 9615. pp. 865-869.
- Roberts M, Hsiao W, Berman P, Reich M. (2003) *Getting Health Reform Right: A Guide to Improving Performance and Equity*. NY, NY: Oxford University Press.
- Rokx C, Schieber G, Harimurti P, Tandon A, Somanathan A. (2009) *Health Financing in Indonesia: A Reform Road Map*. Washington, DC: The World Bank Group. Publication 50174.
- Vujcic M, Ohiri K, Sparkes S. (2009) *Working in Health: Financing and Managing the Public Sector Health Workforce*. Washington, DC: The World Bank Group. Publication 48340.
- Wagstaff A, Lindelow M, Wang S, Zhang S. (2009) *Reforming China’s Rural Health System*. Washington, DC: The World Bank Group. Publication 37091.
- World Bank, World Health Organization, and U.S. Agency for International Development (2003) “A Guide to Producing National Health Accounts: with special applications to low- and middle-income countries”, Geneva, Switzerland
- World Bank, (2007) “Healthy Development: The World Bank Strategy for HNP Results” Washington, D.C.
- World Health Organization. (2007) “Everybody Business: Strengthening Health Systems to Improve Health Outcomes : WHO’s Framework For Action”, Geneva.  
[http://www.who.int/healthsystems/strategy/everybodys\\_business.pdf](http://www.who.int/healthsystems/strategy/everybodys_business.pdf)
- World Health Organization. (2009) *Scaling Up Research and Learning for Health Systems: Now is the Time*. Report of the High Level Task Force, Presented and Endorsed at the Global Ministerial Forum on Research for Health 2008, Bamako, Mali.





#### **About this series...**

This series is produced by the Health, Nutrition, and Population Family (HNP) of the World Bank's Human Development Network. The papers in this series aim to provide a vehicle for publishing preliminary and unpolished results on HNP topics to encourage discussion and debate. The findings, interpretations, and conclusions expressed in this paper are entirely those of the author(s) and should not be attributed in any manner to the World Bank, to its affiliated organizations or to members of its Board of Executive Directors or the countries they represent. Citation and the use of material presented in this series should take into account this provisional character. For free copies of papers in this series please contact the individual authors whose name appears on the paper.

Enquiries about the series and submissions should be made directly to the Editor Martin Lutalo ([mlutalo@worldbank.org](mailto:mlutalo@worldbank.org)) or HNP Advisory Service ([healthpop@worldbank.org](mailto:healthpop@worldbank.org), tel 202 473-2256, fax 202 522-3234). For more information, see also [www.worldbank.org/hnppublications](http://www.worldbank.org/hnppublications).



## **THE WORLD BANK**

1818 H Street, NW  
Washington, DC USA 20433  
Telephone: 202 473 1000  
Facsimile: 202 477 6391  
Internet: [www.worldbank.org](http://www.worldbank.org)  
E-mail: [feedback@worldbank.org](mailto:feedback@worldbank.org)