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Health Financing in Indonesia

A Reform Road Map

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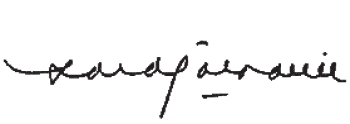
Foreword

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 taken the first significant step by providing coverage to an estimated 76 million poor and near poor through the government-funded Jamkesmas program. Yet, over half the population still lacks coverage, and the full fiscal implications of both the Jamkesmas expansions and the costs of universal coverage need to be carefully assessed as part of the reform process.

Very few middle income countries have successfully achieved universal coverage, and those few that have continue to face significant cost escalation pressures. Successful health insurance reforms must be carefully coordinated with needed health systems changes as well as the available current and future fiscal space. The design and implementation of these reforms must be based on sound information and modern health policy analyses. As the Government develops the final configuration of its health system as well as the transition steps to get there, it must systematically deal with the key 'devils in the details' including the design of the basic benefits package, eligibility criteria for different socioeconomic and employment groups, financing of the reform, provider payment mechanisms, the delivery system configuration, and the overall regulatory and macroeconomic environments.

This study, based on both the Indonesian-specific and global evidence bases provides a critically needed roadmap for the reform effort. Its analytical assessment of the current Indonesian health system and its strengths and weaknesses provides the health policy baseline for the reform. The assessment of key policy parameters needing resolution and of plausible transition options based on the goals of maximizing health outcomes, financial protection, and consumer responsiveness, provides the Government with an extremely valuable guide for moving the reform forward. The study also provides useful inputs to Indonesia's next Five Year Development Plan. As such, this study is an invaluable tool for assisting the Government at this critical juncture in its reform process.



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Abbreviations and Acronyms

Askes	*Asuransi Kesehatan* (Health Insurance)
Askeskin	*Asuransi Kesehatan Masyarakat Miskin* (Health Insurance for Poor Population)
BBP	Basic Benefits Package
BDD	*Bidan di Desa* (Village Midwife)
BKKBN	*Badan Koordinasi Keluarga Berencana Nasional* (Family Planning Coordination Agency)
BPS	*Badan Pusat Statistik* (Statistics Indonesia)
CBHI	community-based health insurance
DAK	*Dana Alokasi Khusus* (Special Allocation Fund)
DAU	*Dana Alokasi Unum* (General Allocation Fund)
DepKes	*Departemen Kesehatan* (Ministry of Health)
DHS	Demographic and Health Survey
DRG	Diagnosis-Related Group
EAP	East Asia and the Pacific
GDP	gross domestic product
HDNHE	Human Development Network, Health and Education
HI	Health Insurance
HIV/AIDS	Human Immunodeficiency Virus/acquired immune deficiency syndrome
HMO	Health Maintenance Organization
IFLS	Indonesia Family Life Survey
IMF	International Monetary Fund
IMR	Infant Mortality Rate
Jamkesmas	*Jaminan Kesehatan Masyarakat* (Health Insurance Scheme for the Population)
Jamsostek	*Jaminan Sosial Tenaga Kerja* (Workforce Social Security)
JPKG	*Jaminan Pemeliharaan Kesehatan untuk Keluarga Miskin* (Health Insurance Scheme for Poor Families)
JPKM	*Jaminan Pemeliharaan Kesehatan Masyarakat* (Community Health Insurance Scheme)
MHI	Mandatory Health Insurance
MMR	Maternal Mortality Rate
MoH	Ministry of Health
NCD	Noncommunicable Disease
NHA	National Health Accounts
NHS	National Health Service
OECD	Organisation for Economic Co-operation and Development
OOP	Out of Pocket

PODES	*Potensi Desa* (Survey of Village Potential)
PT	*Perseroan Terbatas* (Company)
Puskabangkes	*Pusat Kajian Pembangunan Kesehatan* (Center for Health Policy Development and Analysis)
Puskesmas	*Pusat Kesehatan Masyarakat* (Health center at subdistrict)
PVHI	private voluntary health insurance
Renstra	*Rencana Strategi* (Strategic Planning)
Rp	Rupia
RPJM	*Rencana Pembangunan Jangka Menengah* (Medium-Term Development Plan)
RS	*Rumah Sakit* (hospital)
Sakernas	*Survei Tenaga Kerja Nasional* (National Labor Force Survey)
SHI	Social Health Insurance
SIKD	*Sistem Informasi Keuangan Daerah* (Local Government Expenditure Database)
SKRT	*Survei Kesehatan Rumah Tangga* (National Household Health Survey)
Surkesnas	*Survei Kesehatan Nasional* (National Health Survey)
Susenas	*Survei Sosial Ekonomi Nasional* (National Socioeconomic Survey)
U5MR	Under-5 Mortality Rate
UC	universal coverage
UNFPA	United Nations Population Fund
WDI	World Development Indicators

Overview

In 2004, the Indonesian government made a commitment to provide its entire population with health insurance coverage through a mandatory public health insurance scheme. It has moved boldly and has already provided coverage to an estimated 76.4 million poor and near poor, funded through the public budget. Nevertheless, more than half the population still lack health insurance coverage, and the full fiscal impacts of the government's program for the poor have not been fully assessed or felt. In addition, significant deficiencies in the efficiency and equity of the current health system, unless addressed, will exacerbate cost pressures and could preclude the effective implementation of universal coverage (UC) and the desired result of improvements in population health outcomes and financial protection.

For Indonesia to achieve UC, systems' performance must be improved and key policy choices about the configuration of the health financing system must be made. Indonesia's health system performs well with respect to some health outcomes and financial protection, but there is potential for significant improvement. High-

level political decisions are necessary on critical elements of the health financing reform package. The key transitional questions to get there include the following:

- What benefits can be afforded and what will their impacts on health outcomes and financial protection be?
- How will the more than 50 percent of those currently without coverage be insured?
- How will medical care providers be paid to ensure access, efficiency, and quality?
- What will be the most streamlined and efficient administrative structure?
- How will the current supply constraints be addressed to ensure availability of promised services?
- How will revenues be raised to finance the system, including the program for the poor and other currently uninsured groups that may require government subsidization, such as the more than 60 million informal sector workers, the 85 percent of workers in firms of fewer than five employees, and the 70 percent of the population living in rural areas?

While Indonesia is modernizing and further developing its health system with major reforms such as decentralization and the implementation of UC, the demographic, nutritional, and epidemiological transitions will have major implications for the design and costs of these reforms. An aging population will create additional demand for infrastructure (more hospitals), health workers (more specialists and care givers), and old age social security. At the same time, a diminishing employment base, characterized by stagnant movement into the formal sector, will exacerbate cost pressures. There are large emerging differences in the progress of these transitions across Indonesia; Eastern Indonesian provinces remain at the initial stages of the transition with continuing high levels of communicable disease and child mortality, while provinces in Java and Bali have higher levels of noncommunicable diseases.

On the positive side, Indonesia's economic growth has been robust since the financial crisis in 1997–98, and the country appears well positioned to weather the current financial crisis, although the effects on future economic growth are still uncertain. However, poverty rates remain high for a lower-middle-income country, despite significant improvements since 1997–98, and with a looming potential crisis, poverty rates are a major concern. Moreover, some 50 percent of the population remain classified as poor or near poor, leaving a very large part of the citizenry vulnerable to both economic and health shocks, which can be catastrophic and push households into poverty. In addition, labor market dynamics are important when developing a road map to universal coverage health insurance—for example, the large proportion of informality in the labor market complicates the use of worker-based contributions to finance the system.

The rationale for this health financing study is to provide real time, evidence-based inputs to the government of Indonesia's comprehensive Health Sector Review and to assist the government in the development and implementation of its universal health insurance program. The intention is to assist the government by assembling both the Indonesia-specific and global evidence bases, with an explicit focus on the development and implementation of policy options to achieve universal health insurance coverage to improve the health outcomes and financial protection of the Indonesian people.

This study focuses on the key health financing functions of revenue collection, risk pooling, and purchasing and their respective objectives of (i) equitably and efficiently raising sustainable revenues to support UC; (ii) pooling risks in an efficient and equitable manner to ensure financial protection for the Indonesian population; and (iii) purchasing services in an allocatively and technically efficient manner. The study develops the current Indonesian health policy baseline predicated on the strengths and weaknesses of the current system and future epidemiological and socioeconomic trends, and provides a comprehensive framework that enumerates the key reform issues requiring resolution. It provides an analytical policy framework based on the global "good practice" evidence base as well as some rudimentary costed options for the transition to universal coverage. Finally, it discusses the necessary future delivery system, public health, and demand-side reforms.

Health financing since decentralization has become more complicated, and health service delivery appears to be worsening, in large part as a result of governance issues. The national health system has not adapted to decentralized realities, nor has the decision to go to mandatory universal health insurance led to additional restructuring. The system remains publicly focused and continues to be based on the principles and features of Alma Ata (universal access to public primary care), although half of all health spending is private, largely out-of-pocket (OOP), and almost half of all those who are ill actually seek health services from private providers.

Government ability at all levels to make direct payments in the form of salaries and capital expenditures, as well as to provide additional coverage, is contingent on government fiscal capacity. Such fiscal capacity depends heavily on both local revenue-raising capacities and on the flow of funds through the intergovernmental fiscal systems in which some funds are earmarked by central-level government, while others are not, and formulas used for redistributing funds from central to local governments often do not reflect local need and local fiscal capacity.

Physical access to health services in Indonesia is considered adequate, although there are shortages in the number and distribution of health professionals. With more than 8,000 public health centers (1 for every 23,000 people), a wide outreach system, and more than 1,250 public and private hospitals, access to services is

good in all but remoter areas. However, the quality of infrastructure, functionality of equipment, and availability of supplies are often key problems. There are too few doctors, especially specialists, and this will be a major issue with future noncommunicable disease needs expanding rapidly. Not only are there too few doctors and specialists, they are also very inequitably distributed across Indonesia. There are significantly more midwives and nurses, and they are better distributed with at least one midwife for every village. However, as with infrastructure, absolute numbers are not the main issue—deployment and quality are.

Improvements in health service infrastructure have been one product of the overall increase in health expenditure, which rose from 1.9 percent of GDP in 1996 to 2.2 percent in 2006. At the same time, the public share has increased significantly, from 42 percent in 1996 to 50 percent in 2006. Government health expenditures as a share of the budget increased from 4.3 percent to 5.3 percent, while household OOP spending decreased only slightly from 36 percent of all spending (62 percent of 58 percent of overall private spending) in 1996 to 33 percent (66 percent of 50 percent) in 2006. In exchange rate–based U.S. dollars, health spending increased from US$20 in 1996 to US$34 in 2006 and in international dollars from US$55 to US$87.

Private health expenditure has, historically, played a more important role than public health spending in overall health financing in Indonesia. However, this trend started to change in 2005–06, and public health expenditure is expected to have an increasingly important role to play in future years as the government extends UC to the entire Indonesian population. The establishment of *Asuransi Kesehatan Masyarakat Miskin* (Health Insurance for Poor Population), or *Askeskin,* in 2004 and its expansion into *Jaminan Kesehatan Masyarakat* (Health Insurance Scheme for the Population), or *Jamkesmas,* in 2008 have had an impact on both total health spending and the public share of spending. OOP payments still constitute a sizeable share of health spending, however, and the challenge for the government is to channel these expenditures into risk-pooling mechanisms to effectively provide protection against catastrophic health spending.

Despite this historical dependence on private health spending, private voluntary health insurance is not well developed in Indonesia. Each of the three major existing health financing programs is publicly owned. Civil servants and their dependents are covered under the *Askes* program, which is administered by a for-profit state enterprise, *P.T Askes*. *Askeskin* was originally designed to cover the poor but was expanded through *Jamkesmas* to also cover the near poor. It was originally administered by *P.T. Askes* but in 2008 the Ministry of Health (MoH) took over most of the major administrative functions, including provider payment. *Jamsostek* is similar to a classic social insurance program for private sector employees in firms with 10 or more employees and is also administered by a for-profit state enterprise. Employers are at liberty to opt out, either by self-insuring or by purchasing private

insurance for their employees. Both *P.T. Askes* and *P.T. Jamsostek* also sell private commercial policies.

Three possible approaches, based on Indonesia's existing health financing programs, the current policy debate, and the 2004 Social Security Law have been identified as viable UC options. The three options would all result in universal coverage, and would all have sufficiently large numbers of enrollees for effective risk pooling. **I**rrespective of the approach chosen, however, crucial decisions regarding the benefits package, cost sharing, payment and contracting arrangements, and modalities to address supply-side constraints need to be made. The three approaches follow:

- The first approach approximates a National Health Service like those in Sri Lanka and Malaysia, and involves expanding the general revenue–financed *Jamkesmas* program for the poor and near poor to cover the entire population.
- The second approach approximates the "new" national Social Health Insurance (SHI) model (now called Mandatory Health Insurance [MHI), in which the MHI system is funded through both wage-based contributions for public and private sector workers (and retirees) and government general revenue contributions for the poor and other disadvantaged groups.
- The third approach, which could be considered a variant of the first option or a combination of the first and second options, provides coverage for the poor and other disadvantaged groups through a government-financed system, with others covered through multiple MHI funds, each financed on a contributory basis.

Clearly, whichever option is chosen, the movement to universal coverage will have a sizeable impact on Indonesia's health spending. Micro analyses of current program costs and utilization patterns after the introduction of *Askeskin/Jamkesmas* allow crude projections of future costs. For example, crude estimates of future *Jamkesmas* costs range from 20 percent of current *Jamkesmas* spending to a sixfold increase, depending on the coverage expansion scenario and health inflation assumptions chosen.

If expansion is financed through government spending, significant new demands will be made for available fiscal space in the budget to be allocated to health. The cost analysis included in this book, albeit crude, shows the importance for Indonesia to start addressing the abovementioned weaknesses in the system and to develop the information necessary to conduct more sophisticated projections in the future, and the need for the reform process to address broader health system issues in addition to the financing changes. If, as a result of UC, Indonesia's health spending increases to the levels of comparable income countries—and it implements policies to ensure efficiency and to control costs—health spending in 2040 could

be on the order of 6 percent of GDP compared with just over 2 percent currently. If efficiency and cost control are not addressed, and Indonesia faces cost pressures similar to those faced in the past by industrial countries, health spending could be on the order of 10 percent of GDP.

One way of assessing the availability of fiscal space for health is to examine the alternatives for increasing the sources of government financing for health (which include potential de facto increases achieved through efficiency gains in existing health and other public spending). These alternatives include the following:

- *favorable macroeconomic conditions* such as economic growth and increases in overall government revenue that, in turn, lead to increases in government spending for health;
- a *reprioritization* of health within the government budget;
- an increase in *health-specific foreign aid and grants*;
- an increase in *other health-specific resources*, for example, through earmarked taxation or the introduction of premiums for mandatory health insurance; and an increase in the *efficiency* of government health outlays.

Of the abovementioned alternatives, the first two are largely outside the domain of the health sector itself. The remaining three are more in the direct domain of the health sector and merit particular attention, given that they provide the potential for resources that are sector specific.

Indonesia has established the broad legislative base for moving forward to UC, and the Social Security Council has been focusing on specific implementation issues. There have also been a number of studies by the government, donors, and other stakeholders that provide relevant contributions for decision making as the country proceeds with the development and implementation of the reform. While all these efforts are useful for planting individual trees in the complex forest of health care reform, what has not been evident to date is the final configuration for populating the forest and the road map to eventually get there. In short, the government needs to decide on the final UC system and then carefully lay out the transition steps.

In developing such major policies, Indonesia, like most other countries, lacks critical information—about both policy specifications and data—for informed decision making. In addition, big picture policy choices on the ultimate UC system and transition steps can only be made in tandem with specific policy choices on more micro issues, such as the groups eligible for coverage by each program, targeting mechanisms, contribution requirements (for individuals, firms, and governments), provider payment mechanisms and levels, and the future macroeconomic environment. Rational policy choices need to be based on both the quantitative and qualitative impacts of such policies on, among other things, health outcomes,

financial protection, consumer responsiveness, access, equity, efficiency, costs (public and private), and macroeconomic sustainability.

Based on global experience, the following critical policy issues should form the framework for the implementation of universal coverage:

1. Further development is needed on such data for decision making as National Health Accounts updates; claims data from the existing programs; and cost, equity, and benefit incidence analyses to evaluate policy options. It is crucial to give high priority to developing the actuarial baselines of the current and proposed future health insurance programs and getting better estimates of the behavioral responses of both consumers and suppliers to changes in insurance coverage. Included in these analyses should be assessments of the current Basic Benefits Packages (BBPs), as measured by both cost-effectiveness and financial protection against excessive OOP spending, to enable rational choices of the BBP(s) under the UC reform.
2. The initial assessments of supply-side constraints with respect to both human resources and physical infrastructure highlighted a number of important areas where inefficiencies need to be addressed as well as areas that will come under more pressure given the underlying demographic, nutritional, and epidemiological realities.
3. Building on the pharmaceutical sector assessment and the initial identification of potential opportunities in expending mandatory health insurance, the government is encouraged to further evaluate pharmaceutical sector policies and needed changes to aid implementation of the UC reform.
4. The ongoing decentralization and UC reforms necessitate clarifying the future role of the MoH with respect to public health and its remaining stewardship and financing functions with respect to the public insurance system. Within its broader stewardship role, assessing the effects of policies in other sectors (such as water and education) on health must also be a high priority, as is assessing the need for additional demand-side policies such as conditional cash transfers.
5. Once decisions have been made regarding the financing options under the road map to UC, it is essential to develop, experiment with, and evaluate the impact of alternative provider payment mechanisms on costs, quality, and access.
6. The range of necessary administrative structures to implement the reform needs to be determined, including assessing administrative costs and developing systems to ensure quality, assess efficiency, and evaluate the reform's impacts.
7. The rich local experiences in providing health insurance coverage should be carefully assessed because these natural experiments are an important source of information for the national-level UC reform effort.

8. Attaining UC is highly likely to require large increases in government expenditures, no matter which option is chosen. Thus, continuing attention to evaluating Indonesia's future macro situation, including competing priorities in light of the current global financial and economic crises, is important, as is assessing the need for changes in the current intergovernmental fiscal structure.

Successful implementation of the UC reform will require carefully sequenced implementation of targeted, effective, and fiscally sound policies. The Social Security Council and the MoH have taken important first steps, but more is needed. The Medium-Term Development Plan (RPJM), the Ministry of Health's own internal planning efforts in developing the next *Rencana Strategi* (Strategic Plan), or *Renstra*, and the potentially large and possibly unaffordable (in the short-run because of the current global economic crisis) expenditure implications of expanding health insurance to some 76 million poor and near poor, make this an ideal time to refocus efforts on the comprehensive set of policies needed to effectively implement the UC reform.

Introduction

Indonesia is at a critical stage in the development and modernization of its health system. The government of Indonesia has made major improvements over the past four decades, but struggles to maintain and continue to improve important health outcomes for the poor and achieve the Millennium Development Goals. Nevertheless, some key health indicators show significant progress. Infant and child (under five) mortality rates have fallen by half since the early 1990s, although the speed of the decline appears to have slowed since 2002 (table 1.1). Maternal mortality rates show a declining trend, but remain among the highest in East Asia. Indonesia's population program is one of the world's most successful: fertility rates have declined impressively since the 1970s and continue to fall. Previously declining malnutrition rates among young children have, however, stagnated. The slowing down of progress may be explained by a poorly functioning health system as well as by new and ongoing challenges posed by demographic, epidemiological, and nutrition transitions, which require new policy directions, a reconfigured and better performing health system, and long-term sustainable financing.

Table 1.1 At a Glance: Health Outcomes and Trends in Indonesia

Indicator	1992	1997	2002	2007
Life expectancy at birth, total (years)	62	65	69	69
Fertility rate, total (births per woman)	3.0	2.8	2.6	2.6 to 2.2[a]
Infant mortality rate (per 1,000 live births)	67.8	45.7	34.7	34.0
Under 5 mortality rate (per 1,000)	97.4	58.2	45.7	45.0
Maternal mortality ratio (per 100,000 live births)[b]	465	425	307	228 420[c]
Births attended by skilled health staff (% of total)	35.1	49.1	66.2	73
Birth delivered at a health facility (% of total)	20.9	20.7	39.8	46.1
Immunization (all) (% of total)	48.3	54.8	51.4	58.6
Under 5 underweight malnutrition (% of total)	37	29	27	27

Source: DHS 2002/3–2007; *Susenas* 2006.

Note:

a. 2.6 is the most recent estimation in DHS 2007; 2.2 with refined sampling (Hull and Mosley 2008).
b. All maternal mortality ratios are subject to very high confidence intervals; often the difference between the lowest and highest point estimates is greater than the midpoint.
c. Most recent estimate is from 2005 using more accurate estimation methods (WHO et al. 2008). This data point is not comparable with the earlier years because different methods are used to estimate mortality rates.

Indonesia is also transitioning through two major reforms: (i) the decentralization reform of 2001, and (ii) the implementation of universal health insurance coverage (UC). Indonesia's political system has undergone a profound transformation, from a centralized authoritarian regime to a decentralized democratic polity. Despite initial turbulence, a sense of political stability has grown as the democratic process has matured and achieved wider acceptance. Decentralization, while still far from complete, has devolved substantial funds and authority to local governments, and new forms of decentralized participation in policy making have been created (World Bank 2008a). Indonesia's growing economy, political stability, and decentralization prospects now allow it to think expansively about health care.

Indonesia introduced the first phase of UC through a mandatory public health insurance–based scheme in 2004. *Asuransi Kesehatan Masyarakat Miskin* (Health Insurance for Poor Population), or *Askeskin,* was targeted to the poor and has increased access to care and financial protection for the poorest. In 2008, *Askeskin* evolved into *Jaminan Kesehatan Masyarakat* (Health Insurance Scheme for the Population), or *Jamkesmas,* which now covers over 76.4 million poor and near-poor Indonesians, and would potentially cover the entire population (Statistics Indonesia et al. 2008). A number of design and targeting issues have led to a much larger expenditure level than foreseen; budgets have tripled since the start of the program and continue to increase. This raises fundamental fiscal questions regarding the equity, affordability, and sustainability of the proposed new health insurance system.

The current health system suffers from inefficiencies; large geographic, urban-rural, and poor-nonpoor inequalities; and overall low quality of service provision. Although substantial progress was made in increasing access to health services, the performance of the current health system is inefficient and inequitable with respect to improving health outcomes and ensuring financial protection against impoverishment for the Indonesian population. Utilization of health services in Indonesia declined in the late 1990s after the financial crisis and has not rebounded to earlier levels. Self-treatment is very high with more than half of the population continuing to self-treat instead of seeking care when ill. Public and overall health spending increased substantially in recent years, but remain low by international standards and continue to be inequitably distributed among, and within, provinces (World Bank 2008c). Medical doctors are in short supply, not well distributed, and are often absent from public facilities during working hours, tending to their private clinics instead (World Bank 2009b).

Overshadowing the government's health development agenda is the potential impact of the global financial crisis on the government's ability to create the fiscal space to increase expenditures on health. It is too early to assess the impacts on Indonesia's future growth prospects of the recent global financial crisis. Precrisis and current indications suggest, however, that the country's macroeconomic fundamentals are relatively robust, and the financial sector is resilient. Nevertheless, the likelihood of a negative impact of the crisis on the Indonesian macroeconomy and on growth projections cannot be discounted, especially if export demand, foreign investment, and capital inflows are adversely affected (World Bank 2008b).

Rationale for a Health Financing Study

The government of Indonesia is in the process of undertaking a comprehensive health sector review that includes the health financing system. The government's aim is to obtain advice for the development of its Medium Term Development Plan 2009–2014 (*Rencana Pembangunan Jangka Menengah)*. In addition to health financing, the government-led review aims to address human resources for health, public health, service delivery system issues, pharmaceuticals, physical infrastructure and overall health system organization, and management and accountability issues. The main rationale for the present health financing study is to assist the government-led review by assembling the evidence base to inform the government's health sector reform agenda and provide options to achieve universal coverage.

The health financing functions of revenue collection, risk pooling, and purchasing have not been adequately assessed in the rich Indonesian health policy research literature. For example, there is a paucity of actuarial and economic assessments of the costs of UC, and the development and implementation of modern incentive-

based medical care provider payment systems is in its infancy. This study focuses on the financing functions and their respective objectives of (i) equitably and efficiently raising sustainable revenues to support UC, (ii) pooling risks in an efficient and equitable manner to ensure financial protection for the Indonesian population, and (iii) purchasing services in an allocatively and technically efficient manner.

This assessment provides an analytical policy framework based on the global good practices evidence base as well as on some rudimentary costed options for the transition to UC, including the necessary future delivery system and demand-side reforms. The study also builds on earlier sector analyses of Indonesia's postcrisis decentralization strategy that were undertaken in 2002 (World Bank 2002) and the 2008 Indonesia Health Public Expenditure Review (World Bank 2008c). More detailed regional comparisons are provided in a World Bank study of the health financing challenges in the East Asia and Pacific region (Langenbrunner and Somanathan forthcoming).

Objectives

The reform experience in Indonesia is an important addition to the global evidence base because of the "big bang" nature of both the decentralization and financing reforms as well as the need to document the cost, equity, financial protection, and outcome impacts of scaling up to UC in a developing country. Moreover, Indonesia, like the Philippines, Thailand, and Turkey, faces the considerable challenge of a middle-income country striving to achieve UC by scaling up a series of fragmented programs covering different population subgroups into one universal mandatory health insurance program for its entire population.

The specific objectives of this report are to provide a freestanding assessment of the critical challenges, knowledge gaps, and potential policy options for the government to implement UC, while at the same time contributing to the government's comprehensive health sector review. This will be accomplished by

- assessing in detail the performance of the current health financing system in Indonesia and highlighting the strengths and weaknesses of its public and private systems and proposed reforms;
- analyzing the impacts of the critical interactive underlying factors affecting health financing, including epidemiologic, demographic, and nutrition trends; health and related (education, for instance) systems configurations and policies; current and future economic trends; and decentralization issues; all in the context of the underlying political, institutional, and geographic realities of Indonesia;
- addressing the implementation and financing challenges brought about by the passage of Social Security Law No. 40/2004 introducing UC through a

mandatory national health insurance scheme;
- focusing on the need for additional policies to effectively protect households from falling into poverty because of catastrophic health events and thus ensuring equity; and
- providing recommendations on how to proceed in addressing specific unresolved policy and technical issues needed for informed decision making.

Methodology and Scope

This work is closely coordinated with counterparts from the government of Indonesia and other development partners. It builds upon and updates earlier reviews and strategic work by the government, the World Bank, the Indonesian health policy community, and other donors. The scope of the review is national. A systematic review, synthesis, and analysis of existing data, documents, and reviews across the sector was undertaken as the principal study methodology for this assessment. New data were collected, including district-level expenditures, household expenditures, health insurance coverage and claims information; and preliminary actuarial estimates were developed. Consultations and interviews with key stakeholders and academics were used to fill other knowledge gaps and to highlight areas for more in-depth analyses.

More specifically, this health financing review includes analyses of a wide range of available data. This data relates to macroeconomic indicators; demographic data; health expenditures and utilization; existing household survey results (*Susenas*); the Ministry of Finance's *Sistem Informasi Keuangan Daerah* (Local Government Expenditure Database); Demographic and Health Survey results (DHS); the Indonesian Family Life Survey; the Governance and Decentralization Survey; infrastructure censuses such as *Potensi Desa* (Survey of Village Potential); and international comparisons based on the World Health Organization's (WHO) National Health Accounts database and the World Bank's World Development Indicators.

Structure and Outline of the Review

This health financing review is structured around the topic areas and policy questions identified and agreed upon in broad stakeholders' discussions. These discussions were formalized in two seminars: (i) the senior policy seminar on *Disease Control Priorities and Health System Strengthening*, held in Bandung, Indonesia, June 10–12, 2007; and (ii) the high level health conference *Health Systems: How to Achieve Results* held in Nusa Dua, Bali, Indonesia, August 27–29, 2007. In addition, numerous consultations with the government of Indonesia and key donor partners were held around specific areas over the past three years, including a consultation on the draft final version of this study on January 30, 2009.

Using available information, analyses, and actions taken to date by the government, this study encompasses five key tasks: (i) to assess the underlying demographic, epidemiological, economic, geographic, and political factors underpinning current and future reform efforts; (ii) to analyze the strengths and weaknesses of the current Indonesian health system in the context of the basic health system objectives of maximizing health outcomes, ensuring financial protection, and being responsive to consumers in an equitable, efficient, and sustainable manner; (iii) to assess efforts to date in expanding health insurance coverage in Indonesia; (iv) to collate these efforts with the above policy questions; and (v) to provide recommendations on possible next steps, including policy analyses, options development, actuarial analyses, and transition steps germane to the next five-year planning cycle and movement to UC.

The study is organized as follows:

- Chapter 1 provides a brief background to, and the rationale for, the study as well as the objectives and methodology.
- Chapter 2 provides a brief overview of the socioeconomic and health systems context as it pertains to health financing.
- Chapter 3 describes Indonesia's current health financing programs according to the classic health financing functions of revenue collection, risk pooling, and purchasing, and analyzes Indonesia's health spending trends.
- Chapter 4 assesses the performance of the health system as measured by health outcomes, health spending, financial protection, equity, and allocative and technical efficiency, and summarizes its strengths and weaknesses.
- Chapter 5 discusses the health financing reform options under consideration and analytical efforts to date in answering the key policy questions outlined above; highlights remaining unresolved issues; and proposes a health policy framework for dealing with these issues based on global experience and Indonesia's ongoing reform processes.
- Chapter 6 discusses options for finding the needed resources to finance universal coverage.
- Chapter 7 concludes this study by providing suggestions on the next steps in the government of Indonesia's transition to universal health insurance coverage.

Socioeconomic and Health Systems Context

Although Indonesia's population growth has slowed considerably since the 1960s, there will be close to 300 million Indonesians by 2025. Changes in disease patterns will have serious consequences for the type of health care needed and the fact that more women are joining the workforce will reduce the availability of family members to care for the elderly. This chapter provides a brief overview of these socioeconomic issues and the health systems context as it pertains to health financing.

Population Dynamics and Demographic Changes

Changes in population numbers and demographics are important because they indicate the changing requirements for various types of infrastructure even if there is little or no change in living standards. With a population of approximately 228 million (in 2008), Indonesia is the fourth most populous country in the world. Although population growth is projected to decline significantly from 1.34 percent per year in 2005 to 0.11 percent in 2050, Indonesia's total population will still increase from 206.3 million in 2000 to 273.2 million by 2025. This projection is important for policy making and universal health insurance coverage planning because it illustrates the future characteristics of the population (table 2.1).

Table 2.1 Population and Demographic Indicators and Projections for Indonesia (1961–2025)

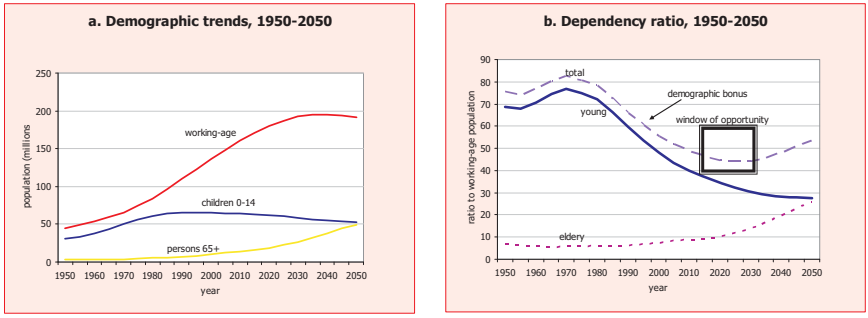
Indicator	1961	1980	2000	2010	2020	2025
Total population (millions)	97.0	147.5	206.3	233.4	261.0	273.2
Women at reproductive age, 15–49 yrs (millions)	23.7	35.9	57.3	66.8	70.3	70.8
Women at reproductive age, 15–49 yrs (%)	24.4	24.3	27.8	28.6	26.9	25.9
Children age 0–14 yrs (millions)	41.0	60.0	63.2	60.7	62.4	62.3
Children age 0–14 yrs (%)	42.3	40.7	30.6	26.0	23.9	22.8
Working-age population, 15–64 yrs (millions)	53.4	81.9	133.1	160.2	180.4	187.7
Working-age population, 15–64 yrs (%)	55.1	55.5	64.5	68.6	69.1	68.7
Older population, 65+(million)	2.6	4.8	9.6	12.4	18.3	23.2
Older population, 65+ (%)	2.7	3.3	4.7	5.3	7.0	8.5
Dependency ratio (young)	76.8	73.3	47.5	37.9	34.6	33.2
Dependency ratio (elderly)	4.9	5.9	7.2	7.7	10.1	12.4
Total dependency ratio (per 100 working age)	81.7	79.2	54.7	45.6	44.7	45.6
Rate of population growth, %/year, past decade	1.80	2.30	1.40	1.27	1.06	0.92
Number of births (millions)	3.80	5.30	4.10	4.29	4.24	4.18
Number of deaths (millions)	2.20	1.90	1.60	1.47	1.69	1.93
Crude birth rate (per 1,000 population)	43.8	39.9	20.7	18.4	16.3	15.3
Crude death rate (per 1,000 population)	22.7	12.9	7.8	6.3	6.5	7.1
Total fertility rate per woman	—	4.70	2.30	2.15	2.08	2.07
Net reproductive rate per woman	—	—	—	1.00	0.99	0.98
Infant mortality rate (per 1,000 births)	—	109.0	47.0	25.7	17.0	15.5
Life expectancy (years)	—	52.2	65.4	69.8	72.8	73.6

Source: Bappenas-BPS-UNFPA 2005, base-year 2000.
Note: — = Not available.

Other factors are also important when developing a road map for health system reforms and universal health insurance coverage. The average age at which people will complete education should rise from about 15 to about 18 as it has in many Organisation for Economic Co-operation and Development countries. The average age at which retirement occurs should increase—probably to about age 60 but it could go higher by 2025. Average household sizes will probably decrease quite markedly as a result of reductions in total fertility rates and increases in workforce mobility, which will be influenced by increased urbanization. However, the pace of urbanization will not occur uniformly across provinces. Labor force participation rates for women are likely to increase, and coupled with falling birth rates, will diminish their numbers and availability as informal-sector caregivers for increasingly older parents. Growth in the 55–74 age group will bring high demand for additional health services, including hospital-based specialist services for noncommunicable diseases and more social services.

The resulting infrastructure issues will be significant, and will be particularly noticeable with regard to hospitals, health centers, and local primary care practices. The successful family planning programs that started in the 1970s in Indonesia led to smaller families and a decline in the fertility rate to 2.3 children per woman in 2000. The resulting decline in the overall and youth dependency ratios[1] may provide an opportunity for economic growth defined as the "demographic bonus" or "demographic dividend" (figure 2.1) if this increasingly large workforce can be productively employed. If not, the demographic dividend could become a "demographic curse" with high levels of unemployment and social unrest.

Figure 2.1 Potential Window of Opportunity for Indonesia



Source: Adioetomo 2007.

Epidemiological Changes

Accompanying the demographic transition is an epidemiological transition with a rising burden of noncommunicable diseases and injuries. The two main causes of death in Indonesia are currently noncommunicable diseases: cardiovascular diseases and malignant neoplasms. In addition, intentional and nonintentional injuries make up more than 10 percent of deaths and this figure is growing as a result of increased numbers of road accidents (WHO 2008a). Risk factors such as tobacco use,[2] poor diet and lack of exercise, and traffic accidents are growing in importance and further contributing to the noncommunicable disease burden.

Although the incidence is declining, communicable diseases remain important and make up 43 percent of deaths in Indonesia. Emerging diseases, such as avian influenza and HIV/AIDS, also add to the changes in disease patterns. Indonesia has the highest number of avian influenza deaths worldwide and has one of the highest fatality rates. With the exception of the province of Papua, the HIV/AIDS

[1] The total dependency ratio is defined as the number of children less than 15 years old plus the number of persons 65 or older compared with the working-age population ages 15–64

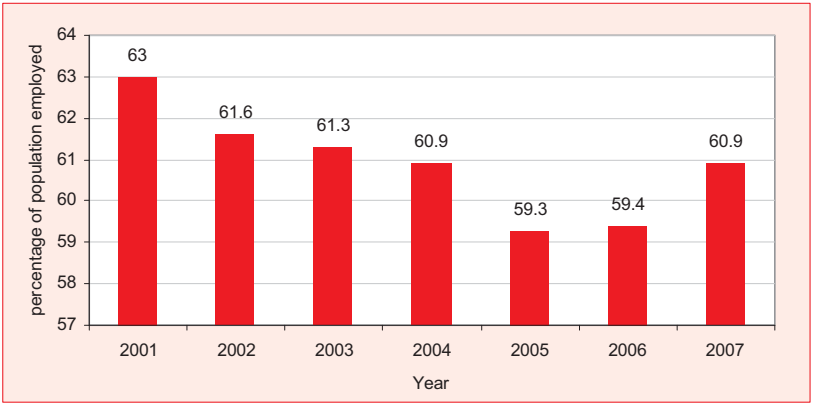
[2] Some 63 percent of the male population of Indonesia smokes (Barber et al. 2008).

epidemic in Indonesia is currently concentrated in high-risk subpopulations, such as sex workers and intravenous drug users.

Labor Market Situation

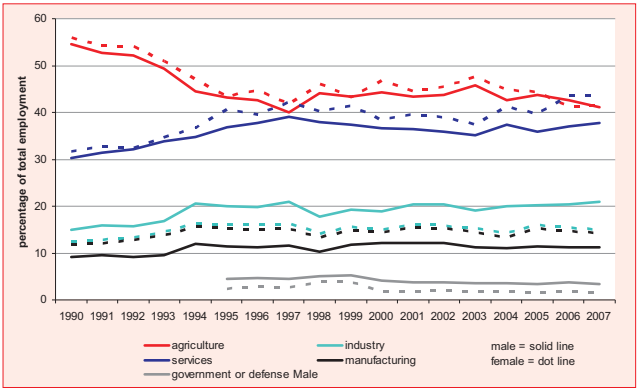
Job creation has not kept up with population growth since 2000, with the percentage of the employed population falling from 63 percent in 2001 to 59.4 percent in 2006 (figures 2.2 and 2.3). Although there was a subsequent turnaround in total employment in 2007, only some 30 percent of the labor force works in higher value added activities, in formal manufacturing, or as employees in organized enterprises. Work in formal, organized enterprises is particularly important to future health insurance because formal sector employers and employees are more identifiable as contributors to an insurance scheme.

Figure 2.2 Employment and Population Growth



Source: BPS (*Sakernas* labor force surveys).

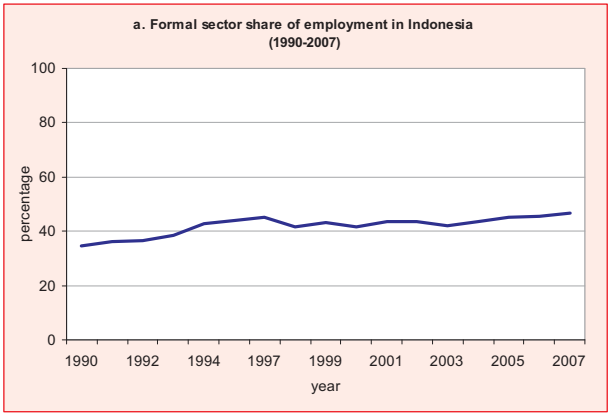
Figure 2.3 Indonesia's Labor Force Growth



***Source*: BPS (*Sakernas* labor force surveys).**

Another relevant issue from the perspective of increasing health insurance coverage using some form of payroll-based premium is the large degree of informality in the labor market in Indonesia. Some 60 percent of the labor force was composed of informal workers in 2007 with 40 percent of Indonesia's labor force dependent on low-productivity agricultural activities. Despite several years of economic growth in the country, there is only a very weak trend toward increasing formality in the workforce. As can be seen in figure 2.4, the level of formality has barely changed in the past two decades in Indonesia. This persistent level of informality, however, is observed not only in Indonesia but all across Asia and Latin America (Felipe and Hassan 2006).

Figure 2.4 Growth of Formal Sector Share of Employment in Indonesia



Source : World Bank staff estimate

Indonesia's Health System

The Ministry of Health (MoH) has overall responsibility for national health policy and manages and operates teaching-level and specialized hospitals. It recruits and allocates public sector doctors and other key staff and operates the main vertical programs for controlling such diseases as tuberculosis, HIV/AIDS, and malaria. The MoH remains responsible for the allocation of key staff to the subnational regions, despite decentralization. However, while the MoH is responsible for the health system, various health insurance programs, the private sector, and local governments are also important financiers, and in some cases providers, of services, resulting in significant fragmentation of both roles and flows of funds. These issues are discussed in more detail below.

As in many other low- and middle-income countries, most public provision and financing of health care in Indonesia is integrated and managed centrally by the MoH. The Ministry of Finance transfers funds to the MoH based on budget proposals that have been developed based on the previous year's budget, rather than needs and demand. In addition, in 2007 the MoH took on the responsibility of reimbursing hospitals for care provided under the *Jamkesmas* insurance program for the poor. The private health sector, which provides services to some 40 percent of those seeking care, exists in parallel, with little public oversight regarding the quality of services, despite such oversight being required by law as mentioned above.

Decentralization set in motion a significant change in the roles and responsibilities of various levels of government. Responsibility for implementation of health services was transferred to local governments at the district level, together with almost a quarter million health workers. The relocation, however, was administrative rather than physical. Although districts are now responsible for employment, deployment, and payment, regulations regarding authority to make decisions and budgets, and the capacity to carry them out, do not exist, largely because overall civil service reforms have stalled (World Bank 2005a).

Since decentralization, province-level health offices have mainly been responsible for training and coordination efforts as well as oversight of provincial hospitals, but they have limited resource allocation responsibilities. In contrast, districts have major responsibilities for delivering health services and allocating resources. At the subdistrict level, *Puskesmas* (health centers) have been the linchpin of basic health services and primary care since the 1970s, while district-level hospitals are the main providers of curative care. Curative services are provided by four types of hospitals ranging from teaching hospitals in the country's major cities to district-level hospitals where all main services are provided and referrals are made for more complicated cases to the higher level hospitals.[3]

[3] Hospitals are categorized as (i) class A, averaging about 1,450 beds and that offering a complete range of specialties and advanced forms of treatment; (ii) class B, averaging about 625 beds and providing about 10 specialties, sophisticated X-ray facilities, and a full range of laboratory services; (iii) class C hospitals at the district level, ranging from 50 to 350 beds and providing most specialties and referring up patients in need of advanced diagnostic and treatment services; and (iv) class D hospitals, also at the district level, averaging about 70 beds and providing only general services.

Public health facilities play an important role as economic enterprises for local governments. Local governments officially "own" public health facilities and hospitals but have never been allocated the needed resources to manage them. As a result, they rely on central subsidies for salaries and operational costs while user fees finance the nonsalary costs of medical care. In the 1990s, the private sector was encouraged to take on a more important role in delivering health services. This led to growth in the number of private hospitals and emergency-trained midwives,[4] which were expected to support themselves by charging fees for service.

Public hospitals, and later *Puskesmas*, were encouraged to adopt the self-governing (*Swadana*) principle, which has led to a greater reliance on user fees. Cost-recovery fees contributed little before decentralization—about 15 percent in public health facilities—but their contribution increased following decentralization. There is a dearth of information regarding these revenues, but a limited 2006 study reported that 75 percent of revenues generated by *Puskesmas* and public hospitals went to local governments (Kristiansen and Santoso 2006). Still, little is done to track actual revenues of these facilities. A negative result of the focus on revenue raising is that public health interventions and preventive measures get less attention because they are less profitable.

Health Service Physical Infrastructure

An impressive expansion of public health system infrastructure occurred in the 1970s and 1980s. Construction of the primary health care network and *Puskesmas* was financed mainly from the central government budget. Initially, financing came from the *Inpres* (Presidential Instruction) program and later through the MoH budget (*Anggaran Pendapatan dan Belanja Negara* or APBN, the state budget). Central-level funding for *Puskesmas* construction continued after decentralization through the special allocation fund (*Dana Alokasi Khusus* or DAK) that channeled funds directly to the district level. The *Puskesmas* and its network were equipped using standards set by the MoH and funded by the central government.

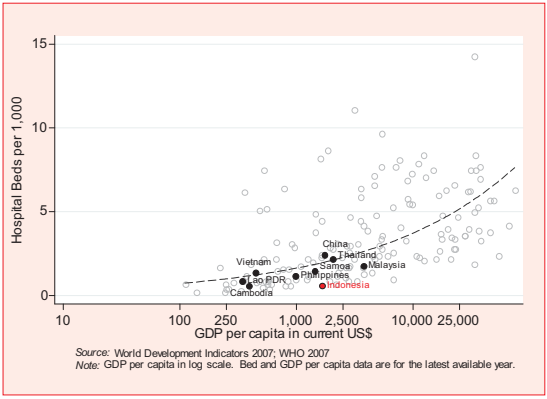
By 2006, Indonesia had established more than 8,000 *Puskesmas*, of which about 31 percent provide inpatient facilities (MoH 2007a). Each *Puskesmas* serves about 23,000 people within a service area of 24 square kilometers (MoH 2007a). Access to public health services has been further improved with the establishment of about 22,200 health subcenters (*Puskesmas Pembantu* or *Pustu*) and about 5,800 mobile health centers.[5] The ratio of health subcenters to health centers is about 3:1. Although the number of *Puskesmas* is considered sufficient to meet the established standard of one *Puskesmas* per 30,000 people, there are disparities among provinces and availability is not based on needs assessments.

[4] The *Bidan Di Desa* (BDD) program was started in 1989 with the objective of accelerating the reduction of high levels of maternal mortality. An estimated 55,000 midwives were trained in one-year courses and deployed to all villages in Indonesia.

[5] *Puskesmas Keliling,* of which 508 are four-wheeled and about 700 are on boats (MoH 2007a, Health Profile 2005).

Physical access to services is considered less of a problem than quality of services in Indonesia. When compared with other countries, however, Indonesia has a very low hospital bed to population ratio (figure 2.5). The number of beds per 1,000 population is, in fact, one of the lowest in the East Asia and Pacific region, even when compared with much lower-income countries such as Vietnam and the Lao People's Democratic Republic and, on a global scale, Indonesia has significantly fewer beds than other countries of a similar income level.

Figure 2.5 Global Comparison of Hospital Beds to Population and GDP



The number of hospitals and hospital beds has grown slowly and has barely kept up with population growth. In 1990, there were 404 hospitals and about 59,000 beds under the "main system," consisting of the MoH, plus provinces and districts. In 2005, these numbers rose to 452 hospitals (including specialized hospitals) and about 66,700 beds (tables 2.2 and 2.3). These numbers do not include hospitals belonging to the armed forces, the police, or other ministries and state-owned enterprises, which, although affiliated with state agencies, function more like private institutions.

Table 2.2 Number of Hospitals by Ownership

Hospital affiliation	1995	1997	2000	2003	2005	2006
Ministry of Health	15	15	14	14	13	13
Province, district, municipal	323	327	328	339	365	377
Armed Forces or Police	110	111	110	110	110	110
Other ministry or state-owned enterprise (*Badan Usaha Milik Negara* or BUMN)	73	69	68	71	71	71
Private	329	351	390	432	436	441
Total	**850**	**873**	**910**	**966**	**995**	**1,012**

Source: MoH 2007b.
Note: Table does not include specialized hospitals, which explains the discrepancy in numbers between table and the text.

The slow expansion in public hospitals and beds has been partly offset by an increase in private hospitals. In 1995, there were 329 private hospitals with about 33,300 beds, some 33 percent of the total beds, increasing in 2006 to 441 hospitals, including specialized, private hospitals with about 43,800 beds, some 37 percent of the total (table 2.3). Private hospitals are, on average, smaller than public hospitals. This difference in size is partly explained by the large number of small single-specialty private hospitals, mostly maternity hospitals. However, even among general hospitals, private hospitals are smaller than public general hospitals, with an average of 99 beds and 146 beds, respectively (MoH 2007b).

Table 2.3 Number of Beds by Hospital Ownership

Indicator	1995	1997	2000	2003	2005	2006
Ministry of Health	9,023	9,610	9,173	8,858	8,483	8,784
Province, district, municipal	40,069	40,824	42,109	43,761	46,798	48,209
Armed Forces or Police	10,752	10,874	10,811	10,718	10,814	10,842
Other ministry or state-owned enterprise (*Badan Usaha Milik Negara* or BUMN)	7,246	6,881	6,928	6,758	6,827	6,880
Private	33,298	35,697	38,516	42,284	43,364	43,789
Total	**100,388**	**103,886**	**107,537**	**112,379**	**116,286**	**118,504**
Beds per 100,000	**51.55**	—	**52.42**	**52.62**	**53.05**	**53.37**
Bed occupancy rate	—	—	—	**56**	**56**	**59**

Source: Indonesia Health Profiles, various years, MoH.
Note: Beds in general hospitals only, not including specialized hospitals. — = Not available.

The Governance and Decentralization Survey 2 (GDS2) conducted by the World Bank in 2006 found that more than 80 percent of *Puskesmas* have medicines in stock, an ambulance, and computers (Lewis and Pattinasarany 2007). In addition, 90 percent have clean water and, while almost all have electricity, only 39 percent have a power generator. Regarding waiting room conditions, almost all have adequate lighting and ventilation, but in only 40 percent of the *Puskesmas* are the examination rooms closed for privacy and 20 percent do not have a garbage can.

A recent physical infrastructure rapid assessment[6] shows the data on physical infrastructure are not very reliable as a result of a failure to maintain data currency after decentralization as well as inconsistencies with names, locations, and inventories (GTZ 2009). The sample assessment findings highlight a number of issues in medical equipment planning, provision, and use that contribute to inefficiencies. Equipment is often provided through different sources (for example,

[6] This assessment was commissioned and managed by *Puskabangkes* and the German Agency for Technical Cooperation as part of the inputs to the Indonesian government-led Health Sector Review. The objective was to evaluate the data and information on physical infrastructure inventories; standards and guidelines regarding facilities and equipment requirements, including their application; procedures with regard to budgeting and planning; and to conduct an inspection of a sample of buildings and equipment.

provinces can provide equipment to *Puskesmas* without a district's knowledge and without a needs assessment); and some *Puskesmas* are overequipped (or are receiving inappropriate anaesthetics machines and electro-surgery units), while others lack equipment. There is little coordination between the equipment on hand and technical specialists to operate it.

Several hospitals found a solution to operating sophisticated equipment by leasing from private companies, thereby transferring the burden of complex maintenance and repair services from the hospital management to the company. Similar schemes were found for laboratories. Although maintenance units were found in all hospitals, staffing and qualification levels were mostly inadequate. Outsourcing of maintenance services (basic as well as complex services) is used in some instances but, in general, maintenance appears to be a neglected area. There are no clear guidelines or minimum budget figures for maintenance. Management appears to prefer to invest in new equipment instead, a practice that leads to significant loss of value and wastage. The present budgeting system leads health facilities to favor procurement and replacement (often funded from outside sources) over maintenance (funded from internal, limited resources).

Pharmaceuticals

Availability of essential medicines in public primary care appears to be reasonable, but temporary vaccine shortages are widespread. The availability of essential medicines is not systematically monitored, but there are indications of variable performance across districts. Between 75 and 80 percent of districts in Indonesia for which data are available (from the GDS and ad hoc studies) report adequate supplies of essential medicines. However, this achievement has come at an unmeasured cost in high quantities of inventory at multiple levels in the system, losses of date-expired products, and stock-outs. Delays in budget allocation and public sector procurement for essential medicines and vaccines, combined with variable efficiency in the buffer stock and the local drug management system for primary care medicines, are leading to simultaneous overstocking and stock-outs. The high quantities of inventory at every level of the system have hidden financing costs and associated risks of leakage or spoilage. Many districts and *Puskesmas* have a combination of overstocking for some products and stock-outs of others.

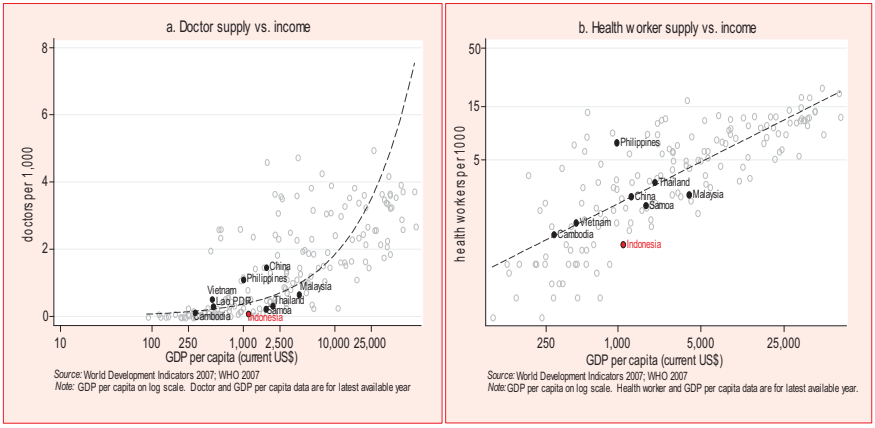
Many districts reported several months of vaccine stock-outs in 2007, and in the aggregate, insufficient annual quantities of vaccines have been distributed. These inefficiencies partly result from budget and procurement rules that treat these supplies as discretionary, deferrable expenditures but also because of the challenge of coordinating both centralized and decentralized planning, budgeting, and procurement in the very tight time frame created by current budget rules and procurement practices. Indonesia also has a substantial and diverse traditional medicines sector, with a wide range of practices across the many ethnic groups

that use such remedies from traditional healers. Traditional medicines are still used extensively, especially by the rural population.

Human Resources for Health

Indonesia's health workforce is small, with low service ratios relative to other countries in the region and globally. Compared with countries that have similar income levels, Indonesia has considerably lower doctor-to-population ratios: 21 doctors per 100,000 compared with 58 in the Philippines and 70 in Malaysia. Even when compared with countries with lower income per capita than Indonesia, such as Vietnam and Cambodia, Indonesia has lower ratios (figure 2.6). Similarly, with respect to the total numbers of health workers to population, Indonesia has a much lower ratio than most other East Asia and Pacific region countries as well as other countries of its income level globally.

Figure 2.6 Global Comparisons of Doctors and Health Workers to Population Trendlines (2000–06)



The ratio of doctors per 100,000 population has improved over time, but inequities in distribution between provinces, between urban and rural regions, and between more and less affluent areas have not. In 2007, there were a few more than 70,000 medical doctors in Indonesia and, of those, about 15,000 were medical specialists (*Konsil Kedoktoran Indonesi* [Indonesian Medical Council], http://www.inamc.or.id/). Indonesia does somewhat better in regional comparisons of the ratios of midwives and nurses to population, with an estimated 62 nurses and 50 midwives per 100,000 population (World Bank 2009a).[7] There are almost 80,000 midwives in Indonesia.

[7] There are large discrepancies between data sources, preventing a clear picture of the current number and distribution of nurses from being formed. For more details, please see World Bank (2009a).

Their numbers and ratio per 100,000 population have also improved over time, as has their distribution (table 2.4). For nurses, however, the data do not allow credible estimates of current numbers and distribution to be determined.

Table 2.4 Ratio of Doctors and Midwives by Region (1996–2006)

Region	Doctors per 100,000 Population			Midwives per 100,000 Population		
	1996	2006	% change	1996	2006	% change
Java-Bali	16.2	18.5	14.20	27.5	26.1	-5.09
Urban	39.0	34.1	-12.56	23.8	25.1	5.46
Rural	4.4	4.5	2.27	29.5	27.1	-8.14
Outside Java-Bali	14.8	18.1	22.30	46.8	52.8	12.82
Urban	43.2	40.9	-5.32	45.1	45.4	0.67
Rural	7.1	8.3	16.90	46.0	55.1	19.78
Remote	4.7	6.6	40.43	53.4	58.1	0.09

Source: Various years of PODES (Survey of Village Potential).
Note: The number of doctors and midwives was obtained from questions in PODES that asked the head of the village about the number of doctors living within the boundary of the village.

The data for the number and ratio of specialists in Indonesia are very limited. The most reliable current estimate comes from the number of specialist doctors registered with Konsil Kedoktoran Indonesi (15,082), or only seven specialists for every 100,000 Indonesians (table 2.5). Even in Jakarta, the ratio is only 41 per 100,000 population. In addition, there are also large differences in the number of specialists between provinces, with the large majority of specialists, more than 10,000, in Jakarta, Yogyakarta, and West, Central, and East Java.[8]

Table 2.5 Total Number and Ratio of Specialists to Population

Source	Total specialists			Ratio per 100,000 population		
	1996	2007	% change	1996	2007	% change
Profiles	6,832	9,717	42.23	3.21	5.18	61.37
KKI		15,082				

Source: KKI 2008.
Note: Totals from profiles do not include West Sulawesi, North Maluku, West Papua, Banten, Kep. Bangka Belitung, and Kep. Riau for lack of data.

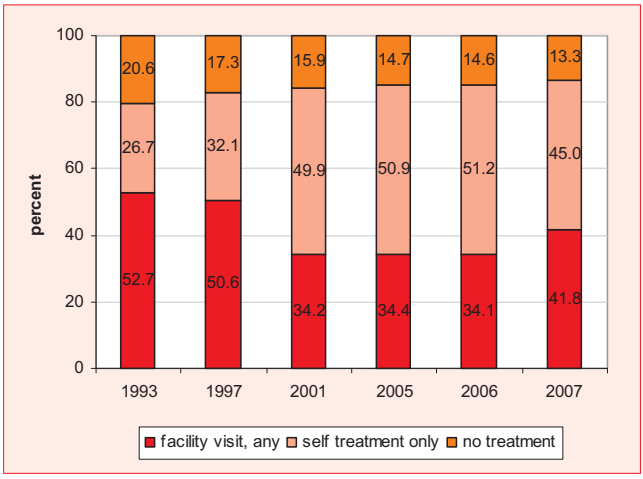
[8] Data are not provided in disaggregated form, and it is not possible to characterize the distribution of specialists across urban, rural, and remote areas.

Health Services Utilization

The utilization[9] of health facilities has increased since the 1997 financial and economic crisis, but overall utilization has not been restored to precrisis levels. In 2007, 42 percent of those reporting ill sought treatment from an established facility (World Bank 2008c). However, 45 percent of people reported that they relied on self-treatment during their last illness, obtaining medication at pharmacies or drugstores. More than one in ten people (13 percent) did not seek treatment at all (figure 2.7).

Since 2004, public service utilization has increased, while private provider utilization has decreased. Public health service utilization rates have increased by almost 100 percent since 2004, while private service utilization rates have decreased (figure 2.8). This could be the result of a substitution effect, whereby those previously seeking private health services are now serviced by public providers.

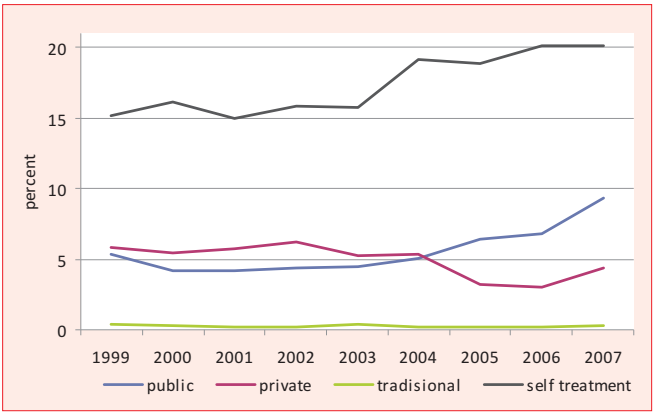
Figure 2.7 Care-seeking Behavior Among Those Reporting Ill (1993-2007)



Source: World Bank staff calculations based on various years of *Susenas*.

[9] Utilization is measured as the percentage of the population seeking treatment as a share of total population (not those reporting ill).

Figure 2.8 Choice of Provider (1999-2007)



Source: World Bank staff calculations based on various years of *Susenas*.

Health Information System

A recent health information system (HIS) assessment indicates that Indonesia's national policy on health information systems[10] describes the components but the strategic planning and operational guidance have not yet been developed (HMN 2007). In addition, private health providers participate very little in the HIS; as a result there is no information regarding almost 50 percent of health service delivery. Although data are being collected, the integration of information is inadequate, there is overlap and duplication, and many areas for improved quality and efficiency can be identified. At the district level, the reporting system has been considered voluntary since decentralization and, as a result, there are no dedicated staff for HIS at the Puskesmas level. HIS has been implemented in hospitals, but mainly for the purpose of medical records and billing (HMN 2007). The breakdown of the information system at the decentralized level and the lack of coordination at the national level explain the lack of information at the national level since 2001.

[10] The national policy on health information systems was established by Minister of Health Decree No. 511/MenKes/SK/V/2002.

Indonesia's Health Financing System

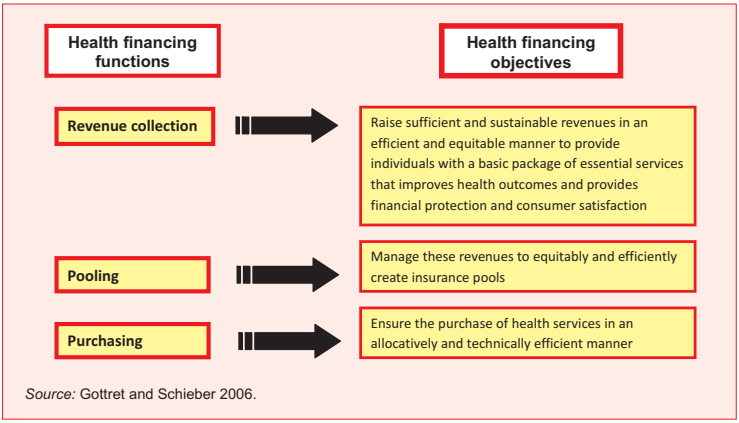
This chapter provides an overview of the historical evolution of the Indonesian health financing system and assesses the basic financing functions of revenue collection, risk pooling, and purchasing of services. A country's health financing functions need to be assessed in the context of how well they achieve the basic health system objectives of maximizing health outcomes, ensuring financial protection, and promoting consumer responsiveness in an equitable, efficient, and financially sustainable manner. The basic financial and nonfinancial incentives embodied in the specific policies underlying these functions are critical determinants of the overall performance of the health system.

Health Financing Functions

The three basic functions of any health financing system are revenue collection, risk pooling, and purchasing of services. Figure 3.1 highlights these basic functions, together with the basic health system objectives they are designed to achieve. Countries need to focus not on generic models but on health financing functions and objectives and the specific micro and macro policies needed to achieve them.

Revenue collection, public or private, entails collecting *sufficient* and *sustainable* revenues in an *economically efficient* (so taxes do not distort the economy) and *equitable* manner to provide individuals with a Basic Benefits Package (BBP) that improves *health outcomes, provides financial protection, and is responsive to consumers*. These revenues are then "pooled" to provide people with "insurance" protection against unpredictably large medical care expenses. Covered services are then purchased *efficiently* so as to maximize health outcomes, financial protection, and consumer responsiveness.

Figure 3.1 Health Financing Functions and Objectives



Source: Gottret and Schieber 2006.

Some of these functions for specific groups (for example, higher income earners) and types of services can be accomplished through private or public financing arrangements. There are no one-size-fits-all solutions, and generic models such as social health insurance (SHI), national health services (NHS), and private voluntary health insurance (PVHI) are, individually, extremely limited in providing the specific policy direction needed to achieve the health financing and health system goals. Most countries' health financing systems represent combinations of these models. In fact, the "new" SHI model, generally known as mandatory health insurance, explicitly recognizes this fact by being characterized as a model in which the poor are covered through the general government budget (an NHS characteristic), while other groups are financed through mandatory individual contributions, employer contributions, or both (an SHI characteristic). In some countries, higher income individuals opt out to use higher quality or higher amenity private services, which, in effect, allows scarce public funds to be concentrated on the poor through universal coverage. Getting this balance right is difficult because it requires a good-quality public system, one that better-off citizens will continue to politically support, even though on occasion they may go outside the public system for better amenities and quality for certain services.

Indonesia's Health Financing Programs

The evolution of Indonesia's health financing programs has a rich history. This evolution started during the colonial period and is characterized by the change from traditional medicine rooted in the Chinese system to Western medicine (Boomgaard 1993). In the early twentieth century, the Dutch established a mandatory health insurance scheme for civil servants.[1] The provider was the governmental hospital, which supplied a free, comprehensive package of benefits. In 1938, all civil servants and their families were included under the same benefit package; in 1948, a 3 percent copayment for inpatient services was introduced.

After Indonesia gained its independence in 1945, the regulation regarding civil servants' health insurance in effect during the Dutch Indies government went into effect for government officers through the early *Asuransi Kesehatan* (Health Insurance), or *Askes,* scheme (Guadiz-Padmohoedojo 1995). The budget was provided to the Ministry of Health (MoH) and hospitals were reimbursed for services provided to civil servants with salaries below a fixed ceiling. Health services were free of charge in public hospitals and reimbursable in private hospitals. For inpatient services a 3 percent copayment was charged. The reimbursement system worked as follows: Health inspectors at the province level verified claims that were brought to the reimbursement office in the central MoH office. After verification, the claim was brought to the State Exchequer Office, which would pay the MoH. Early problems identified in this scheme include those that modern insurance schemes continue to suffer: moral hazard, high costs to the public budget, high administrative costs, and noncoverage of retired officers.

Askes Persero, the predecessor to *P.T. Askes*, was established in 1968 under Presidential Instruction No. 230/1968 to finance and deliver health insurance services to both active and pensioned civil servants, including their direct family members. In addition, Ministry of Health Regulation No. 1/1968 provided *P.T. Askes* with exclusive rights to manage its own insurance fund to support administrative and functional operations. Starting in 1991, *P.T. Askes* broadened its market and product coverage to the provision of commercial health insurance programs to the public. In 1992, the *Jaminan Sosial Tenaga Kerja* (Workforce Social Security), or *Jamsostek,* social security–based program for private employees and employers was introduced.

In response to the financial and economic crisis of 1997–98, new emphasis was placed on pro-poor financing and a number of efforts were undertaken to deal with the severe circumstances. Donor funding increased sharply in 1998–99 so that the

[1] *Staats Regeling* 1/1934 governed the insurance scheme and specified that participation was limited to public servants holding European status or equivalent.

overall level of public funding remained close to its levels of the early to mid-1990s. The government of Indonesia developed several targeted programs to cushion the economic shocks of the crisis on the poor and other vulnerable groups. These programs are collectively referred to as the *Jaring Pengaman Sosial* (Social Safety Net) or JPS programs (table 3.1). JPS schemes included workfare, subsidized rice sales, targeted scholarships, health subsidies, and village block grants. Moreover, over this period, the MoH was involved in encouraging various community-based and voluntary initiatives, including the promotion of Village Community Development (*Pembangunan Kesehatan Masyarakat Desa*) and community-managed health care based on the American health maintenance organization model (*Jaminan Pemeliharaan Kesehatan Masyarakat*, or JPKM).

The platform for universal coverage was established in 2004 with the introduction of a new health program for the poor, *Asuransi Kesehatan Masyarakat Miskin* (Health Insurance for Poor Population) or *Askeskin*, which was designed to increase access to, and the quality of, health services for the poor. The program had two components: (i) operational funds provided to *Puskesmas* in the form of capitation payments; and (ii) a fee-for-service health insurance scheme, covering third-class hospital beds and reimbursed through *P.T. Askes*. The program differed from the previous programs for the poor in two major ways: (i) rather than being a purely government-run program, it provided a block grant to *P.T. Askes*, which then targeted the poor with *Askeskin* cards and refunded hospital claims; and (ii) the beneficiary cards in this program were individually targeted rather than household cards as in previous programs. Initially there were 36.1 million target beneficiaries; however, the target was soon expanded to include more than 76 million individuals in 2008 under the current program called *Jaminan Kesehatan Masyarakat* (Health Insurance Scheme for Population), or *Jamkesmas*. The *Jamkesmas* program is being implemented throughout the country and will serve as one of the key building blocks of the government's proposed universal coverage scheme, which is designed to synchronize the multiple health insurance schemes.

Health financing in Indonesia is complicated by decentralization because direct payments of salaries and capital costs by all levels of government clearly impact the hospital reimbursement schedules used by insurers. Governments' ability to make such payments and to provide additional coverage (see local experiments discussed in chapter 5) are heavily contingent on their fiscal capacity. Such fiscal capacity depends on both local revenue-raising capacity and the flow of funds through the intergovernmental fiscal systems in which some funds are earmarked by central-level government, while others are not, and formulas used for redistributing funds from central to local governments often do not reflect local need and fiscal capacity.

Although the concept at first appears simple,[2] districts are responsible for implementing health services. The complexity of the flows of funds—some targeted to health, others not; some payments made through insurance organizations, and others made directly to public providers (hospitals, *Puskesmas*, and personnel)—make for an intricate, inequitable, inefficient, and fragmented set of financing flows (World Bank 2008c). Moreover, recent studies also indicate that many poor districts are receiving much higher levels of funding than previously, but have been unable to spend these funds because of local absorptive capacity constraints. In other cases, despite increased district spending, little effective poverty reduction has occurred in some of the poorest districts (Fengler and Hofman 2007).

Table 3.1 summarizes the major evolutionary changes in social health insurance starting with the introduction of health insurance for civil servants in 1968.

Table 3.1 Overview of Social Health Insurance Landmarks in Indonesia

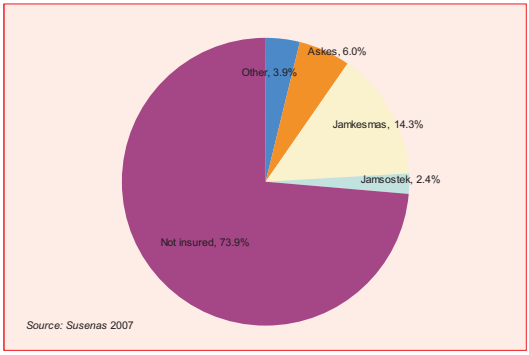
Year	Initiative
1968	Health insurance for civil servants – *Askes*
1974–90	Promotion and experiments in community-based health insurance (CBHI) – *Dana Sehat*
1992	Social security for private sector employees – Jamsostek, JPKM (HMOs), and CBHI
1997	Financial crisis
1998	MoH attempt to mandate HMOs fails
1999	JPS (Social Safety Net): financial assistance for the poor, ADB loan
2000	Comprehensive review of health insurance and amendment of constitution to prescribe the rights to health care
2001	Decentralization law implemented
2001	Comprehensive review of social security system
2002	Amendment of constitution on the right to social security; President establishes a task force on social security
2003	Parliament initiates a bill on National Social Health Insurance (June) Task force finishes drafting bill on National Social Security including health, occupational health, provident fund and pension, and death benefits (December)
2004	Bill on National Social Security enacted (October 19)
2005	Preparation for extension of insurance coverage to 36.4 million poor people
2008	MoH covers 76.4 million poor and near poor through *Askeskin/Jamkesmas* programs; National Social Security Council established (October 2008)

Source: Adapted from presentation at Bandung Policy Seminar, April 2007, by Prof. Hasbullah Thabrany.
Note: ADB = Asian Development Bank.

As of mid-2009, it is difficult to get a clear picture of the extent of coverage. Reliable data on the numbers of people with formal health insurance coverage are lacking. Figure 3.2, using 2007 *Survei Sosial Ekonomi Nasional* (National Socioeconomic Survey), or *Susenas*, survey data, indicates that in 2006 only some 26 percent of the Indonesian population was covered, largely through the *Jamkesmas* program for the poor.

[2] There are three main funding sources from the central level to the district, two of which involve direct funding of the district (DAU and DAK), and one indirect via the provincial level *(Dekon)*. In addition, the district has its own funding, the PAD (locally generated revenues).

Figure 3.2 Insurance coverage Status of the Indonesian Population



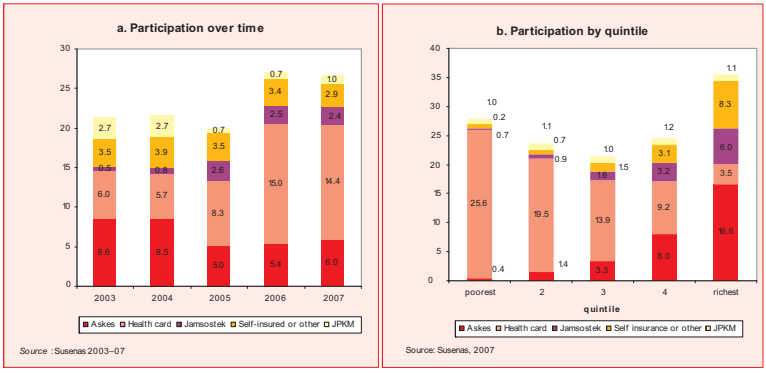
Indonesia's Health Insurance Providers

In general, health insurance participation remains low in Indonesia (figure 3.3a). Participation increased markedly in 2008 compared with the early stagnant rate of about 20 percent, but current schemes still covered less than half the population.

Recent increases in coverage are mostly attributed to the introduction of the *Askeskin/Jamkesmas* health insurance scheme for the poor, discussed in more detail below. The other main schemes, *Askes* (mostly civil servants) and *Jamsostek* (mostly formal sector workers), only cover about 6.0 and 2.0 percent of the population, respectively, while private insurance companies and other schemes cover another 3 percent.[3] Coverage by these programs has not changed much over the past decades. Community health insurance schemes are so small they cannot be included as a separate category in figure 3.3b. Analyzing participation by income quintile, it becomes clear that the poor are the main beneficiaries of the *Askeskin* and *Jamkesmas* systems, while individuals in richer quintiles are mostly covered by the civil service (including military) schemes or by *Jamsostek*.

[3] There are some inconsistencies in the *Jamsostek* data as reported by different sources. For example, ADB reports 1.3 percent of the population covered (circa 2005), which is consistent with the ILO's (circa 2000) figure of 1.4 percent and similar to *Jamsostek's* 2009 figure of 1.7 percent (4.1 million people), while *Susenas* reports 2.4 percent (circa 2007). Some of the differences may be due to the different years reported. While these are significant differences in percentage terms for *Jamsostek's* gross coverage numbers, the key issue is that very small percentages of the Indonesian workforce (of some 105 million) and population (225 plus million) are covered through the current social health insurance system for formal sector workers. These discrepancies highlight the need for much better information for decision making, which is discussed in chapters 5 and 7.

Figure 3.3 Insurance Participation

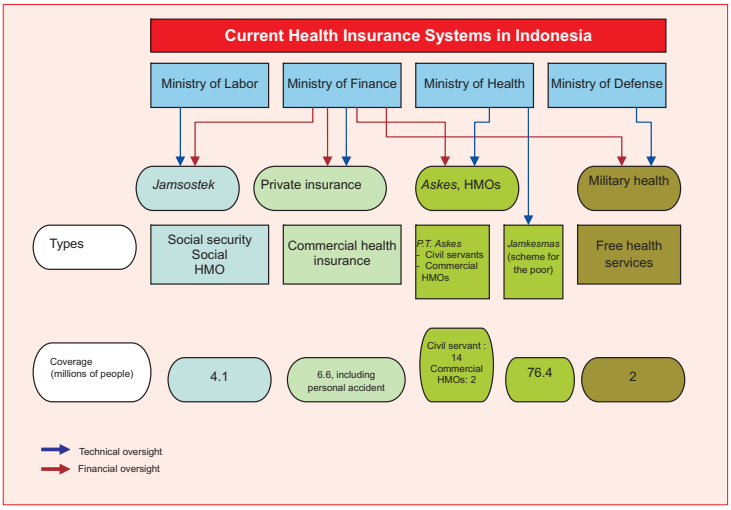


The government estimated that, in 2008, formal health insurance covered approximately 48 percent of the population, largely by the expansion of *Jamkesmas* from 36 million people to 76.4 million (figure 3.4).[4] The bulk of those covered would be the poor and near poor through *Jamkesmas* and civil servants through *P.T. Askes*. While *Jamsostek* currently covers about 4.1 million workers and dependents or some 2 percent of the population, recent ILO and ADB studies suggest that if the entire fully employed workforce and dependents were covered, *Jamsostek* coverage could increase to 40–50 percent of the population. *Jamsostek*'s low coverage rate is a result of firm-size limitations (only firms with 10 or more employees are required to participate) as well as an opt-out provision for firms self-insuring or providing PVHI. Indonesia also faces the classic problem of enrolling its more than 60 million informal sector workers in its extant schemes as well as under its planned universal coverage (ILO 2003; ADB 2007).[5]

[4] At the time of writing, no household data were available to verify coverage.

[5] The *Jamsostek* law envisioned inclusion of informal workers, but the provision was never implemented.

Figure 3.4 Current Health Insurance Systems in Indonesia (Type and Coverage)



Source: Gotama and Pardede 2007b, adapted and updated by World Bank staff.

Table 3.2 describes in detail the three major health financing programs—*Askes*, *Jamsostek,* and *Askeskin/Jamkesmas*—including their eligibility requirements, benefits, financing, and provider payment arrangements. Indonesia confronts many of the same problems faced by other developing countries attempting to move to universal coverage, as it begins to expand and consolidate a set of fragmented health financing programs, establish a standard package of benefits, impose unified and pay-for-performance provider payment mechanisms, and establish a "level playing field" for the participation of both public and private sector providers. Each of these areas is discussed in turn.

Characteristics	Askes	Jamsostek	Private health insurance and self-insured	JPKM	Community based	Askeskin/ Jamkesmas
Scheme nature						
1.1 Participation	Compulsory	Compulsory, opt out option for employers that could provide better benefit plans	Fringe benefit	Voluntary	Voluntary	Social insurance
1.2 Model	Social health insurance	Social health insurance	Private voluntary health insurance or self insurance	Managed-care model	Various community - based health insurance schemes	Closest to social health insurance
1.3 Covered population	Active civil servants and their dependents (spouse and up to the third child), civil service retirees, and military	Private formal sector employees and their dependents and provision for informal workers (latter was never implemented)	Private formal employees and their dependents	Informal sector, civil servants, and military for their uncovered dependents	Informal sector	Identified poor and near poor, based on individual and household targeting
1.4 Coverage	14 million (Askes) (Susenas: 14 million - 2007)	4.1 million (Jamsostek 2009)	6.6 million (Susenas 2006)	540,000	Estimated 440,000 (Susenas 2006)	76.4 million
Benefit package						
2.1 Ambulatory services	Public only	Public and private, or private only	Private; in some areas where private not available, public	Mostly public, in few cases private	Public only	Public
2.2 Inpatient services	Public only	Public and private contracted, or private only	Private; public in some areas where private not available	Mostly public	Usually not covered; public only	Public, and also private facilities
2.3 Choice of provider	Limited to public provider, registration required	Registration required	Free, or registration required	Registration required	Registration required	Registration required

Characteristics	Askes	Jamsostek	Private health insurance and self-insured	JPKM	Community based	Askeskin/ Jamkesmas
2.4 Conditions included	Comprehensive package	Comprehensive package	Comprehensive package	Comprehensive package	Limited package, inpatient not included in the benefit	Comprehensive package
2.5 Conditions excluded	None	Conditions: health conditions directly caused by natural disaster, self inflicted, and extreme sports	Vary by plan	Vary by plan	Specialist ambulatory and inpatient services	None
2.6 Maternity benefits	Yes, packaged payment for normal delivery	Yes, packaged payment for normal delivery	Yes	Yes	Yes, for the maternity scheme	Yes
2.7 Annual physical check-ups	Yes	Yes	Yes	No	No	No
2.8 Prevention and health promotion	Yes	Yes	Yes	Yes	Yes	Yes
2.9 Services not covered	Cosmetic surgery, physical check-ups, alternative medicine, dental prostheses, fertility treatment, nonbasic immunization	General check-up, cancer treatment, heart surgery, renal dialysis, and lifelong treatment for congenital diseases, prostheses, nonbasic immunization, transplantation, fertility treatment	Vary by plan	Cosmetic surgery, physical check-ups, alternative medicine, dental prostheses, fertility treatment	Specialist and inpatient services	Cosmetic surgery, physical check-ups, alternative medicine, dental prostheses, fertility treatment
3 Financing						
3.1 Source of funds	Member contribution 2% basic salary + government 2% basic salary; no limit	Single: 3% basic salary; members with dependents: 6% salary; limit to Rp 1 million (US$110)	Payroll, vary by plan	Premium, vary by plan	Member contribution	Tax-based. "Premium" Rp 6,000/capita

Eligibility Criteria

Each of the three major health financing programs has a particular constituency and its own set of eligibility criteria. Civil servants and their dependents are covered under the *Askes* program, which is administered by a for-profit state enterprise, *P.T. Askes*. Askeskin/Jamkesmas was originally designed to cover the poor but was expanded to also cover the near poor. It was originally administered by *P.T. Askes* but in 2008 the MoH took over most of the major administrative functions, including provider payment. *Jamsostek* is similar to a classic social insurance program for private sector employees in firms with 10 or more employees and is also administered by a for-profit state enterprise. Employers can opt out, either by self-insuring or by purchasing private insurance for their employees. Both *P.T. Askes* and *Jamsostek* also sell private commercial policies. Two key problem areas that result from these arrangements is that the *Jamsostek* opt-out and firm size restrictions result in only about 15 percent of formal sector workers being covered; and although informal sector workers have the right to purchase insurance, few do; thus, Indonesia's informal sector is largely uncovered.

Basic Benefits Packages

The BBPs across the three programs, while extensive, vary somewhat. *Jamsostek* does not cover certain high-cost treatments. There are some differences in drug benefits (for example, different formularies, generic requirements under *Jamkesmas*) and differences in whether services can be obtained from largely public (*Askes* and *Askeskin/Jamkesmas*) versus private providers (*Jamsostek*).

Financing Arrangements

Revenue generation efforts differ significantly across programs. *Jamsostek* is funded by a 3 percent (6 percent for families) payroll contribution (up to a Rp 1 million [US$110] per month ceiling) paid by the employer. *Askes* is funded by a 2 percent premium paid by government employees and matched by a 2 percent payment by the government. *Askeskin/Jamkesmas* is funded through general revenues. These arrangements on the revenue side coupled with benefit package differences (including restrictions on the use of private providers under *Askes* and *Askeskin/Jamkesmas*) have resulted in significant differences in expenditures under the different programs, including significant out-of-pocket (OOP) costs for *Jamsostek* and *Askes* (estimated at 40 percent) program beneficiaries. Continuing large OOP payments suggest that the level of financial protection provided by those insurance funds may be limited.

Provider Payment and Contracting Mechanisms

As with revenue raising, provider payment and contracting mechanisms vary among insurers and medical care providers. *Jamsostek* has contracts with public and private providers; it reimburses for primary care on a capitation basis and for inpatient care using capitation and fee-for-service. *Askes* uses a capitation mechanism for primary care and fee schedules for inpatient care. *Askeskin/ Jamkesmas* provides capitation payments to *Puskesmas* based on the number of poor in the catchment area for primary care, and pays public hospitals on a fee-for-service basis. While various aspects of the American managed care model have been adopted in principle, payment methods used by the different programs do not embody the efficiency and quality incentives inherent in modern pay-for-performance systems increasingly being used globally.

Private voluntary health insurance (PVHI) is not well developed in Indonesia. There are 64 commercial insurance companies selling insurance policies covering about 4–5 million people with an average of fewer than 100,000 members per insurer. The role of PVHI in a universal mandatory public system is an area in which the government needs to make some important policy decisions, for example, whether PVHI can fill in the cost-sharing in the public programs. Health insurance regulation is, therefore, an area needing careful examination and coordination during the transition to universal coverage (Mukti and Riyarto 2008).

An ADB study (2007) further highlights some fundamental spending differences between *Askes*, *Askeskin/Jamkesmas*, and commercially insured individuals. The current *Askes* health program covers catastrophic health expenditures, but many program participants go outside the program, particularly for outpatient medical care. Table 3.3 shows the breakdown of claims costs between primary, secondary, and hospital care for civil servants, the poor, and members of commercial funds. Expenses for civil servants for primary health care are a far smaller percentage of civil servants' total health care services than for the commercially insured or the poor. This shows the extent to which civil servants are going outside the program for primary health care.

Not surprisingly, hospital care accounts for a higher percentage of the poor's total spending on health than it does for the other two groups, and secondary care accounts for a lower percentage. Indonesia has lower ratios of doctors to population in rural and remote areas so the poor must rely on hospitals for services that might otherwise be provided by general practitioners in urban areas (Wiener 2007). As Indonesia moves to universal coverage, it will need to better understand these differences and make decisions on key insurance parameters such as the BBPs, cost sharing, choice of providers, and pharmaceutical policies if it decides to move to a standard set of benefits for the whole population.

Table 3.3 Covered Health Care Expenditures

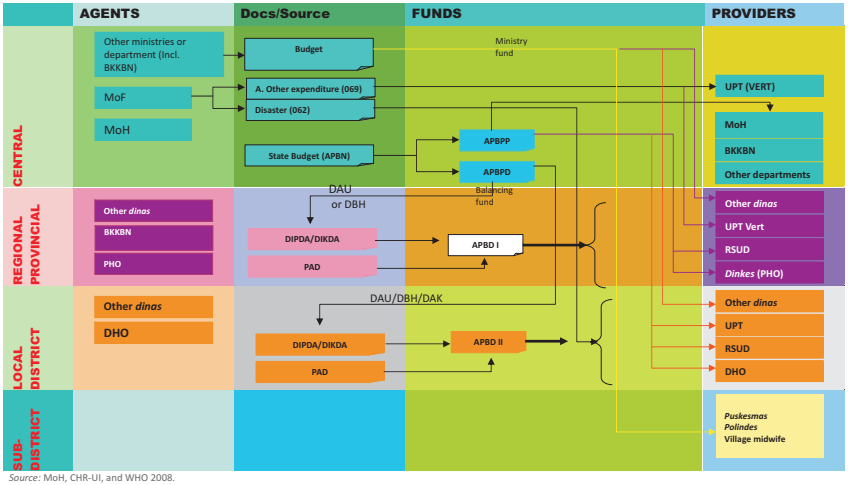
Service level and beneficiary group	Amount (millions of rupiah)	Percentage
Primary health care service		
Civil servants	92,431	4.85
Commercial	79,851	23.19
Poor	798,323	23.96
Total	970,605	17.39
Secondary health care service		
Civil servants	781,576	41.02
Commercial	93,240	27.08
Poor	395,623	11.88
Total	1,270,439	22.76
Hospital care service		
Civil servants	1,031,420	54.13
Commercial	171,239	49.73
Poor	2,137,331	64.16
Total	3,339,990	59.85
Total health care service		
Civil servants	1,905,427	
Commercial	344,330	
Poor	3,331,277	
Total	5,581,034	

Source: Adapted from Wiener (2007).

Indonesia's Health Spending Trends

Indonesia's health spending levels and trends are contained in Indonesia's National Health Accounts (NHA; WHO 2008b). Figures 3.5 and 3.6 show the flow of funds from public and private financing agents, respectively, to financing sources to service providers. The fragmentation and complexity of Indonesia's health financing system is again apparent. Table 3.4 displays the trends in Indonesia's nominal and real total, public, and private health spending based on WHO's NHA database from 1996 through 2006.

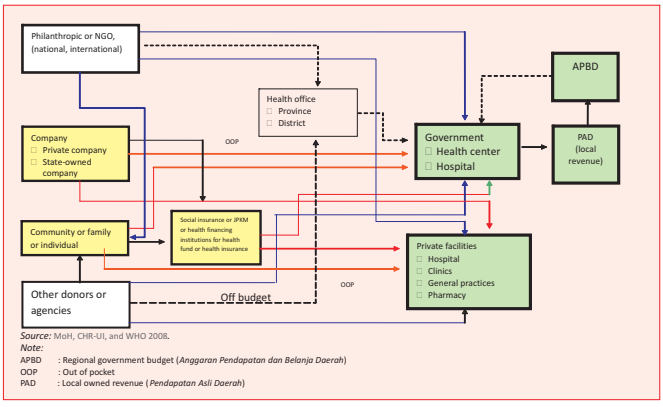
Figure 3.5 Public Flow of Funds



Source: MoH, CHR-UI, and WHO 2008.
Note:

BKKBN : National Family Planning Agency (*Badan Koordinator Keluarga Berencana Nasional*)
Mof : Ministry of Finance
APBN : State budget (*Anggaran Pendapatan dan Belanja Negara*)
APBD : Regional government budget (*Anggaran Pendapatan dan Belanja Daerah*)
APBPP : State budget for central government (*Anggaran Pendapatan dan Belanja Pemerintah Pusat*)
APBPD : State budget for sub-national level (*Anggaran Pendapatan dan Belanja Pemerintah Daerah*)
UPT (vert) : Vertical technical service unit (*Unit Pelaksana Teknis*)
PHO : Provincial Health Office (*Dinas Kesehatan Tingkat Propinsi*)
DAU : General allocation fund (*Dana Alokasi Umum*)
DAK : Special allocation fund (*Dana Alokasi Khusus*)
DBH : Grant allocation fund (Dana Bantuan Hibah)
DIPDA : Local development budget (*Daftar Isian Khusus Daerah*)
DIKDA : Local routine budget (*Daftar Isian Kegiatan Daerah*)
PAD : Local owned revenue (*Pendapatan Asli Daerah*)
RSUD : Province or district general hospital (*Rumah Sakit Umum Daerah*)
DHO : District Health Office (*Dinas Kesehatan Tingkat Kabupaten/Kota*)
Dinas : Provincial subproject management
Puskesmas : Health center at subdistrict (*Pusat Kesehatan Masyarakat*)
Polindes : Village maternity clinics (*Poli Bersalin Desa*)

Figure 3.6 Private Flows of Funds



Source: MoH, CHR-UI, and WHO 2008.
Note:
APBD : Regional government budget (*Anggaran Pendapatan dan Belanja Daerah*)
OOP : Out of pocket
PAD : Local owned revenue (*Pendapatan Asli Daerah*)

The overall trends show an increase in health expenditure as a percentage of GDP from 1.9 percent in 1996 to 2.2 percent in 2006. The public share increased significantly from 42 percent in 1996 to 50 percent in 2006. Government health expenditures as a share of the budget increased from 4.3 percent to 5.3 percent, while household OOP spending decreased only slightly from 36 percent of all spending (62 percent of 58 percent of overall private spending) in 1996 to 33 percent (66 percent of 50 percent) in 2006. In exchange rate–based U.S. dollars, health spending per capita increased from US$20 in 1996 to US$34 in 2006 and in international dollars from US$55 to US$87. Time series trends are analyzed in further detail, in both real and nominal terms, below.

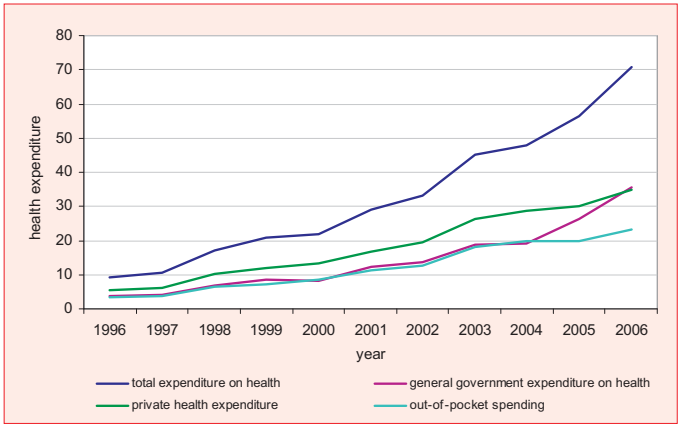
Table 3.4 Health Spending (1996–2006)

Selected ratio indicators	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
1.Expenditure ratios											
Total expenditure on health (THE) as % of GDP	1.9	1.8	2.0	2.1	1.7	1.8	1.8	2.2	2.1	2.1	2.2
Financing agents measurement											
General government expenditure on health (GGHE) as % of THE	41.9	40.7	40.6	42.0	38.5	42.2	41.2	42.0	40.1	46.7	50.4
Private sector expenditure on health (PvtHE) as % of THE	58.1	59.3	59.4	58.0	61.5	57.8	58.8	58.0	59.9	53.3	49.6
GGHE as % of GGE	4.3	3.3	3.4	3.7	3.8	3.6	4.2	4.8	4.5	5.1	5.3
Social security funds as % of GGHE	9.3	11.9	8.3	6.7	7.4	10.5	3.4	4.8	4.8	20.7	20.0
Private households OOP payments as % of PvtHE	62.0	62.2	63.4	60.6	63.3	66.1	65.8	69.7	69.2	66.4	66.3
Prepaid and risk-pooling plans as % of PvtHE	7.6	7.7	7.8	8.5	8.4	7.1	9.2	9.1	8.7	9.7	9.7
Financing sources measurement											
External resources on health as % of THE	1.4	5.2	11.5	11.6	10.8	4.4	3.3	3.5	3.0	4.6	2.3
2. Selected per capita indicators											
Total expenditure on health per capita at exchange rate	20	18	8	13	12	13	16	24	24	26	34
Total expenditure on health per capita at international dollar rate	55	56	52	55	48	52	56	73	74	78	87
GGHE per capita at exchange rate	8	7	3	5	5	6	7	10	10	12	17
GGHE per capita at international dollar rate	23	23	21	23	19	22	23	31	30	36	44

Source: WHO National Health Accounts database, September 2008.

Total, public, total private, and OOP private health spending all increased during the 11-year period 1996–2006. Total health expenditure increased almost sevenfold, from under Rp 10 trillion in 1996 to just over Rp 70 trillion in 2006 (figure 3.7). Private health expenditure remained greater than public health expenditure during the period, until 2006 when public health spending marginally surpassed private health expenditure. OOP payments remained on a par with public health expenditure up to 2004. In the subsequent two years, however, public health expenditure increased by 85 percent, far higher than the increase in OOP spending.

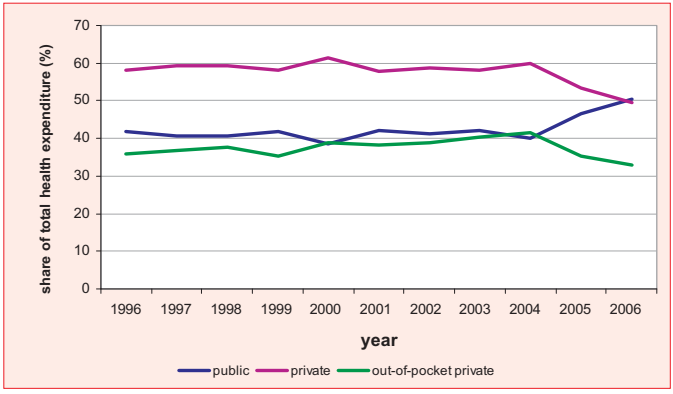
Figure 3.7 Trends in Nominal Health Spending



Source: WHO National Health Accounts database, September 2008.

Increased public expenditure on health since 2004 has changed the public, total private, and OOP private shares in total health spending in Indonesia. From 1996 through 2004, private health expenditure was the largest share of total health spending and averaged 58 percent over this period (figure 3.8). However, by 2006, public and private shares of total health expenditure had equalized at 50 percent. Trends in the share of total health expenditure composed of OOP private payments closely followed trends in the public share of total health expenditure until 2004, after which the share of OOP spending dropped relative to public and private shares of total health expenditure, falling to 32.8 percent in 2006.

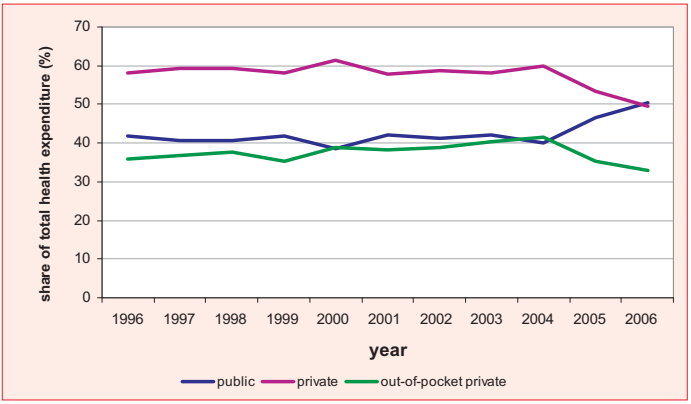
Figure 3.8 Public, Private and OOP Shares of Total Health Spending (1996-2006)



Source: WHO National Health Accounts database, September 2008.

Total health spending averaged 2 percent of GDP over the 11-year period 1996–2006 and reached a high of 2.2 percent in 2003 and 2006 (figure 3.9). The share of total health spending in GDP fell by 0.4 percentage points from 1999 to 2000, and averaged only 1.8 percent of GDP over the period 2000–02, increasing again in 2003 to 2.2 percent. Calculating the nominal elasticity of health spending relative to GDP for this period shows that total health spending increased 5 percent per year faster than GDP (nominal elasticity of 1.05), public spending on health increased 11 percent faster (nominal elasticity of 1.11), and private health spending increased at the same rate as GDP (nominal elasticity of 1.0).

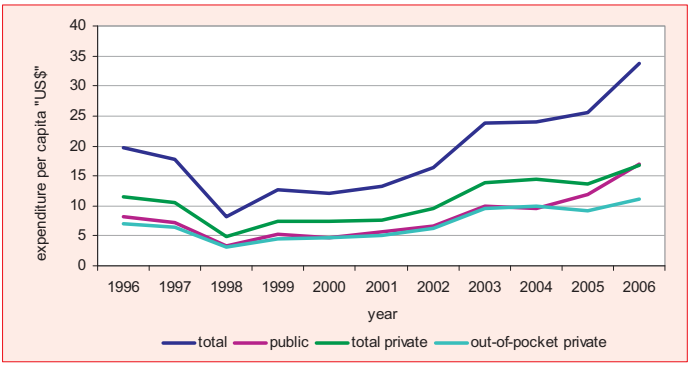
Figure 3.9 Spending Components as Share of GDP



Source: WHO National Health Accounts database, September 2008.

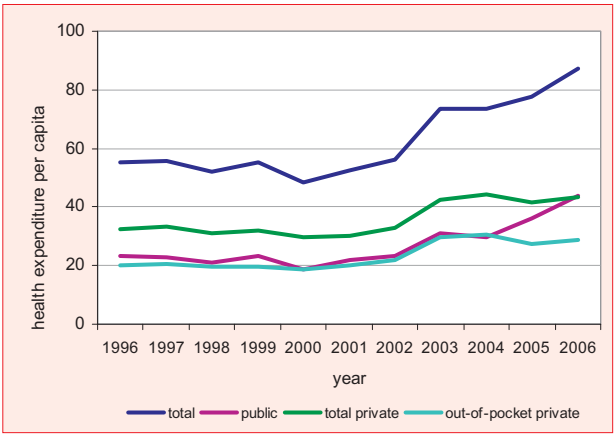
Per capita total, public, total private, and OOP private health expenditure all fell in 1998, reflecting the economic and financial crisis that engulfed the country in 1997 (figure 3.10). The decrease in total per capita health expenditure was dramatic, falling from US$18 in 1997 to US$8 in 1998. Although this figure rose again in 1999 to US$13, it did not surpass its precrisis level until 2003 when total health expenditure per capita reached US$24. The trends for total, public, total private, and OOP private spending are similar over the period until 2004, when government spending accelerated. Total health spending per capita in international dollars also fell in response to the financial crisis, from US$56 in 1997 to US$52 in 1998, but rose again in 1999 to US$55 and reached a high of US$87 in 2006 (figure 3.11). Again, the trends are similar for the different components until 2005 and 2006.

Figure 3.10 Spending per Capita in Exchange Rate-based US$ (1996-2006)



Source: WHO National Health Accounts database, September 2008.

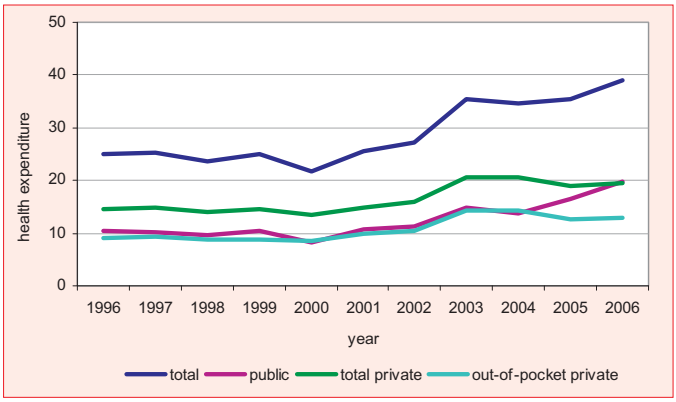
Figure 3.11 Health Spending per Capita in International Dollars (1996-2006)



Source: WHO National Health Accounts database, September 2008.

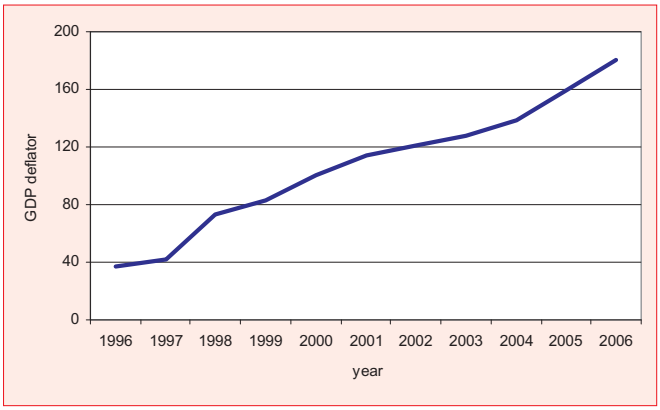
In contrast to nominal total health expenditure, real total health expenditure did not rise consistently during the period 1996–2006 (figure 3.12). Significant increases occurred only after 2002, indicating that much of the rise in nominal health expenditures was mainly due to price increases. This is confirmed by the steady increase of the GDP deflator over the same period (figure 3.13).

Figure 3.12 Real Health Spending (1996-2006)



Source: WHO National Health Accounts database, September 2008.

Figure 3.13 Inflation in Indonesia (1996-2006)



Source: World Bank World Development Indicators database, December 2008.

Overall, these trends show that private health expenditure has, historically, played a more important role than public health spending in overall health financing in Indonesia. However, this trend started to change in the period 2005–06, and it is expected that public health expenditure will have an increasingly important role to play in subsequent years given the government's plan to extend universal health care coverage to the entire Indonesian population through a mandatory public health insurance program. The establishment of *Askeskin* in 2004 had an impact on both total health spending and the public share of spending. OOP payments still constitute a sizeable share of health spending, however, and the challenge for the government is to channel these expenditures into risk-pooling mechanisms to effectively provide protection against catastrophic health spending.

Another critical area of expenditure performance is pharmaceuticals, which account for over one-third of all health spending (Hawkins 2008). The pharmaceutical market was valued at about US$2.7 billion in 2007 (including over-the-counter drugs) with average annual growth of 10 percent, mainly fueled by the private sector. The market is dominated by branded generics despite the availability of unbranded and relatively cheap generics, indicating that consumers are willing to pay for brand image or can be persuaded by providers to choose more expensive drugs. Per capita consumption by value is low at around US$12 per capita per year, which is one-third to one-half the levels in Malaysia, Thailand, and the Philippines. This low value compared with the Philippines may be due to policies in Indonesia that have achieved better availability of low-priced generics in the public sector.

Privately purchased medicines supplied through private pharmacies and drug sellers dominate the supply of medicines in Indonesia, accounting for a large percentage of all drug spending. Most medicines are purchased out of pocket, and most private purchases are of branded generics, and some innovator brands. These branded drugs have a very high price premium over the lowest price generic drug in private pharmacies. While dispensing doctors and some drugstores reportedly sell prescription drugs at lower than prevailing market prices, these sources are not quality assured, and dispensing doctors and drug sellers have financial incentives to prescribe too many items and to sell higher price, higher margin branded medicines.

It is difficult to assess the adequacy of public spending on essential medicines for public primary care in Indonesia. In 2007, about Rp 12,000 (approximately US$1.32) per capita was spent from all public sources on essential drug list (EDL) drugs for primary care. Almost half of this came from the central government budget. District spending varies widely. For budget allocation purposes, the MoH advocates that primary care essential medicine spending should be based on the WHO indicative target of US$2 per capita per year. The appropriate figure for Indonesia could, however, be higher or lower and will differ between districts because of differences between the EDL and prices assumed by WHO, differences in local morbidity, differences in doctors' prescribing practices compared with recommended guidelines, and differences in the share of patients who obtain primary health care from the private sector or self-medicate.

The rapid escalation of public spending on hospital drugs under the *Askeskin* program since 2006–07 is widely acknowledged to have been driven substantially by poor control of membership, lack of control of outside-formulary prescribing, and lack of fraud control. The 40–45 percent share of *Askeskin* expenditure on medicines is not necessarily inappropriate. A relatively high share is to be expected, given that salary and capital costs are largely financed from supply-side budget spending. A rising share of spending on medicines has been experienced in the early years of health insurance schemes for the poor in other countries (as insurees and providers become more familiar with the benefits package). As a result, it is too soon to assess the impact of the more stringent control measures put in place in the 2008 guidelines for *Jamkesmas*.

Assessment of Health Financing Performance

This chapter provides an assessment of the performance of the Indonesian health financing system. Performance is generally assessed against the major goals of health policy: (i) maximizing health outcomes and responsiveness to consumers; (ii) minimizing costs subject to the attainment of these outcomes, or using the optimal mix of inputs to achieve these outcomes; and (iii) pursuing equity in both financial protection against unpredictable, catastrophic medical care costs and access to health services.[1] The three major functions of health financing—revenue raising, pooling, and purchasing—have implications for each of these three goals. This chapter thus examines how the health financing system has helped or impeded the achievement of these three major goals.

Much of the analysis in this section consists of comparisons between the average level of key health indicators in Indonesia and the average level of these indicators in comparator countries. Indonesia is a lower-middle-income country with relatively good economic growth prospects. Its neighbors include Malaysia, the Philippines,

[1] This is based on the framework often used to assess performance of Organisation for Economic Co-operation and Development countries, and is described in Hurst (2002).

Thailand, and Vietnam, all lower-middle- or upper-middle-income countries, which have experienced rapid economic growth in recent years. It is therefore appropriate to benchmark Indonesia's performance against that of comparable middle-income countries. Global regression lines are used to establish an expected level for a health system indicator given the level of one or more of its apparent determinants, such as health spending or income per capita. The regression lines fitted to the international data simply reflect the average behavior of outcome variables for comparable countries; they do not indicate the correct or desirable level of the outcome variables.

Health Outcomes

Indonesia has experienced a doubling of life expectancy from 34 years in the 1940s to almost 69 in 2006. On average, life expectancy in Indonesia has been growing at a relatively high rate of 1.05 percent per year over the past 66 years, higher than the rates of growth of life expectancy in Sri Lanka and Thailand. In 2006, however, Indonesia's life expectancy of 68.2 years was lower than that in comparator countries (except for India). Figure 4.1 plots life expectancy over the period 1960–2006 for China, India, Indonesia, Sri Lanka, Thailand, and Vietnam. Indonesia's life expectancy grew faster than that of most of its comparators, except for Vietnam, until about the mid-1980s when the rate of improvement in the indicator slowed.

Income tends to be a strong predictor of population health outcomes and one way to assess country performance is to examine life expectancy relative to income. Figure 4.1 shows life expectancy rates among comparators but does not recognize the fact that the six countries had very different income levels over the period. Indonesia, for instance, has been richer than India, Vietnam, and, until recently, China. By 2006, its income level was roughly equivalent to that of Sri Lanka (figure 4.2).

Figure 4.1 Life Expectancy Rates in Selected Comparators (1960–2006)

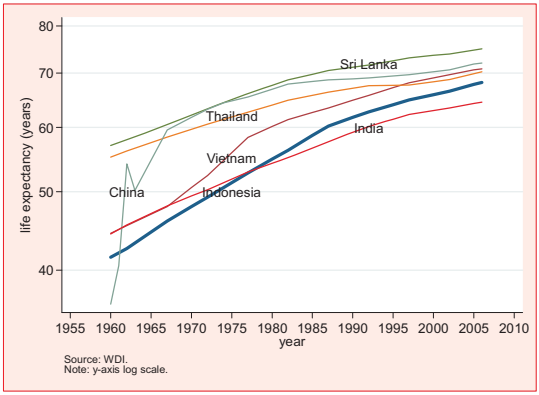
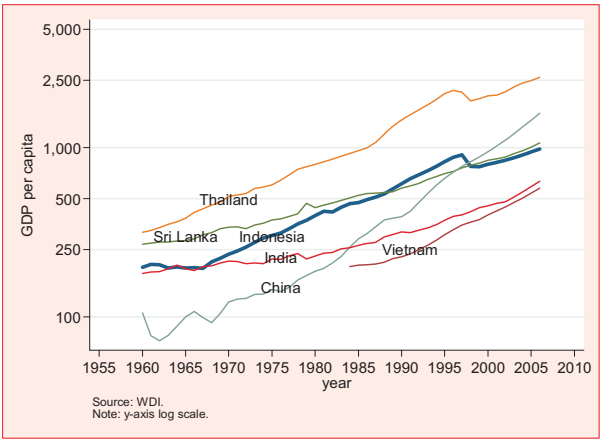


Figure 4.2 GDP per Capita in Selected Comparators (1960–2006)



In 1960, Indonesia's life expectancy relative to income was about average. Over time however, this measure slowly improved and was somewhat above average in 2006 (figure 4.3). China and Thailand had life expectancy rates higher than the average predicted for their income levels in 1970 and 1980, but in later years their life expectancy rates converged toward the average for their income levels. Indonesia's performance with regard to life expectancy, however, is much poorer than that of Sri Lanka and Vietnam, both of which have consistently been far above average relative to income. In addition, based on the latest available data (2006), Indonesia, for both its income and health spending per capita, has a higher life expectancy rate than do other global comparators (figure 4.4).[2]

[2] This assessment is based on regression lines fitted to the international data. The comparisons use quadrant charts showing two sets of deviations from regression lines simultaneously: (i) deviations from a regression line associated with a specific indicator of health status to GDP per capita across countries, and (ii) deviations from a regression line relating the same indicator of health status to health expenditure per capita across countries. This approach to comparing outcomes across countries makes it possible to allow simultaneously for the effects of both national income and health spending.

Figure 4.3 Life Expectancy versus Income (1960–2006)

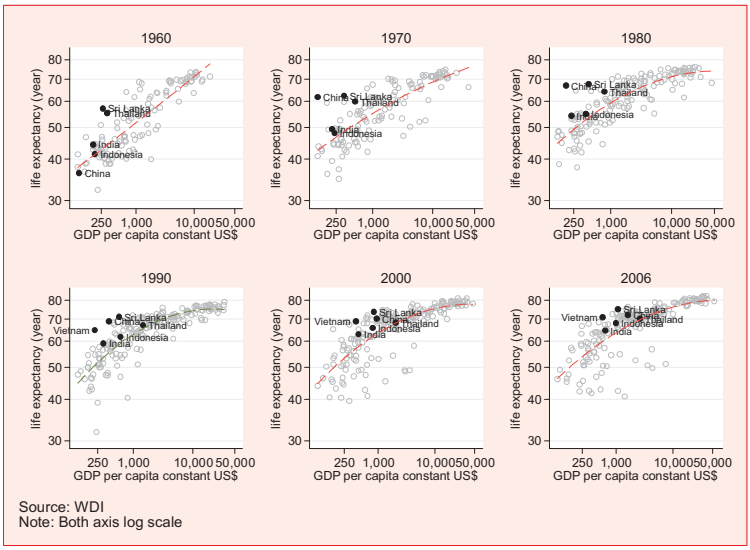
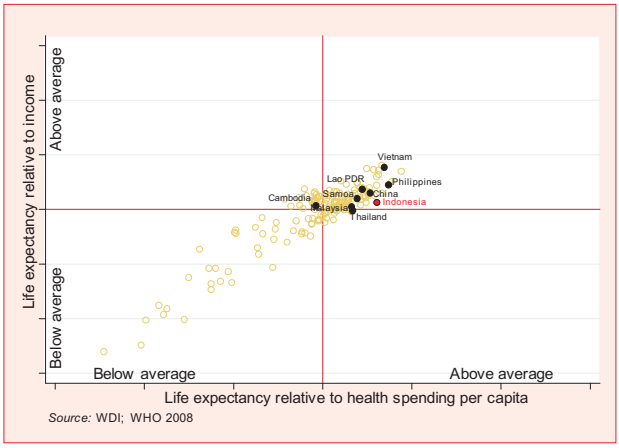


Figure 4.4 Global Comparisons of Life Expectancy vs Income and Health Spending



Indonesia's infant mortality rate (IMR) has been the highest among the comparators over the 1960–2006 period (again except for India; figure 4.5). In addition, its IMR has been declining at a slower rate than most of its comparators over that period. Assessing IMRs relative to income at six points over the period 1960–2006 shows Indonesia's experience with infant mortality has been somewhat different from

its experience with life expectancy rates (figure 4.6). With the exception of 1990, Indonesia's IMR has been better than would be expected relative to its income level; the rate has not been falling as quickly as it has in Sri Lanka, Thailand, and Vietnam. Controlling for both income and health spending, Indonesia's IMR is slightly better than that of its global income comparators but significantly better for its level of health spending (figure 4.7). This is not surprising given that Indonesia's health spending is low for its income level.

Figure 4.5 Infant Mortality Rates in Selected Comparators (1960–2006)

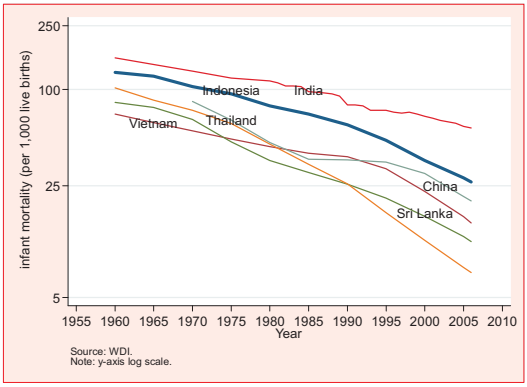


Figure 4.6 Infant Mortality versus Income (1960–2006)

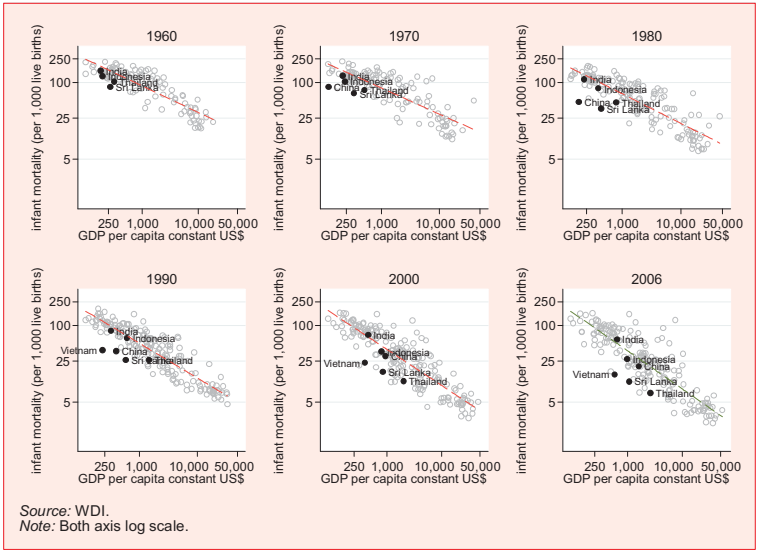
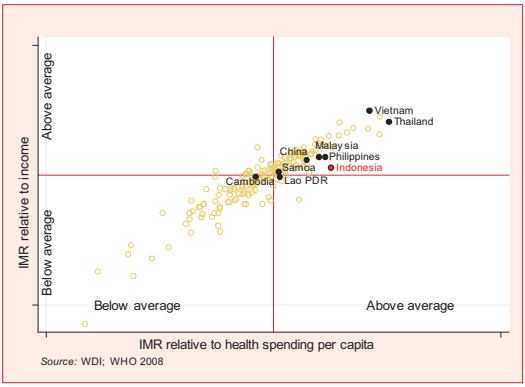
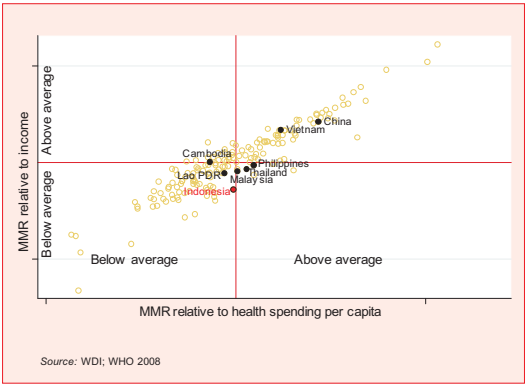


Figure 4.7 Global Comparisons of Infant Mortality versus Income and Health



Indonesia's performance on other key health outcomes, such as maternal mortality and child malnutrition, has been relatively poor. Its maternal mortality ratio (MMR)—often considered to be one of the best indicators of the performance of a health system—was an estimated 420 per 100,000 for 2005 (WHO, UNFPA, UNICEF, and World Bank 2008c). At such a level, Indonesia's MMR is very high and progress in reducing the rate slow.[3] Figure 4.8 shows that, in 2005, holding both income and health spending constant, Indonesia performed worse with respect to maternal mortality than other East Asia and Pacific region (EAP) and global comparators.

Figure 4.8 Global Comparisons of Maternal Mortality versus Income and Health Spending

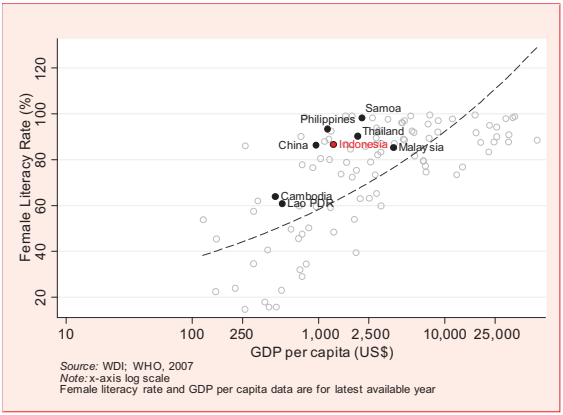


[3] The most recent data available are based on the new round of estimates for 2005, which applied a more accurate estimation method for maternal deaths. As a result of more accurate recording of all pregnancy-related deaths, most countries saw an increase in their maternal MMR. Indonesia's latest and most accurate estimate is 420 maternal deaths per 100,000 live births (WHO, UNFPA, UNICEF, and World Bank 2008). To be precise, with any MMR estimate there are high levels of uncertainty; for Indonesia, 420 per 100,000 is the point-estimate; 240 per 100,000 is the lower limit and 600 per 100,000 the upper margin. Indonesia's MMR is very high in regional comparisons.

One potential explanation for this difference in performance is that reductions in maternal mortality are more reliant on direct health system inputs than are infant mortality and life expectancy. Improvements in infant mortality rates and life expectancy at birth are likely to be driven by a range of factors, such as income levels, improved water and sanitation, and maternal education, as well as health system inputs. Reductions in maternal mortality, however, are directly reliant on health system inputs such as access to basic curative care services and the availability of backup Cesarean section capacity when needed.

Overall population and female education levels have been found to be important factors in explaining levels within, and differences in, health outcomes between countries. Figure 4.9 shows that Indonesia has significantly higher levels of female literacy than do other countries of its income level. This may partially explain Indonesia's relatively good performance on some health outcome indicators despite its relatively low levels of health (physical and human) infrastructure and health spending.

Figure 4.9 Female Literacy and Income



Source: WDI; WHO, 2007
Note: x-axis log scale
Female literacy rate and GDP per capita data are for latest available year

Health Spending

Health system performance is difficult to measure because of the complex interactions among numerous health- and nonhealth-related factors. Nevertheless, some (noncausal) perceptions can be formed of the performance of Indonesia globally relative to the basic health system objectives of health outcomes, financial protection, and consumer responsiveness by evaluating Indonesia's health outcome measures against its health spending levels and comparing the results to those of other countries. This section compares Indonesia's total, public, and private

health spending levels with other comparable-income countries. Figures 4.10 and 4.11 indicate that total health expenditures as a share of GDP and per capita total health spending are well below the levels that would be expected for a country with Indonesia's income level.

Figure 4.10 Total Health Expenditure as Share of GDP versus Income per Capita (2006)

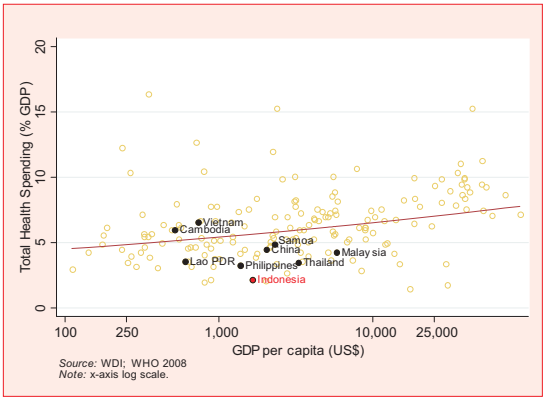
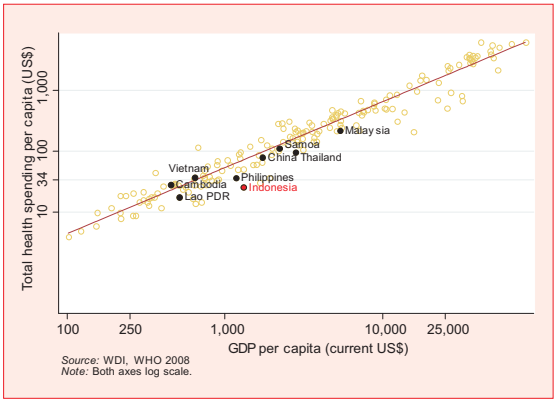


Figure 4.11 Total Health Expenditure per Capita versus Income per Capita (2006)



In contrast to the previous measures, Indonesia's *public* share of total health expenditure is about average for a country of its income level (figure 4.12). As a consequence, it is not surprising that public spending on health care, whether measured as a share of GDP (figure 4.13), in per capita terms (figure 4.14), or as a share of overall government spending (figure 4.15), is also below the expected level, judging by regression lines relating these three measures of public spending to income per capita. This may suggest that public spending on health care has not been as high a priority in Indonesia as it has

been in some other middle-income countries. It also complements the findings, shown in figure 4.16, that out-of-pocket (OOP) spending, a measure of financial protection, is slightly worse than average compared with comparable income countries.

Figure 4.12 Public Expenditure as Share of Total Health Expenditure versus Income per Capita (2006)

Figure 4.13 Public Expenditure on Health as Share of GDP versus Income per Capita (2006)

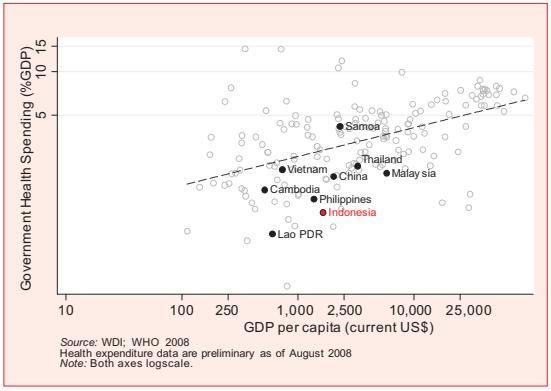


Figure 4.14 Public Expenditure on Health per Capita versus Income per Capita (2006)

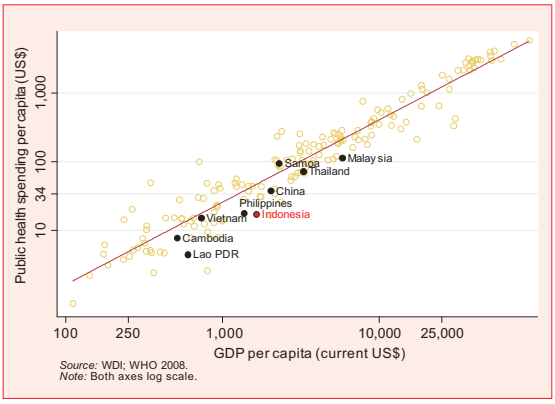


Figure 4.15 Public Expenditure on Health as Share of Total Government Expenditure versus Income per Capita (2006)

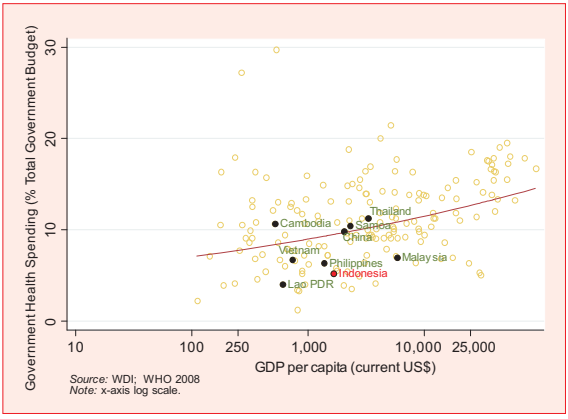
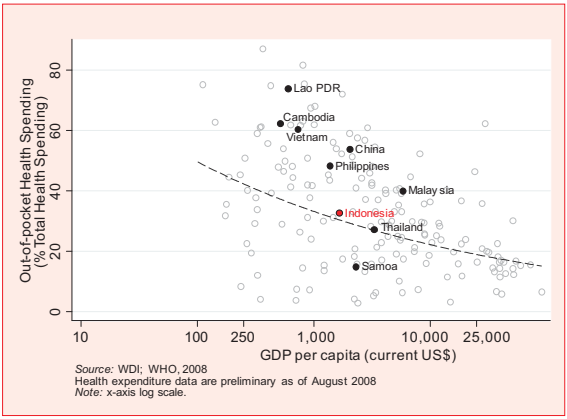


Figure 4.16 Out-of-Pocket (OOP) Spending as Share of Total Health Spending versus Income per Capita



Source: WDI; WHO, 2008
Health expenditure data are preliminary as of August 2008
Note: x-axis log scale.

While it is not possible to directly relate Indonesia's macro spending performance to the health outcomes previously discussed, it is plausible to argue that its mixed health outcomes may, in part, be due to insufficient, inequitable, or inefficient spending on health. The following sections on technical and allocative efficiency explore this issue in more detail, and the financial protection and equity discussions analyze in the performance of Indonesia's health system with respect to the equity and financial protection dimensions of performance.

Efficiency

Efficiency is typically defined as maximizing outputs from inputs, and is primarily related to the purchasing function of health financing. *Allocative efficiency* is achieved when available financing is directed toward a mix of interventions that has the greatest marginal impact on health outcomes. *Technical efficiency* is achieved when health financing is allocated so that it maximizes outcomes given the resources it uses (staff, equipment, and purchases of goods and services), or minimizes the use of those resources given what it produces. Allocative and technical efficiency together are often referred to as *economic efficiency*. Efficiency can be defined at a *micro level* (for example, at the level of health facilities) or at a more *macro level* (for example, at the level of a subnational or national health system). Inefficiencies can also arise in how revenues are collected and pooled. This section examines these issues.

Allocative Efficiency

In practice, allocating health care resources to the most cost-effective set of interventions is regarded as a means to improving allocative efficiency (Liu 2003). The Disease Control Priorities Project (Jamison et al. 2006) provides evidence on the cost-effectiveness of health interventions, which indicates that preventive and public health interventions are generally more cost-effective than curative care interventions. Thus, it is argued that allocative efficiency can be achieved by shifting resources toward greater provision of preventive and public health services relative to curative, mostly hospital-based, services. In the absence of detailed information on the actual benefits covered under Indonesia's health programs and the cost-effectiveness of the package of interventions that is delivered at the country level, the ratio of hospital to nonhospital costs is used as a crude proxy for allocative efficiency (Kutzin 1995).

It is clear that, regardless of any methodological differences in how the estimates were derived, Indonesia spends relatively little on hospital care compared with other countries in the region. Table 4.1 shows the share accounted for by hospitals and nonhospital provision in total curative and preventive care spending in the EAP region. The estimates are from National Health Accounts (NHA) data for all of the countries in the region with the exception of Indonesia, for which the shares are World Bank estimates.

Table 4.1 Hospital and Nonhospital Care: Share of Total Public Health Expenditures in Asian and Pacific Countries (Various Years)

Economy	Hospital (%)	Nonhospital (%)
Bangladesh	32	68
Nepal	35	65
Indonesia	38	62
Korea, Republic of	43	57
Tonga	48	52
Australia	50	50
Japan	55	45
Taiwan, China	64	36
Malaysia	71	29
China	75	25
Hong Kong, China	77	23
Vietnam	79	21
Sri Lanka	83	17
Thailand	88	12
Mongolia	89	11

Sources: Fernando 2008; Indonesia – World Bank staff calculations.

Information on the relative shares of hospital and nonhospital expenditures does not, however, provide sufficient evidence to make conclusions about the level of allocative efficiency in Indonesia. For example, some of the best health outcomes in EAP are found in countries with relatively high shares of hospital spending, such as Malaysia, Hong Kong (China), and Sri Lanka, as shown in table 4.1. A second problem with assessing allocative efficiency using cost-effectiveness criteria is that it assumes that maximizing health outcomes is the only objective of a health system. As discussed above, health systems have multiple objectives. The government of Indonesia's goal is not only to maximize health outcomes, but also to provide insurance against financial catastrophe associated with health care costs.

Technical Efficiency

In Organisation for Economic Co-operation and Development (OECD) countries, measurement of technical efficiency is well developed and has led to a large body of evidence on the efficiency and productivity of health service delivery in these countries (Hollingsworth 2008). In low- and middle-income countries, technical efficiency is measured using basic methods such as ratios of inputs and service indicators, and unit costs. Such micro-level measures, even when available, can lead to an incomplete characterization of efficiency because they tend not to control for quality of health care and differences in input costs resulting from cost-of-living differences (for example, rural-urban differences in costs that are unrelated to the health system itself).

In Indonesia, measurement of technical efficiency is particularly limited because there are no unit-cost data. In the absence of better data, this chapter analyzes bed-occupancy and case-flow data in public hospitals to examine differentials in public hospital performance across Indonesian provinces. Figure 4.17, based on a characterization of hospital efficiency introduced in the mid-1980s and used widely since (Pabon Lasso 1986), shows the average bed-occupancy rate (the percentage of beds occupied on average over the year) and average case-flow (the number of cases per bed per year) in each of Indonesia's 30 provinces.[4]

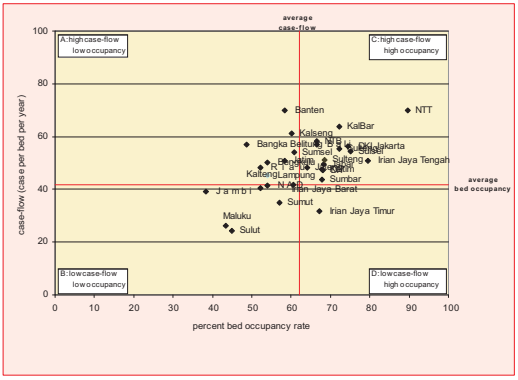
It is clear that there are large differentials in the performance of public hospitals across Indonesia; however, a better understanding of these differentials in performance is needed. The vertical and horizontal lines in figure 4.17 show the national average bed-occupancy rate and national average case-flow, respectively. The plane is divided into four zones by vertical and horizontal lines that cut through the mean values of the occupancy rate and case-flow, respectively. Hospitals in regions that fall in Zone C (high occupancy and high case-flow relative to the mean), for example Nusa Tenggara Timur (NTT), are said to be more efficient than

[4] Not including Gorontalo, North Maluku, and East Papua.

hospitals in the other three zones.

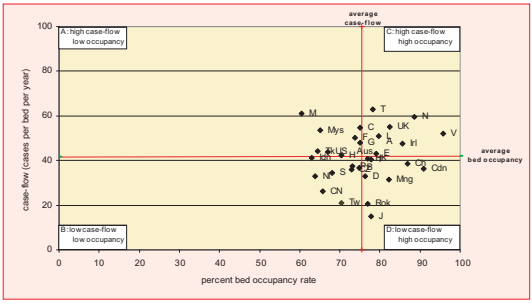
Average hospital case-flow in Indonesia is comparable to the global average, but average bed-occupancy rates in Indonesia are well below the global average. Figure 4.18 provides the same characterization of hospital efficiency for Indonesia and a sample of other countries in the region and in OECD as figure 4.17 presents for the Indonesian provinces. Indonesia lies in Zone B and is most comparable to Turkey in this diagrammatic representation of facility efficiency. Although this comparison is relatively simplistic and does not take into account variations in quality and case mix, it does provide crude evidence that health facility efficiency can be improved in Indonesia.

Figure 4.17 Variations in Hospital Efficiency Across Indonesian Provinces



Source: MoH 2006.

Figure 4.18 Relative Hospital Efficiency in Indonesia and Other Countries



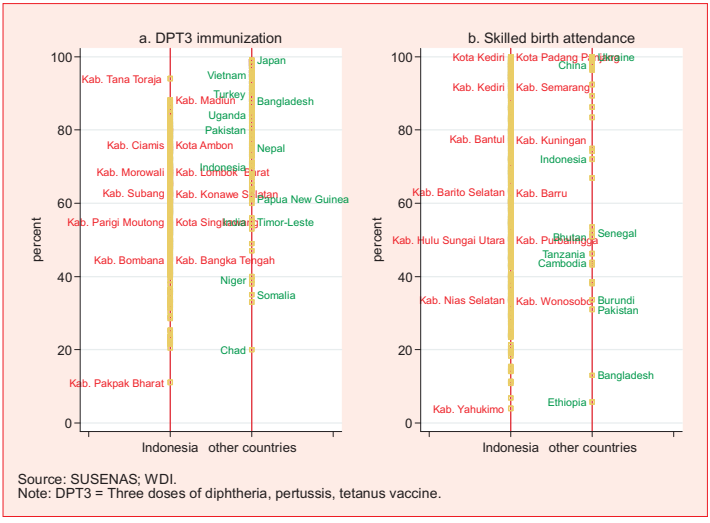
Sources: OECD member countries' data from OECD (2008). Other countries' data from different sources—China: China Statistical Yearbook; Hong Kong, China: Census & Statistics Department, Department of Health, Hospital Authority, Thematic Household Survey; Indonesia: Indonesia Health Profile; Malaysia: Health Facts and MoH Annual Report; Mongolia: Health Indicators, National Center for Health Development; Taiwan, China: Health and National Health Insurance Annual Statistics, Department of Health; Thailand: Health Workforce Survey, Bureau of Policy and Strategy, Ministry of Public Health Thailand.

Note: A = Austria; AUS = Australia; B = Belgium; C = Cambodia; CDN = Canada; CH = Switzerland; CN = China; CZ = Czech Republic; D = Germany; E = Spain; F = France; G = Greece; H = Hungary; HK = Hong Kong (China); I = Italy; IDN = Indonesia; IRL = Ireland; J = Japan; L = Luxembourg; M = Mexico; MNG = Mongolia; MYS = Malaysia; N = Norway; NL = the Netherlands; P = Portugal; ROK = Republic of Korea; S = Slovak Republic; T = Thailand; TK= Turkey; TW = Taiwan (China); UK = United Kingdom; US = United States; V = Vietnam.

Data reflect latest available year (2003–06).

The significant variation in health outputs across districts in Indonesia suggests that there may be lessons to be learned from better performing districts. Figure 4.19 presents a comparison of DPT3 (three doses of the diphtheria, pertussis, tetanus vaccine) immunization and skilled birth attendance rates for a selected range of districts. The figure shows that performance varies widely between districts. For example, the districts of Kediri and Padang have almost 100 percent skilled birth attendance, which puts these districts on par with some of the best performing countries in the world. By contrast, skilled birth attendance is below 40 percent in Wonosobo and Nias Selatan, which is comparable to relatively poor, even fragile, states.

Figure 4.19 Global Comparison of Indonesian Districts of DPT3 Immunization and Skilled Birth Attendance (2005)



Source: SUSENAS; WDI.
Note: DPT3 = Three doses of diphtheria, pertussis, tetanus vaccine.

Underlying these differentials in facility efficiency (figure 4.17) and overall performance in output (figure 4.19) are variations in the organization and management of health facilities and staff incentives at the district level. Many districts in Indonesia have taken the opportunity provided to them by decentralization to increase performance monitoring and improve the incentives offered to health professionals and managers. It is important to gain a better understanding of the factors that drive the performance of the better performing districts. Therefore, a closer study of the impact of these district-level improvements on performance is needed.

Macro-Level Measures of Efficiency

Given the complexities of health systems, it is not easy to aggregate micro-performance measures to macro levels or to readily estimate macro-outcome performance directly. Macro-level measures of health system efficiency can be misleading given that they assume that health expenditure is a causal factor underlying health system outcomes. Health outcomes are clearly a function of many other factors—education, water and sanitation, housing, and income, to name a few—making the attribution of causality to health expenditures alone difficult.[5] Ideally, a mix of macro- and micro-level indicators should be examined to assess the potential for improvement of efficiency-related problems in any health system.

Effective coverage rates for given levels of health resources can be a tracer for estimating macro-level health system efficiency problems. Effective coverage—defined as the proportion of the population with a given health care need who receive quality care—is a more direct output measure of a health system (Shengelia et al. 2005). Health care needs may be defined on the basis of population characteristics (for example, the need for immunization among children) or by the presence of a disease or health problem for which an effective intervention is available.

DPT3 immunization coverage, for instance, is often considered to be a good indicator of the coverage of a health system. Table 4.2 lists several countries in that spent less on health care than did Indonesia but attained higher DPT3 coverage rates. While table 4.2 does not show that Nepal's health system is more efficient than Indonesia's—a more composite measure of effective coverage would be needed to reach such a conclusion—it does suggest that there might be some efficiency-related problems in Indonesia that merit further study given its poor performance on a key health system metric such as DPT3 immunization and considering the net health resource envelope at its disposal.

[5] See ADB (2007) for a critical overview of methods for measuring macro-level health system efficiency.

Table 4.2 Selected Countries with Lower Health Spending than Indonesia but Higher DPT3 Coverage Rates (2005)

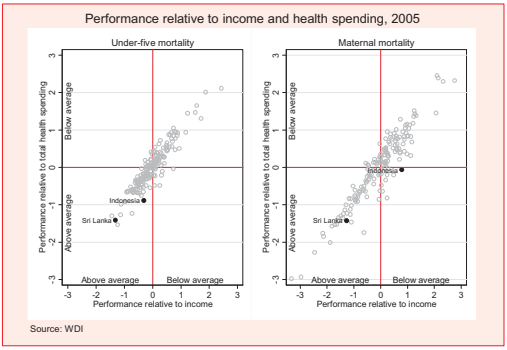
Country	Total health expenditure per capita (US$)	DPT3 immunization coverage (%)
Indonesia	**26**	**70**
Uganda	22	84
Rwanda	19	95
Tajikistan	18	85
Tanzania	17	90
Nepal	16	75
Pakistan	15	80
Bangladesh	12	88

Sources: WHO NHA database; WDI.

Sri Lanka is often presented as an example of a country that has attained good health outcomes with relatively low levels of resources. This outcome is at least partly due to the underlying efficiency of its health system (box 4.1). Because it is also one of the few developing countries for which analysis of costs and efficiency has been attempted in any significant way, the Sri Lankan case is used for comparison here.

Box 4.1 Health System Efficiency in Sri Lanka

FIGURE: SRI LANKA'S CHILD AND MATERNAL MORTALITY RELATIVE TO INCOME AND TOTAL HEALTH SPENDING



Sri Lanka is one of the best-performing countries with regard to population health indicators relative to its resources. The figure shows the attainment of child mortality and maternal mortality relative to income and total health expenditure in Sri Lanka and Indonesia (and other countries, not visible) in 2005. Sri Lanka is clearly one of the most positive outliers while Indonesia is above average for child mortality but not for maternal mortality.

Although population health outcomes are also a function of nonhealth system–related factors such as education, in Sri Lanka's case there is some evidence that part of its good performance in health may be due to the fact that its health system has been relatively efficient. Its expansion of health coverage after 1960 occurred during a period when government health spending as a share of GDP actually declined.

With regard to some traditional efficiency indicators, Sri Lanka has relatively low cost ratios to GDP per capita for inpatient and outpatient care, has high productivity of human resources in the health sector, as well as high case-flow rates and a low average length of stay in hospital. The health care delivery modality in the country is oriented toward the use of hospitals for providing both inpatient and outpatient primary care and there is some evidence that this has been more cost-effective than the use of stand-alone primary care facilities, possibly because of economies of scale.

Source: Rannan-Eliya and Sikurajapathy 2008.

Financial Protection and Equity in Financing and Delivery of Health Care

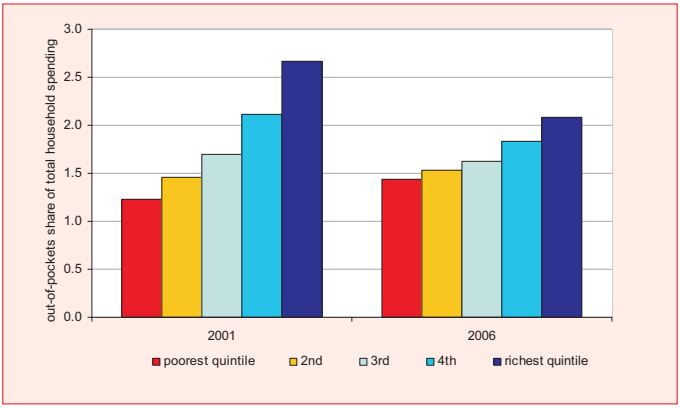
This section presents evidence on financial protection and equity in Indonesia, and compares Indonesia's performance with other countries in the EAP region. Two important goals of health policy are to (i) provide financial protection, especially to poor households, from high or prolonged expenditure on health care; and (ii) improve equity in the financing and delivery of health and, thus, improve the distribution of health outcomes. Using the OOP spending share of total health spending as a crude measure of financial protection, Indonesia provides less financial protection than do other comparable income countries.

Financial Protection

Direct OOP payments constitute a large share of the financing of health care in Indonesia and are potentially a significant burden on poor households.[6] This is also the case in many other low- and middle-income countries in the EAP region and globally. Nevertheless, OOP payments for health care account for only about 1.7 percent of an average household's budget in Indonesia (figure 4.20). Elsewhere in the EAP region, the OOP share of the household budget averages around 2 percent only in countries such as Malaysia, Sri Lanka, and Thailand where there is universal coverage for health care.

[6] If payments for health are large relative to household resources, the disruption to material living standards could be substantial and may be considered catastrophic.

Figure 4.20 OOP Share of Total Household Budget by Consumption-based Quintile (2001 & 2006)



Source: Analysis carried out for this report by Gadjah Mada University, Yogyakarta.

The gap in the OOP share of the total household budget between rich and poor households narrowed between 2001 and 2006 (figure 4.20) as a result of a slight rise in the OOP shares for the two poorest quintiles and a more significant reduction for the richer quintiles. These trends may be explained by the recent policy change to promote financial protection for the poor through the *Askeskin/Jamkesmas* program. The increase in OOP payments by the poor may be related to higher levels of utilization resulting from the introduction of this, or local, health insurance mechanisms. Households that would have forgone care in the past may now be seeking care at health facilities because they now own a health card. However, the health card does not cover all costs of treatment, particularly drug costs if the drugs are not available in the facility itself, which may have led to increased OOP costs among these income groups. At the same time the richer quintiles may be benefiting from the targeting of the health card to the poor and thus are seeing a decline in their OOP spending.[7]

OOP Payments and Financial Catastrophe

Catastrophic payments for health care are defined as OOP payments in excess of a substantial proportion of the household budget, usually 10–40 percent (Van Doorslaer et al. 2006; Xu et al. 2003). Ideally, longitudinal data would be used to estimate the extent to which the purchase of medical care in response to illness shocks has a catastrophic impact on household spending. The effects can be short

[7] A study of the targeting effectiveness of the *Askeskin* program in 2006 (Aran and Juwono 2006) found some leakage in health card distribution to the richer quintiles.

term if health care is financed by cutting back on current consumption, or long term, if it is financed through savings, the sale of assets, or credit. In the absence of panel data, an approximation of the disruptive effect is made. Table 4.3 shows the incidence and distribution of the catastrophic impact of health care payments on Indonesian households in 2001 and 2006.[8] The incidence is relatively low in Indonesia, and has declined over time.

In 2001, 2.6 percent of households incurred health care payments in excess of 15 percent of their total household budget; by 2006, this ratio had declined to 1.2 percent. Coming as no surprise, the incidence of catastrophic payments is higher when compared with the nonfood household budget, with 8.3 percent of households incurring health care payments in excess of 15 percent of their nonfood budget in 2001, declining to 3.7 percent in 2006. It is clear that, once basic food needs have been met, health care accounts for a large fraction of the remaining family resources for a substantial fraction of the population. The positive concentration indexes in table 4.3 indicate that richer households are more likely to incur catastrophic spending than poorer households.

Table 4.3 Incidence (Headcount) of Catastrophic OOP Payments for Health Care on Total Household Spending (2001 and 2006)

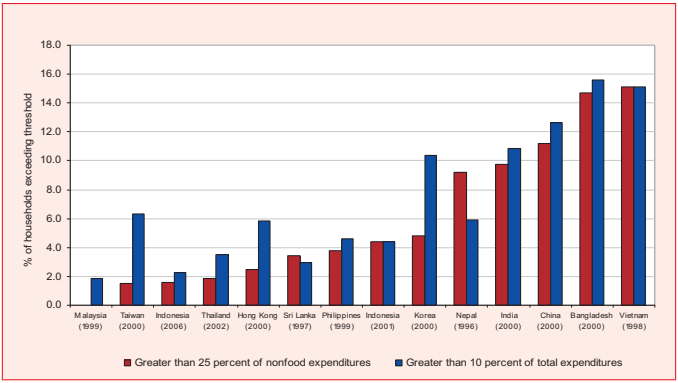
	2001 Threshold (percent)				2006 Threshold (percent)			
	5	10	15	25	5	10	15	25
Of total household spending								
Headcount (%)	9.57	4.43	2.59	1.13	6.07	2.24	1.24	—
Concentration index of headcount	0.01	0.20	0.30	0.47	0.12	0.27	0.37	—
Rank-weighted headcount (%)	8.63	3.54	1.81	0.59	5.32	1.62	0.78	—
Of nonfood household spending								
Headcount (%)	20.21	12.33	8.28	4.40	18.42	7.00	3.73	1.55
Concentration index of headcount	0.00	0.03	0.08	0.18	-0.10	0.00	0.09	0.26
Rank-weighted headcount (%)	20.30	11.90	7.60	3.60	20.31	7.01	3.38	1.14

Source: Analysis carried out for this report by Gadjah Mada University, Yogyakarta.
Note: — = Not available.

[8] The catastrophic headcount is defined as the percentage of households incurring catastrophic payments relative to a predefined threshold. In this analysis, two thresholds are used: one is in relation to total household spending, and the other in relation to household spending excluding food spending. The latter is included to examine the extent to which payments for health care are a significant burden on households once the biggest necessity—food—has been excluded. Thus, the catastrophic headcount could be measured as the percentage of households for which health care payments account for more than 15 percent of total household spending, or for more than 15 percent (or some higher threshold) of nonfood household spending. The concentration index of the headcount measures the distribution of catastrophic payments among rich and poor households. A key question here is as follows: do the poor bear a disproportionate share of the incidence of catastrophic payments for health care compared with the rich. A positive index means that the incidence of catastrophic spending increases with household income, or that the rich are more likely than the poor to incur catastrophic payments for health. A third measure, the rank-weighted headcount, reflects both the incidence and the distribution of the catastrophic payments. If the likelihood of incurring catastrophic payments is primarily concentrated among the rich, then the rank-weighted will be lower than the unweighted headcount.

By regional standards, the incidence of catastrophic health spending is low in Indonesia, and its performance relative to other countries has improved over time (figure 4.21). The proportion of households incurring catastrophic payments for health care is highest in Bangladesh, Vietnam, China, and India, all of which, like Indonesia, lack universal coverage. In Vietnam, for instance, OOP payments for health care exceed 25 percent of the nonfood budget for 15 percent of households. By contrast, Indonesia is in the same group as Malaysia, Sri Lanka, Thailand, and the Philippines, where OOP payments exceed 25 percent of the nonfood budget for only 5 percent or less of all households. Generally, if the incidence of catastrophic spending is high, the OOP share of total health spending will be high. The relatively low incidence of catastrophic spending in Indonesia is surprising given that OOP spending accounts for more than half of total health spending in Indonesia.

Figure 4.21 Incidence of Catastrophic Payments Defined Relative to Total and Nonfood Expenditures



Source: Van Doorslaer et al. 2007; analysis carried out for this report by Gadjah Mada University, Yog

OOP Payments and Impoverishment

In Indonesia, the risk of impoverishment because of OOP payments alone is only moderate. In 2006, 69.8 percent of the population fell below the $2.15/day poverty line. When the poverty headcount was recalculated on the basis of household resources minus payments for health care, the headcount rose to 70.6 percent, barely 1 percentage point more. This implies that less than 1 percent of the population fall below the $2.15/day threshold when health care payments are subtracted from their household budgets. Table 4.4 shows the impact on the poverty headcount of household OOP payments for health for Indonesia and other EAP countries. The increased share of the population falling below the $2.15/day line is higher in Vietnam (4.5 percent), Bangladesh (3.6 percent), and China (1.8 percent), but is lower in Malaysia and Thailand.

Table 4.4 Impact of OOP Health Care Payments on Poverty Headcounts (% Change)

Country	Contribution of OOP to headcount at $1 .08/day	Contribution of OOP to headcount at $2.15/day
Malaysia (1999)	0.05	0.25
Thailand (2002)	0.17	0.69
Sri Lanka (1997)	0.31	1.68
Philippines (1999)	0.59	1.05
Indonesia (2006)	**1.07**	**0.79**
Vietnam (1998)	1.08	4.45
Indonesia (2001)	1.18	1.05
Nepal (1996)	2.24	1.26
China (2000)	2.57	1.84
India (2000)	3.70	2.05
Bangladesh (2000)	3.77	3.55

Sources: Van Doorslaer et al. 2006; analysis carried out for this report by Gadjah Mada University, Yogyakarta; Harbianto and Hariyadi 2008; Bank staff analysis.

Not only do OOP payments account for a relatively low share of the household budget in Indonesia, but the incidence of catastrophic OOP expenses and the risk of impoverishment as a result of health care payments are also relatively low. For instance, Indonesia relies on OOP financing only slightly less than China does, yet the incidence of catastrophic payments and risk of impoverishment are much higher in China. Furthermore, although the proportion of the population at risk of extreme poverty in Indonesia was of a similar size to that in Bangladesh and India, the proportion counted below the extreme poverty threshold after taking account of health payments in Indonesia was much lower.

Askeskin/Jamkesmas, the health insurance scheme targeted to the poor, is one possible explanation for the improvement in financial protection in Indonesia despite the high levels of poverty and reliance on OOP financing. As described in chapter 3, the program has been in place since 2004, and has been expanded gradually. Although some systematic evaluations of the program have been carried out, no firm evidence confirms that the program has had a significant impact on financial protection. Analyses of household data and expenditures do, however, appear to demonstrate support for this hypothesis.

A second possible explanation for the low incidence of catastrophic spending is that a large proportion of Indonesian households forgo care because of their inability to meet the large OOP costs. A substantial body of evidence from Indonesia and elsewhere suggests that OOP payments deter use of services, with differential effects on utilization rates by the poor compared with the rich (Gertler, Locay, and Sanderson 1987; Gertler and van der Gaag 1990; Mocan, Tecan, and Zax 2004). Uncertainties about obtaining appropriate and quality services and the high levels of absenteeism of medical providers, especially in rural areas, may lead to some households forgoing care, so contributing to low spending levels. A fourth

explanation is cultural—people perceive serious and life-threatening illnesses as natural and do not feel the need to prolong life.

Nevertheless, the Indonesia Poverty Assessment states that illness and related costs are the second most important causal factor for impoverishment (World Bank 2007a). In addition, health shocks have a significant impact on households, not only because of the large OOP payments associated with the treatment of the illness itself, but because of lost income when a working member of the family falls ill. Households cope with catastrophic payments for health care by depleting their savings, selling off their assets, and reducing their consumption of food. Health care may be forgone early on in the illness, leading to more acute, costly care being needed later on.

Equity in Financing of Health Care

Greater equity in health care financing is a relevant health system goal because it has implications for the distribution of both health and income. The distribution of health may be affected through financial disincentives for the utilization of health care. This would be the case if large OOP payments result in high levels of forgone care, as discussed above. The distribution of income may be altered by taxes and social insurance contributions if, for instance, the rich pay disproportionately more of the taxes that are used to finance health care.

In Indonesia, direct income taxes and social insurance contributions are highly progressive, and indirect income taxes and OOP payments moderately so. The richest two quintiles account for a disproportionately large share of tax and social insurance payments relative to their ability to pay (table 4.5). Underlying this highly progressive distribution is the fact that direct taxes and social insurance contributions are paid predominantly by skilled, formal sector employees who are relatively better off than the rest of the population. By contrast, indirect taxes are less progressive than direct taxes because they are levied on a range of goods and services that are purchased by a broader group in the population. The rich also make more direct OOP payments for health care relative to their ability to pay compared with the poor. As discussed in the earlier section, OOP payments are more likely to be incurred by richer groups in the population who can also afford to pay for more expensive, private sector care.

Table 4.5 Quintile Shares of Ability to Pay and Sources of Financing for Health Care (2001 and 2006)

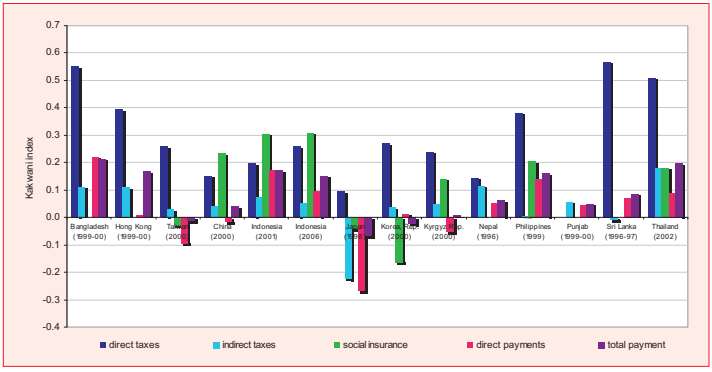
(percent)

Quintile	Ability to pay		Direct taxes		Indirect taxes		Social insurance		OOP payments	
	2001	2006	2001	2006	2001	2006	2001	2006	2001	2006
Poorest 20%	9	8	5	3	8	7	1	1	5	6
2nd	12	12	7	5	12	11	4	3	8	10
3rd	16	16	13	11	16	16	9	10	12	14
4th	23	23	23	19	23	23	23	22	22	22
Richest 20%	40	40	52	62	41	44	63	65	53	48

Sources: 2001 – O'Donnell et al. 2008; 2006 – Harbianto and Hariyadi 2008; Bank staff analysis.
Note: Totals may not add to 100 percent because of rounding.

Indonesia shows progressivity in all of the major financing sources, as do most low- and middle-income countries in the EAP region. Figure 4.22 also shows the following: tax financing is highly progressive, a reflection of the narrow tax base in many of these countries; direct taxes are more progressive than indirect taxes; social insurance is progressive because coverage of social insurance programs is limited to skilled, professional groups; direct OOP payments are progressive in Indonesia, and again in most low- and middle-income countries with the exception of China, because the rich tend to spend proportionately more on health care than do the poor.

Figure 4.22 Kakwani Indices for Finance Sources



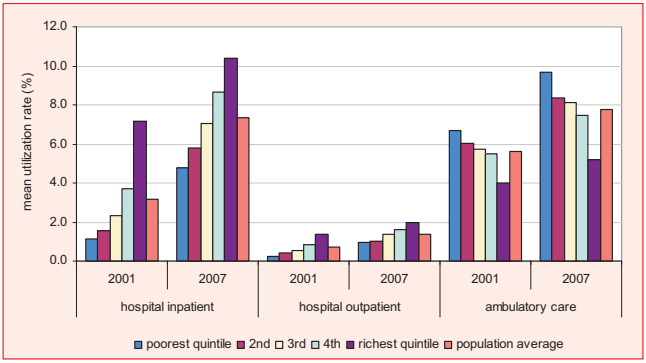
Source: O'Donnell et al. 2008; Harbianto et al analysis carried out for the Equitap Project (2002) and World Bank-Indonesia Health Financing AAA (2008).
Note: The Kakwani index is a summary measure that indicates whether the rich contribute more than the poor in both absolute terms and relative terms. A positive Kakwani index implies that the share of payments made by the rich is greater than their share of total ability to pay, or progressivity. A zero value implies proportionality, and a negative value implies a regressive distribution. This figure provides the Kakwani indexes for the different sources of financing in Indonesia and EAP.

Equity in Use of Health Services

When direct OOP payments for health care account for a large share of health financing, as is the case in many low- and middle-income countries like Indonesia, the distribution of financing also affects the distribution of health care use. In these settings, equity in financing and utilization need to be examined together. Utilization rates of health care are an important proxy for measuring the equitable distribution of the use of health services. Equitable utilization of health care is measured as the share of the population in each quintile that used a particular service during the past year (for inpatient care), or the past two weeks (for outpatient and ambulatory care).

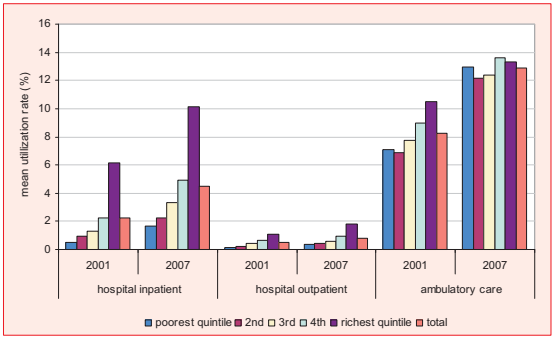
Utilization rates for both public and private sector services in Indonesia increased across all income groups between 2001 and 2007. This is clear from figures 4.23 and 4.24, which show mean utilization rates in 2001 and 2007 by quintile for public and private services, respectively. Notably, the rate of increase in utilization rates was higher for the poorest quintile than for the richest quintile for all types of public sector services. In particular, the poorest quintile's utilization of public hospital inpatient services quadrupled during this period, compared with a more moderate increase of approximately 50 percent for the richest quintile. Despite these increases, the socioeconomic gradient in use of public hospital services continues to favor the rich, while the gradient for use of ambulatory care services favors the poor. Use of private hospital services did not change much, but use of private sector ambulatory care services increased significantly, particularly by the poor.

Figure 4.23 Utilization Rates of Public Sector Facilities (2001 & 2007)



Source: Harbianto et al analysis carried out for the Equitap Project (2002) and World Bank–Indonesia Health Financing AAA (2008).

Figure 4.24 Utilization Rates of Private Sector Facilities (2001 & 2007)



Source: Harbianto et al analysis carried out for the Equitap Project (2002) and World Bank–Indonesia Health Financing AAA (2008).

Distribution of Public Subsidies for Health Care

Ensuring that public spending on health care and other services is pro-poor is an important health system objective. Underlying the objective is the contention that distributional concerns, to a large extent, justify public spending on health care. Results from benefit incidence analyses carried out in 2001 and 2006 are presented in this section.[9]

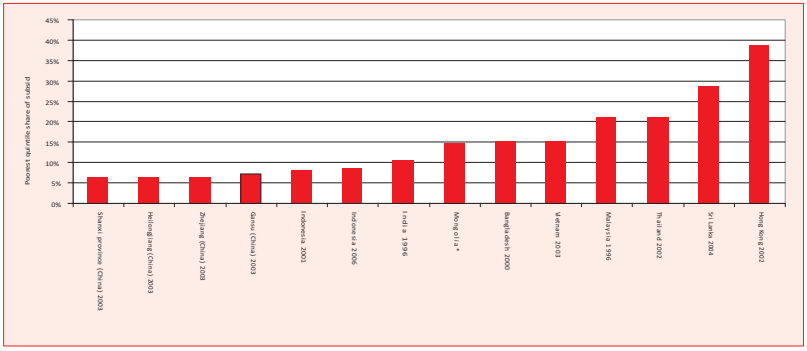
In general, public subsidies for health are not pro-poor in Indonesia. The poorest quintile of the population received less than 10 percent of all hospital subsidies in 2001 and 2006. Subsidies for nonhospital care were distributed roughly proportionately in 2001, although not in 2006. The top two quintiles or the richest 40 percent of the population received 65–70 percent of all hospital subsidies in 2001, although this declined slightly to about 60 percent in 2007. The decline in the share attributable to the richest two quintiles was due to a slight increase in the share accounted for by the middle quintiles. There was no improvement for the poorest quintile.

Compared with other countries in the EAP region, Indonesia has one of the least pro-poor distributions of public subsidies for health care. Figure 4.25 shows the share of total public hospital inpatient subsidies accounted for by the poorest quintile in a range of EAP countries. In both 2001 and 2006, Indonesia had a relatively small share of subsidies going to the poorest groups and was comparable to a few provinces in China. By contrast, in Hong Kong (China), Sri Lanka, Thailand, and Malaysia, the poorest quintile of the population accounted for over 20 percent

[9] For this analysis, the concentration index (Wagstaff and Paci 1991) provides a summary index of this comparison that is negative if the poor generally receive a disproportionate (to population) share of the subsidy. A negative concentration index indicates that the subsidy helps close the absolute gap in living standards between the rich and the poor.

of the hospital inpatient subsidies. Public subsidies for health care are generally inequality-reducing in almost all countries in the EAP region, including Indonesia (O'Donnell et al. 2008). Nevertheless, in Indonesia, this has been less a consequence of public spending policies themselves than the result of the high inequity in living standards overall. Comparing concentration indexes across countries (not presented here) confirms the finding that public health subsidies are not pro-poor in Indonesia.

Figure 4.25 Poorest Quintile Share of Public Hospital Inpatient Subsidies in EAP Region



Sources: O'Donnell et al. 2008; additional analysis carried out under the Equitap Project (Institute for Health Policy, forthcoming); Harbianto et al analysis carried out for the Equitap Project (2002) and World Bank–Indonesia Health Financing AAA (2008).

Table 4.6 Benefit Incidence Analysis: Distribution of Public Health Subsidies by Income Quintile (2001 and 2006)

(percent)

Indicator	Household consumption		Hospital inpatient care		Hospital outpatient care		Nonhospital care	
	2001	2006	2001	2006	2001	2006	2001	2006
Poorest quintile	8	5	8	8	7	11	20	10
2nd	13	9	10	13	11	13	20	14
3rd	16	13	15	17	14	17	20	17
4th	22	21	30	25	26	23	26	23
Richest quintile	41	51	37	37	42	36	15	37
Concentration index	0.3212	0.4497	0.3159	0.2980	0.3260	0.2605	-0.0241	0.2660

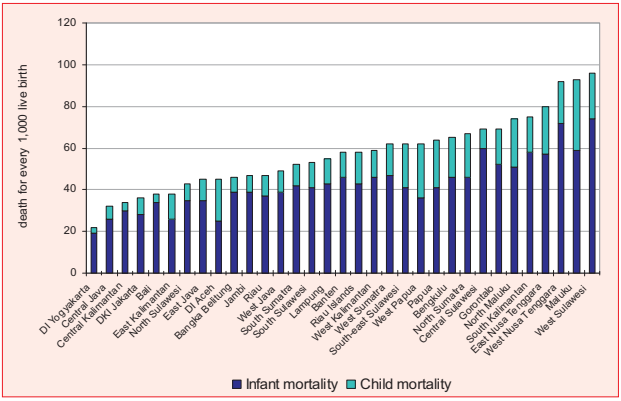
Sources: 2001– O'Donnell et al. 2008; 2006 – Harbianto and Hariyadi 2008; Bank staff analysis.

Equity in Health Outcomes

Indonesia is characterized by large socioeconomic and geographic disparities in health outcomes. While health outcomes could very well improve over time, if distributional issues in the health sector are not addressed the poor will be left

behind (Gwatkin and Guillot 2000). Many countries in the EAP region, including Indonesia, that have made significant progress toward achieving the Millennium Development Goals are still characterized by large income inequalities in the use of services. Figure 4.26 shows the large variations in the IMR and child mortality rate (U5MR) between Indonesian provinces. For example, in East Nusa Tenggara the combined IMR and U5MR is 80, while it is less than 40 in Bali.

Figure 4.26 Comparison of IMR and U5MR Incidence between Provinces



Source: DHS 2007.

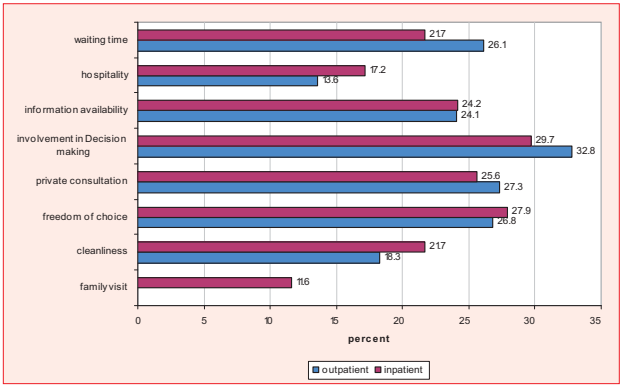
Quality of Health Services

The responsiveness of health care is one important goal of the health system. Consumer dissatisfaction with health service is one of the main reasons for low health service utilization in Indonesia. Its measurement can be based on consumers' experiences with various aspects of health service, or their subjective level of satisfaction with various features of care, or expectations of care. The first of these three measures is considered to provide relatively objective descriptions.

The Ministry of Health published the 2004 *Survei Kesehatan Nasional* (National Health Survey), or *Surkesnas*, report on responsiveness based on patient experiences with seven aspects of care for outpatient settings, and eight aspects for inpatient (figure 4.27). The common aspects between outpatient and inpatient are waiting time, hospitality, information availability, involvement in decision making, private consultation, freedom of choice, and cleanliness; ease of family visit is unique to inpatient settings. The aspect rated worst for both outpatient (33 percent) and inpatient services (30 percent) is the involvement of patients in decision making for their treatment. Second worst for outpatient is private consultation with health providers, while freedom of choice ranks second for inpatient services. At the other end of the scale, hospitality fares better, with only 14 percent of outpatient respondents rating it unsatisfactory; for inpatients,

family visits recorded a dissatisfaction rating of only 12 percent. Dissatisfaction rates based on experience are actually only slightly different from those based on subjective measurements from surveys, such as *Susenas* and Governance and Decentralization Survey 2 (GDS2).

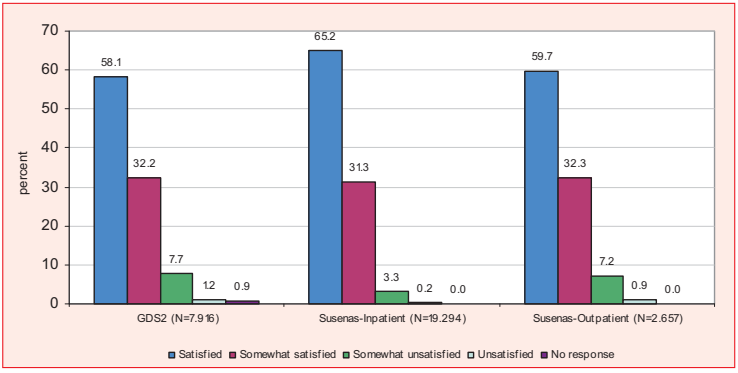
Figure 4.27 Percentage of Dissatisfaction With Various Aspects of Service



Source: Surkesnas (National Health Survey) 2004.

GDS2, which did not distinguish between outpatient and inpatient services, found that waiting times have a significant negative effect on consumer satisfaction (figure 4.28). Conversely, availability of family planning services, including contraceptives, showed a significantly positive correlation. Also in GDS2, public health facilities received less favorable responses compared with private ones, with fewer households visiting public health facilities expressing satisfaction compared to those visiting private health facilities (GDS2 2006).

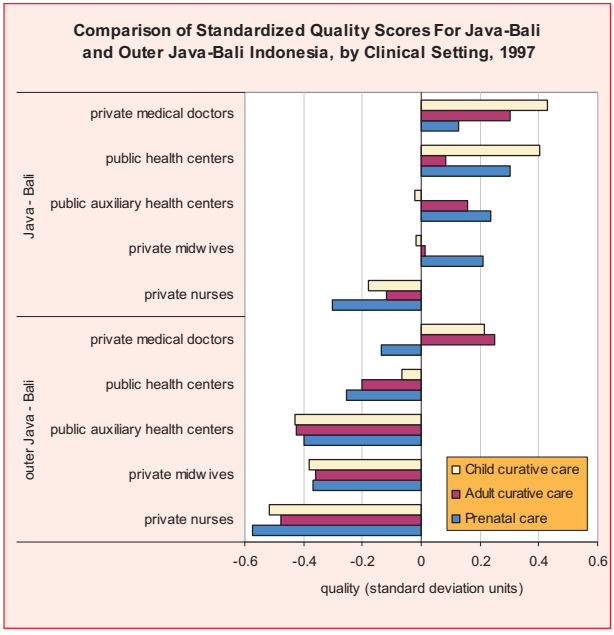
Figure 4.28 Outpatient and Inpatient Satisfaction Levels



Source: Lewis and Pattinasarany 2007.

The Indonesia Family Life Survey (IFLS) is, to date, the only source of information on the quality of health providers. The survey measures technical capacity of different types of health providers using clinical case scenarios. There was a 10-year gap between the quality measurements in IFLS 1997 and the most recent, in 2007. The IFLS 1997, in general, suggested low knowledge of health providers in the case scenarios tested (figure 4.29). Private nurses, at times the sole provider in remote areas and mostly used by the indigent population, performed poorly. Regional discrepancies in accessing quality care are shown by the differences in performance of heath providers from Java-Bali and those from Outer Java-Bali (Barber, Gertler, and Harimurti 2007). Preliminary results from an analysis[10] of the 2007 IFLS show only slight improvements in quality of services, predominantly among private providers and doctors. Nurses and midwives, although showing some improvement, continue to perform poorly.

Figure 4.29 Quality of Care Comparisons



Source: Indonesian Family Life Survey, 1997
Note : Java-Bali is defined as provinces in Java-Bali. Outer Java-Bali is defined as provinces in Sumatera, Kalimantan, and the eastern islands. Adults are defined as age fifteen and older.

[10] Analysis of the IFLS is ongoing. Results were not available at the time this chapter was written, but will be published in a forthcoming Health Labor Force Study by the World Bank.

The Current Health Policy Reform Baseline: Strengths and Weaknesses

Reforms should be predicated on building on the strengths of the current system and dealing with its weaknesses in the context of expected future demographic, epidemiological, and economic changes. The basic strengths and weaknesses of the system define the current health policy reform baseline. The preceding analyses provide a basis for enumerating these strengths and weaknesses and they are classified in the following discussion into management, governance, and underlying conditions; delivery system; and health financing issues.

Management, Governance, and Underlying Conditions

Strengths

- Through decentralization and democratization, many of the decisions concerning the health sector have been transferred to the district level, where governments can, in principle, more flexibly react to local circumstances and demands.
- Health insurance programs covering civil servants and formal sector workers have been in place for many years.
- Framework legislation was passed in 2004 to achieve universal coverage.
- The government is committed to reforming the system and has provided insurance coverage for the poor and near poor, funded through the budget.
- Dependency ratios for the next 25 years are favorable, giving Indonesia the opportunity to capitalize on its potential "demographic bonus."
- Educational and literacy levels are high relative to comparable income countries.
- Despite the current global financial crisis, the future economic picture for Indonesia is favorable.

Weaknesses

- The demographic, epidemiological, and nutrition transitions, and the attendant aging population, will place significant pressures on future health care costs and delivery system needs.
- Such pressures will be exacerbated by increases in the labor force participation rates of women, which will result in a diminishing supply of informal sector care givers for the rapidly growing elderly population.
- Overall management of the health sector is highly fragmented across several ministries and among different levels of government.

- There are significant geographic and income disparities in availability, utilization, spending, and outcomes, and targeting has been a problem.
- The movement toward universal coverage has been challenging because of a lack of data for decision making, lack of actuarial studies of both the existing baseline programs and universal coverage options, changes in direction about the final configuration of the system, and the need to coordinate the universal coverage effort with other envisioned health system and public health reforms.
- Significant improvements can be made with respect to both the costs and quality of pharmaceuticals, which account for some one-third of health spending and a large percentage of OOP costs.

Delivery System

Strengths

- An extensive primary health care infrastructure makes physical access available to most of the population.
- Utilization differentials between the poor and nonpoor have been narrowing.
- Health worker densities per 100,000 population have improved.
- Pharmaceuticals and supplies are generally available.

Weaknesses

- Certain critical health outcomes, such as maternal mortality, are poor, and improvements in others have stagnated.
- The health system is highly fragmented and underfunded, limited with respect to insurance coverage, and replete with allocative and technical inefficiencies resulting from, and in, low productivity.
- Compared with other similar income countries, the levels of both physical and human resources are low, and there are major shortages of physician specialists.
- Given its geography, Indonesia is severely challenged to provide access in rural areas, where some 70 percent of its population resides.
- The system is characterized by poor quality and inefficient service delivery—lack of professionalism (noncompliance with good practice protocols and high absenteeism), uneven deployment, and low motivation in the health workforce.
- Poor quality of care results in high levels of self-treatment.
- Dual practice of public physicians impacts public sector access, efficiency, and overall health system and OOP costs.

- There is a heavy reliance on the private sector for provision of health services without adequate oversight or quality assurance.
- Hospital occupancy rates are low—about 60 percent in 2006—and there are large regional differences in hospital efficiency.
- There is little planning focused on overall needs and joint public-private sector capacity development.

Health Financing

Strengths

- For its income and health spending levels, which are low relative to comparable income countries, Indonesia does well in infant mortality and life expectancy.
- Financial protection is relatively good with OOP payments constituting a small part of household income, the poor spending proportionately less of their household incomes than the rich on health care, and a relatively small proportion of both the poor and nonpoor being driven into poverty by catastrophic medical care expenditures.
- Equity in financing is relatively good because Indonesia's health financing sources—general taxes and social health insurance premiums—are progressive.
- Consumers are generally satisfied with their freedom of choice.

Weaknesses

- Over half the population has no formal health insurance coverage.
- Public subsidies for health care are not pro-poor with the richest one-fifth of the population accounting for 40 percent or more of public health subsidies.
- The large number of informal sector workers (at least 60 million), the large rural population (some 70 percent of the population), and the fact that 85 percent of workers are employed by firms with fewer than five workers (World Bank forthcoming), pose major challenges in designing a contributory-based mandatory health insurance system.
- The current rules, enforcement, governance, and financing arrangements for *Jamsostek* limit risk pooling and insurance coverage through private sector financing for the large majority of formal sector employees.
- Both *Askes* and *Jamsostek* enrollees face high OOP costs as a result of various program design issues, limiting their financial protection.
- Little is known about the costs, impacts, and targeting effectiveness of *Askeskin/Jamkesmas*.

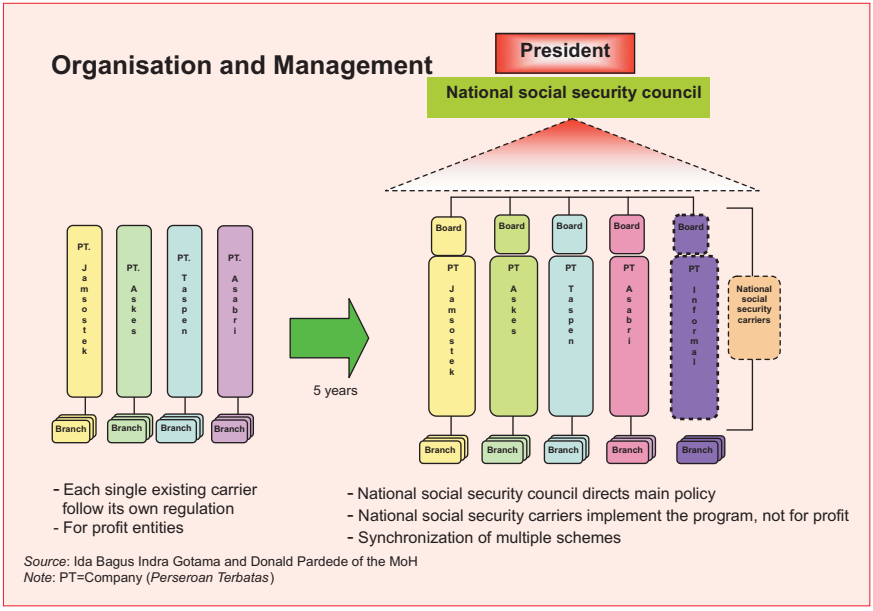
- Provider payment systems are fragmented, and Indonesia lacks state-of-the-art, pay-for-performance systems needed to promote efficiency and quality.
- Supply-side subsidies to public providers and lack of movement toward greater autonomy preclude establishing a level playing field for public and private providers to compete.
- Comprehensive fiscal sustainability and actuarial analyses of *Jamkesmas,* as well as universal coverage options, have not been undertaken.

A discussion of the processes and approaches for advancing Indonesia's health sector reform efforts to address these systemic issues follows in chapter 5.

Key Policy Issues, Options, and Costs

Indonesia is one of a small number of middle-income countries to legislatively commit to providing universal health insurance coverage to its population through a mandatory public health insurance scheme. Law No. 40/2004 established the National Social Security System (GTZ 2006). Coverage for the poor will be financed by the government and financing for the remainder of the population will be through a contributory scheme. The legislation envisages the involvement of the existing health insurance carriers (including *P.T. Askes* and *P.T. Jamsostek*), provided they convert to nonprofit status by October 2009. There is also provision for local governments to opt out and establish their own "comparable" systems. Figure 5.1 provides a graphic depiction of the planned transition from existing programs to the mandatory universal system.

Figure 5.1 Indonesia's Transition to Universal Coverage



Source: Ida Bagus Indra Gotama and Donald Pardede of the MoH
Note: PT=Company (*Perseroan Terbatas*)

This legislation, similar to most such framework laws, contains few specifics with regard to critical aspects of the new system, including timing; transitional arrangements; exact roles of existing insurance entities; the exact form and governance structure of the ultimately unified national health insurer; breadth and depth of benefits covered (and their inherent affordability and trade-offs between health outcome and financial protection), including copayments and residual public health functions of the Ministry of Health (MoH); contracting arrangements, provider payment mechanisms, and whether global expenditure caps will be employed and whether extra billing of patients by medical care providers will be allowed; contribution levels; enrollment, premium levels, and methods for collecting premiums from difficult-to-reach groups such as informal sector workers; and the role of private voluntary health insurance. There is also a provision allowing local governments to opt out and establish their own comparable systems, but the opt-out criteria are not specified.

This chapter, therefore, attempts to provide an appropriate structured approach for analyzing and costing the health insurance (HI) implementation options for the National Social Security System in the context of

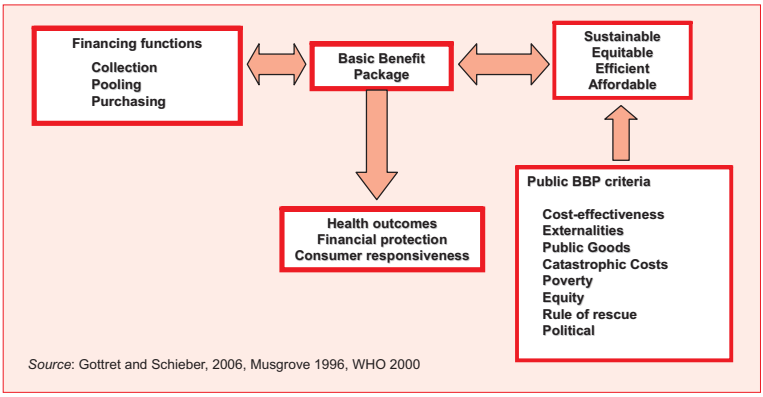
- the goals of health financing systems with respect to revenue collection, risk pooling, and purchasing;
- the global evidence base on large-scale health financing reforms;

- Indonesia's socioeconomic realities;
- the key policy issues that need to be addressed;
- a framework for analyzing major health insurance reforms; and
- the design elements and costing of the major transition options.

Mandatory Health Insurance (MHI) Goals

The ultimate purpose of the reform is to improve health outcomes; provide Indonesians with financial protection from impoverishment resulting from large, unexpected health care costs; and ensure responsiveness of the system to consumers. The underlying incentives built into the health financing reform will impact almost all aspects of system performance. Final system design and transition options need to be developed in this context. Figure 5.2 summarizes these key goals, the importance of the design of the Basic Benefits Package (BBP) in achieving these goals, and some of the specific criteria justifying public financing of MHI.

Figure 5.2 Health Financing Functions and the Importance of the Basic Benefits Package



The revenue collection, risk pooling, and purchasing arrangements of current systems need to be analyzed and those for transitional programs and for the final system need to be carefully designed. Revenues need to be raised and pooled equitably and efficiently, with an affordable BBP that maximizes health outcomes and ensures financial protection and consumer responsiveness. There will be difficult trade-offs between breadth and depth of coverage, which will have important implications for equity, financial protection, health outcomes, and costs. Purchasing and contracting arrangements must be technically and allocatively efficient and, along with revenue collection efforts, will determine both the

affordability and long-term financial sustainability of the program.
Because Indonesia has decided to move to a publicly funded MHI system, most of the rationales for public financing as shown in figure 5.2 have been explicitly adopted by the government of Indonesia. Nevertheless, affordability considerations will place limits on the specific services included in the BBP and there is a need to coordinate the financing of public health services, which are the responsibility of the MoH, with the specific primary care and other personal health care services covered through the health insurance system. This issue needs careful handling because it is an area that has often created coordination problems in other MHI systems (Gottret and Schieber 2006). Indonesia at present does not face a serious overall health expenditure problem. However, unless it adopts incentives-based provider payment mechanisms and overall expenditure caps, it is likely to face the cost-escalation pressures found in most mature health systems as it expands to universal coverage (UC) and reduces its supply constraints.

The Global Evidence Base on Good Practices in Major MHI Reforms

Three recent World Bank studies provide guidance on the enabling conditions for successful health financing reforms. One study, *Governing Mandatory Health Insurance: Lessons from Experience* (Savedoff and Gottret 2008), provides guidance from four case studies (Chile, Colombia, Estonia, and the Netherlands) on the types of governance arrangements needed for effective management of MHI systems. *Good Practices in Health Financing: Lessons from Low- and Middle-Income Countries* (Gottret, Schieber, and Waters 2008) analyzes nine good practice cases of major HI expansions (Chile, Colombia, Costa Rica, Estonia, the Kyrgyz Republic, Sri Lanka, Thailand, Tunisia, and Vietnam) and their common enabling factors, while *Health Financing Revisited* (Gottret and Schieber 2006) discusses the enabling conditions for successful national health service (NHS), social health insurance (SHI), community-based health insurance (CBHI), and private voluntary health insurance (PVHI) reforms.

Governing Mandatory Health Insurance responds to the lack of information concerning the key governance factors that affect the operational impact of MHI funds. For example, while a good deal of material covers issues such as setting premiums, benefits, and coverage rules, very little addresses such governance issues as supervisory boards, regulations, auditing, and accountability. These latter factors influence performance significantly and allow for dynamic self-correction. The study lays out in detail the major factors underlying coherent governance and accountability (table 5.1).

Table 5.1 Governance Factors

Dimension	Features
Coherent decision-making structures	1. Responsibility for MHI objectives must correspond with decision-making power and capacity in each institution involved in the management of the system. 2. All MHI entities have routine risk assessment and management strategies in place. 3. The costs of regulating and administering MHI institutions are reasonable and appropriate.
Stakeholder participation	4. Stakeholders have effective representation in the governing bodies of MHI entities.
Transparency and information	5. The objectives of MHI are formally and clearly defined. 6. MHI relies upon an explicit and appropriately designed institutional and legal framework. 7. Clear information, disclosure, and transparency rules are in place. 8. MHI entities are subject to minimum requirements with regard to protecting the insured.
Supervision and regulation	9. Rules on compliance, enforcement, and sanctions for MHI supervision are clearly defined. 10. Financial management rules for MHI entities are clearly defined and enforced. 11. The MHI system has structures for ongoing supervision and monitoring in place.
Consistency and stability	12. The main qualities of the MHI system are stable.

Source: Savedoff and Gottret 2008.

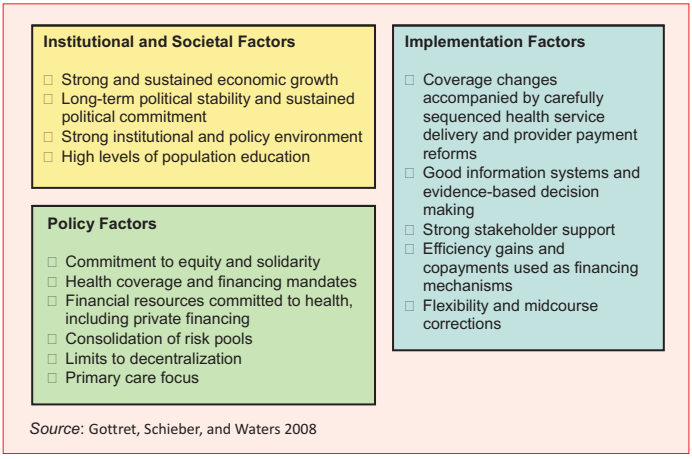
The study details good practices for implementing these governance and accountability principles based on the case studies and other global experience. It also makes some interesting observations on the focus of governance arrangements based on whether MHI schemes have a unitary fund or multiple competing funds, and on appropriate roles for medical care providers:

- *Number of insurers.* With multiple and competing insurers, external oversight mechanisms can pay less attention to efficiency and management, and focus more on consumer protection, inclusiveness, and preserving competition through antitrust actions. By contrast, countries with a single health insurer need external oversight mechanisms that make the insurer accountable for integrity, quality, and productivity.
- *Provider-payer relationship.* The effect of including providers' representatives in decision-making bodies will depend on whether this relationship is antagonistic or collaborative. When providers are direct employees of insurers, negotiations and oversight need to address civil service and labor regulation issues; countries with independent providers need governance mechanisms for transparent negotiations over prices and payment mechanisms.

Good Practices in Health Financing: Lessons from Low- and Middle-Income Countries (Gottret, Schieber, and Waters 2008) identifies 15 enabling factors derived from the nine good practice cases, which spanned the range from SHI reforms to NHS models.

These factors are consistent with those in a previous Bank study that identified the key enabling factors in high-income countries (Gottret and Schieber 2006). The 15 enabling conditions for good practice reforms are grouped into three broad categories: institutional and societal factors, policy factors, and implementation factors (figure 5.3). While some of these conditions are present in Indonesia, others are not. Assuming Indonesia favorably weathers the current global financial crisis, it would appear that economic prospects are good. However, other important areas need to be more fully developed, including information systems, evidence-based policy making, use of efficiency gains and copayments, and recognition of limits to decentralization.

Figure 5.3 Enabling Factors in Health Financing Reforms



Source: Gottret, Schieber, and Waters 2008

Health Financing Revisited (Gottret and Schieber 2006) identifies the enabling factors for successful implementation of all types of health insurance reforms (figure 5.4). For successful implementation of contributory SHI systems, this study highlights the importance of a large formal employment sector and concentrated urban populations—neither of which are found in Indonesia—as well as administrative capacity, which may be lacking to some degree in Indonesia's current insurance system, particularly in areas such as provider payment.

Figure 5.4 Enabling Conditions for Social Health Insurance

- A growing economy and level of income able to absorb new contributions
- A large payroll contribution base and, thus a small informal sector
- Concentrated beneficiary population and increasing urbanization
- A competitive economy able to absorb increased effective wages arising from increased contributions
- Administrative capacity to manage rather complex insurance funds and issues such as management of reserves, cost containment, contracting, and others
- Supervisory capacity to overcome some of the market failures, such as moral hazard and risk selection, as well as other important matters such as governance and sustainability
- Political consensus and will

Source: Gottret and Schieber 2006

Socioeconomic and Institutional Realities Affecting the Design of Policy Options

In light of the above policy issues and global experience, it is apparent that in scaling up to achieve UC through a mandatory contributory health insurance system, some important underlying factors need to be taken into account in designing policy options. These factors relate both to the underlying socioeconomic conditions and characteristics of the insured and uninsured and to existing public and private health insurance programs.

Table 5.2 provides a useful template for decision makers as they determine how to identify uncovered and covered groups by their income and employment status; seek contributions from individuals and employers; and decide which groups to finance or subsidize from the government budget, be they the poor and disadvantaged or small employers with limited ability to pay. It is critical for Indonesian policy makers to understand the numbers of currently insured and uninsured, based on their health status, employment status, ability-to-pay status, and geographic location to effectively design and cost transition policies. High levels of informality, a large rural population, large numbers of self-employed and workers in small firms, and significant numbers of poor and near poor in Indonesia (table 5.2) will pose serious challenges to developing a large contributory base and to ensuring delivery capacity in rural areas in the country's highly supply-constrained health system.

Table 5.2 Population Employment Composition

(percent)

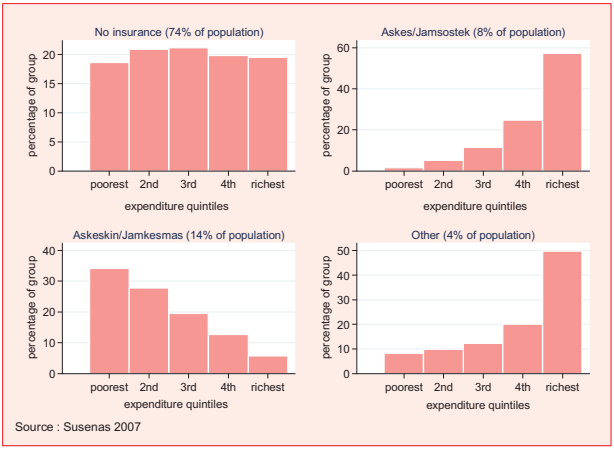
Employment status	Total	Low income	Middle income	High income	Poor	Nonpoor
Employed	64.98	12.13	39.20	13.66	9.56	55.42
Establishing new business	0.19	0.03	0.11	0.05	0.02	0.17
Schooling	7.43	0.74	4.24	2.45	0.71	6.72
Housekeeping	18.67	3.47	11.31	3.89	2.95	15.72
Others	5.49	1.30	3.27	0.92	1.08	4.41
Formal	42.53	3.81	23.97	14.75	3.51	39.02
Informal	57.47	14.86	36.34	6.27	11.20	46.27
Self-employed	21.75	3.62	14.42	3.71	3.04	18.71
Self-employed with temporary workers	16.86	4.17	10.62	2.08	2.93	13.93
Employer	3.21	0.22	1.61	1.38	0.18	3.03
Employee	32.66	2.83	18.20	11.64	2.73	29.94
Unpaid and casual workers	25.51	7.84	15.47	2.21	5.84	19.68
Farmers	38.82	12.56	23.96	2.30	9.04	29.78

Source: Susenas February 2007, modified from Hsiao (2008).

Note: Categories do not always add to 100 percent; categories are not mutually exclusive.

A detailed breakdown of both the insured and uninsured by their employment status, health risk status, location, income level, and family characteristics are needed to cost reform options. For example, detailed analyses of the 2007 *Susenas* data (figure 5.5) provide information about the income status of the insured and uninsured. Appendix 1 provides an econometric analysis of the health care utilization differences between the insured and uninsured.

Figure 5.5 Distribution of Insurance Coverage by Income Quintile for Different Programs



These data have clear implications for the transition path to UC:

- The large level of informality (60 percent of the labor force or more than 60 million people) makes it difficult to identify and obtain contributions from this segment of the population.
- Based on the government's definition of poverty, about 70 million people are poor or near poor, necessitating government financing for a substantial proportion of the population.
- Using a higher US$2/day definition of poverty, over 50 percent of the population (more than 100 million people) could be defined as poor.
- Some 70 percent of the population lives in rural areas, and the geography (7,000 inhabited islands) makes it difficult to achieve scale and scope economies in service availability.
- The unemployment rate is relatively high at 8.4 percent (BPS 2008), again necessitating government financing support for this group.
- Some 85 percent of all workers are in firms of fewer than five workers and 38 percent are in firms of only one worker. This raises serious concerns about obtaining employer contributions from these entities.

Key Policy Questions for Major MHI Expansion

Broadly speaking, an evaluation of the impact of a major HI expansion should be based on the following three scenarios:

- An accurate picture of the current health system (the baseline) is needed, including data on health spending, insurance coverage, and availability and use of services.
- Projections of the future health system, starting from the baseline and assuming no reform, are needed so that policy makers can understand the need for reform and its design aspects.
- Projections of the future system after the reform are needed so that policy makers and the public can understand the likely effects of the reform.[1]

Basic Benefits Package

The BBP and cost-containment mechanisms are two of the most critical operational factors in achieving the desired goals for a health system. All governments face difficult trade-offs between consumer expectations and affordability, and potential trade-offs between health outcomes and financial protection, and between equity and efficiency, and must also deal with political-economic realities such as ensuring adequate quality so that the better-off also use and politically support the

[1] See Nichols (1995).

system.[2] The BBP is one of the critical features that will (along with demand-side and provider payment factors) determine the outcomes of a HI system.

In designing the implementation of MHI in Indonesia, the following factors must be considered as part of the BBP development process[3]:

- Development of criteria for prioritizing elements of the BBP
- Strategies for reaching consensus on those element (with the medical profession, with members of society, with interest groups)
- Dealing with services not included in the package
- Evaluation of the health and financial protection impacts of the package
- An approach for the transition process
- A framework for providing the package
- Determining the cost of the package
- Determining how to finance the basic package
- Defining the beneficiaries of public subsidies
- Development of methods for channeling public subsidies [4]

Provider Payment System

Given Indonesia's current system, a further critical element is the method for paying providers. The methods by which providers are paid and the levels of payment have important implications for costs, quality, and access (Langenbrunner and Somanathan forthcoming). Indonesia lacks the pay-for-performance systems and contracting arrangements found in most developed, and an increasing number of developing, countries. In designing and implementing new provider payment systems, the following tasks should be undertaken:

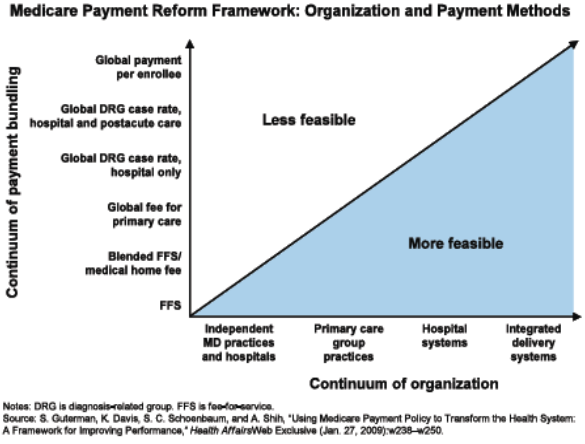
- Define the services covered (the BBP);
- Obtain service unit cost information;
- Define an efficient level of service provision costs;
- Set payment levels to cover costs of efficient provision;
- Evaluate administrative costs of options, including costs to other payers, providers, and consumers;
- Choose payment method(s) that may vary by provider type;
- Develop contracts among payers, providers, and consumers;
- Develop management information and quality monitoring systems at payer and provider levels;

2 Although some countries, such as Sri Lanka, have effectively engineered their systems so that many of the better-off opt out of the public system, largely for better amenities, democratic grassroots support for the system ensures its continuity by the government (Rannan-Eliya and Sikurajapathy 2008).
3 See Mukti and Riyarto (2008) for comparisons of the P.T. Askes BBP with the BBPs in several neighboring countries. Also see Langenbrunner and Somanathan (forthcoming) for a discussion of BBPs throughout the region.
4 Adapted from Hsiao (2008).

- Provide appropriate training for payer and facility personnel and provide information to consumers on how to use the new system;
- Develop a regulatory structure, including an appeals process;
- Demonstrate and evaluate the payment system in sample facilities, practice settings, and geographic areas;
- Modify the payment system and implement it countrywide;
- Undertake any necessary complementary delivery system restructuring and manpower training reforms; and
- Monitor cost, quality, and access, and revise the payment system periodically.

Figure 5.6 provides an example of the types of payment systems that are consistent with different health system organizational arrangements. Each arrangement has positive and negative incentive effects with respect to costs, quality, and access. In addition to the payment method used, the levels of payment are also critical. In practice, most of the more advanced systems are combinations of the base payment mechanisms designed to maximize the strengths of the arrangements used while mitigating their overall weaknesses.

Figure 5.6 Provider Payment Mechanisms and Health System Organization



Notes: DRG is diagnosis-related group. FFS is fee-for-service.
Source: S. Guterman, K. Davis, S. C. Schoenbaum, and A. Shih, "Using Medicare Payment Policy to Transform the Health System: A Framework for Improving Performance," *Health Affairs*Web Exclusive (Jan. 27, 2009):w238–w250.

Indonesia is in the early stages of developing its policies on provider payments, designing its payment mechanisms, and implementing them as part of the health financing reform. This is an important but, thus far, neglected area of reform. The existing system relies on various combinations of primary care capitation, salary, and fee-for-service insurance reimbursement mechanisms. While Indonesia is to be applauded for its ongoing efforts to develop a diagnosis-related group system for paying hospitals, many countries have found that such systems often need

to be accompanied by additional efforts to transfer risk to providers, including expenditure limits, a single payer, and various managed-care elements such as selective contracting, various utilization management techniques, and withholding payments for penalties and bonuses.

Opt-Out Provisions

Another complexity arising from Law No. 40/2004 is an allowance for local governments to opt out of the national system so long as they provide comparable coverage. Such opt outs could exist side-by-side with any of the above national system models as well as the options for Indonesia discussed below.[5] A review of the local schemes (Gani, Tilden, and Dunlop forthcoming) observes that there are two types of health risk protection plans developed by subnational governments: health insurance and generalized subsidy (free health care). The MoH recorded 36 local health insurance schemes in mid-2007, while 60 districts implemented free health care. These local schemes vary widely in organizational structure, funds flows and management, provider network and payment, and member criteria. Gani, Tilden, and Dunlop also note that, in general, the technical capacity of these schemes and the oversight capacity of local governments are weak, and both the legal basis for these schemes to operate and technical standards need to be established.

It is important for policy makers to continue to document and evaluate these local pilot opt-out projects. Information relevant for national programs can be acquired, including how local programs are structured and financed (such as through local and individual contributions), how medical care providers are paid, and their successes and failures. While the public finance literature provides a strong basis for local allocational decisions, critical national issues of equity, redistribution, and sustainability must be addressed, in addition to issues regarding local capacity. Are local opt outs viable only for rich areas? How can such opt-out possibilities be structured so that rich areas also continue to support the national system and the nation's poor? How can poorer localities be guaranteed the fiscal capacity to fund local systems to meet at least the minimum national standards, given their potentially greater health needs? In sum, local opt outs have strong advantages but also raise important equity and financing issues if UC is to be provided through a uniform national mandated set of benefits.

Private Voluntary Health Insurance

While the government of Indonesia has mandated a public UC system, PVHI may still have an important role. If opt outs are allowed, as they are now for *Jamsostek*, employers must be compelled to live up to their social responsibilities and to

[5] See, for example, Gani, Tilden, and Dunlop (forthcoming).

provide and purchase PVHI efficiently. The adverse selection and moral hazard issues associated with PVHI mean that the government must have an effective regulatory framework in place to both protect consumers and create an operating environment that allows survival of the insurance industry. Another important issue is whether supplementary PVHI policies designed to cover the expenses of cost-sharing required in the public system will be regulated. If such policies are permitted (they are not allowed in some Canadian provinces), overall public expenditures will be higher because individuals will use more public services if they have their cost-sharing requirements essentially eliminated. These are all issues the Social Security Council[6] needs to address.

Pharmaceuticals Reform

Another key area of reform, the subject of a World Bank policy note, concerns the transitional risks and potential opportunities with respect to pharmaceuticals (Hawkins et al. 2009). The study discusses risks and opportunities both under existing programs and under the Law No. 40/2004. The *P.T. Askes* system for managing drug expenditure has many good practice features: (i) a formulary based on independent, scientific advice; (ii) priorities linked to budget availability; (iii) prescribing protocols for high-cost drugs; (iv) competition to obtain discounted prices for drugs listed in its *Daftar Dan Plafon Harga Obat* (drugs price list); (v) publication of the price list; and (vi) paying pharmacists fixed fees and declining margins instead of a percentage mark-up. *P.T. Askes* uses about 25 percent of its health expenditure for drugs, and has brought this percentage down over time. The similar figure for *Jamsostek* is about 40 percent. *Jamkesmas* pays prices similar to those paid by *Askes* for the drugs it purchases but offers its members very little choice (unbranded generics only for items in its formulary), and it has no capacity to control off-formulary prescribing or to monitor the availability of discounted drugs to its members.

In the medium to long term, methods of paying hospitals should be developed to include the costs of drugs in the price for inpatient services and most outpatient services. Those methods should be accompanied by measures to encourage hospital managers to adopt and implement formularies, to strengthen their influence on what drugs their doctors prescribe and how they prescribe them, and to procure drugs at lower prices. The changing burden of disease in Indonesia—with increases in noncommunicable diseases such as diabetes, and in cardiovascular disease risk factors—makes this an important public health issue. An incremental approach to expanding and managing outpatients' benefits would make sense to ensure fiscal sustainability, beginning with high-burden conditions and risk factors amenable to low-cost prevention and treatment. Use of treatment protocols, including drugs, by SHI carriers is one means of managing this expenditure, and is already in use to

[6] The government body designated with the task of developing the details of health reform.

some extent by *Askes* and *Jamsostek*. But as the caseload of patients with chronic diseases increases in primary care, this approach becomes costly and complex to monitor, and complementary approaches are needed (such as using primary care provider payment and contracting, prescriber monitoring and feedback, and use of pharmaceutical benefits management services).

It is desirable to have a single drug formulary as part of the benefits package for the implementation of Law No. 40/2004. Decisions will need to be made about how each SHI carrier will set reimbursement rates for medicines, how much choice of product they will allow, and how they will deal with prescribing outside the formulary. One option would be to scale up on a nationwide basis the approach used by *Askes*. Another option, if there are multiple funds, would be to allow each health insurance fund to develop its own system of setting reimbursement prices. There are trade-offs: multiple formularies and reimbursement price schedules for different insurers creates complexity for health care providers and increases control and monitoring costs.

In concept, a single national system for establishing the formulary and setting drug reimbursement rates is potentially more efficient, and could achieve greater downward pressure on drug prices. The governance, transparency, and administrative efficiency of the system would be crucial, however, and there are practical and political considerations in a country as large and diverse as Indonesia. Such a system would become the focus of very strong lobbying from diverse industry interests. The challenge of controlling fraud, monitoring availability of reimbursable drugs, and monitoring and managing out-of-formulary prescribing for a much-expanded scheme is enormous. It takes several years of development and capacity building to get such a system working. Simpler, less sophisticated control mechanisms would be needed while this type of system is developed.

Many high-income countries with universal health insurance use national price regulation to set standard prices that their health insurance funds use as the basis for reimbursing prescription drugs. There has been a global trend toward including the cost of drugs in an overall price per case or global budget payment for hospitals. This makes the hospital management responsible for controlling the prescription and prices of medicines. It also requires a change of mind-set among hospital managers, from seeing pharmacy as a profit center to seeing it as a cost center. It would require an increase in medicines management and purchasing capacity in hospitals. If medicines and supplies purchasing agencies (or contracted private logistics agents) are established, public hospitals would be able to benefit from large volume procurement. The transition to these new methods of payment would also require support for hospital managers to review the way they contract with retail pharmacies in hospital sites to serve their patients. Clearly, there is a large agenda here that needs to be addressed by the Social Security Council.

An Operational Analytical Framework for Addressing Issues

Table 5.3 provides a detailed framework for describing options for the expansion of health insurance coverage in Indonesia.[7] Across the top of the table are listed three possible reform scenarios discussed in detail below. This framework defines the key building blocks for the UC policy options, which will also determine costs, sustainability, equity, efficiency, health outcomes, and financial protection impacts of the policies chosen. The Social Security Council and key policy makers need to address each of these issues in designing and costing the various UC reform options. Table 5.4 lays out the types of cost and coverage impact analyses that need to be undertaken in assessing the effects of the different options on the key financing entities of the national government, provincial and local governments, private employers, and households.

Table 5.3 Framework for Describing Major Features of HI Reform Proposals

Element	Option 1 *Jamkesmas* for all	Option 2 Single fund MHI	Option 3 Multiple fund MHI
1. Eligible groups			
Universal coverage			
Single risk pool			
Multiple risk pools – risk adjustment			
Definition of eligibility unit			
Targeting mechanisms			
Current public programs changed or expanded			
Uncovered groups			
2. Benefits covered			
Standard national BBP			
Multiple BBPs			
Positive-negative lists			
Copayments and cost sharing			
Other limits on benefits			
Extra billing			
3. Financing			
Premiums • Rating basis: risk vs. community • Individuals • Employers; opt outs • Provincial and local governments			
Subsidies and incentives • Poor and near poor • Informal sector workers • Small employers and other employers • Other			
National revenues including earmarked revenues			
Provincial and local contributions			

[7] This framework is based on studies by the Commonwealth Fund (Collins, Davis, and Kriss 2007; Collins et al. 2007; and Davis, Collins, and Kriss 2007) that lay out the key policy issues and impact analyses that need to be considered in major health reform legislation.

Element	Option 1 *Jamkesmas* for all	Option 2 Single fund MHI	Option 3 Multiple fund MHI
Provider payment mechanisms • Methods • Payment levels • Levels of risk sharing • Selective contracting • Scope			
Global expenditure caps			
Fiscal sustainability criteria			
4. Key implementation steps and dates			
Number of years for transition to UC			
Phase-in schedule			
5. Other key elements of reform			
Oversight and governance roles of national, provincial, and local governments			
Roles of MoH, other agencies, and current public insurers			
Changes to intergovernmental fiscal structures and flows			
Participation of private providers			
Quality assurance: measures and administration (public, independent agency, self-regulation)			
Efficiency measures			
Provincial and local employer opt outs			
Role and regulation of PVHI			
Expansions and changes in delivery system including supply-side subsidies to public providers			
Other demand-side measures such as conditional cash transfers			
Source: Adapted from Collins, Davis, and Kriss 2007; Collins et al. 2007; and Davis, Collins, and Kriss 2007.			

This discussion is meant to be illustrative of both the manifold aspects of comprehensive health insurance reform and the kinds of impact evaluations on costs, access, equity, and numbers of uninsured that should be undertaken. As the government develops and implements its MHI system, these issues need to be considered in the design, evaluation, and costing stages of the policy options.

Table 5.4 Framework for Assessing Cost and Coverage Impacts of UC Options

Indicator	2008 (baseline)	2010	2015	2020	UC target year
1. Number of uninsured (millions)					
2. Change in numbers of uninsured newly covered					
3. Net costs of newly covered uninsured from previous cited year (millions of Rp) • Total • National government • Provincial governments • Local governments • Private employers • Households					
4. National health expenditure • Total • Share of GDP • Public share • Out-of-pocket as a share of total • Percentage annual changes from previous cited year in nominal and real terms Total Per capita					

Indicator	2008 (baseline)	2010	2015	2020	UC target year
5. Change in national health expenditure from previous cited year (millions of Rp) • Total • National government • Provincial governments • Local governments • Private employers • Households					
6. Equity: change in average household health spending by annual income quintile					
Source: Modified from Collins et al. 2007.					

Design and Costing of MHI in Indonesia

Designing and costing each transition option and the final UC configuration depend on existing institutional arrangements, administrative capacity, and political economy and macroeconomic considerations. Such efforts also require demographic, socioeconomic, and cost information, all of which need to be analyzed through appropriate public health, actuarial, economic, political, and sociological lenses.

Current Realities

In addition to the socioeconomic realities previously discussed, the design and costing of the transition to steady-state UC as well as the long-term costs and sustainability of the system will be heavily influenced by the current baseline public insurance programs. Chapter 3 provided the latest available information on program enrollment and the targeted 76 million poor and near poor who were covered by *Jamkesmas* in 2008. Of the 48 percent of the population with HI coverage in 2008, some three-quarters (in principle, the poor and near poor) were covered through *Jamkesmas,* financed by general revenues from the central government budget, while *Askes*, *Jamsostek*, and PVHI covered the remaining 25 percent of those with insurance.

Specific design features of the existing health insurance programs could have important implications for the transition to UC for the remaining nonpoor segments of the population:

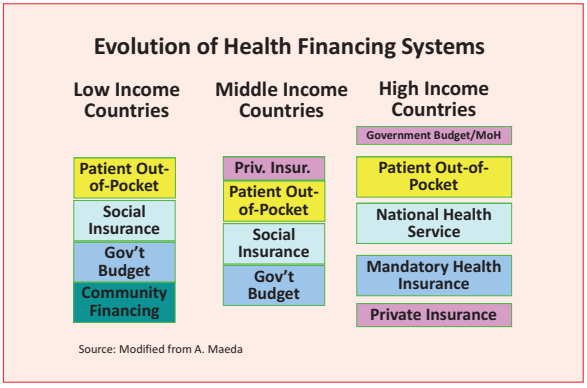
- Because of firm size restrictions, wage ceilings, and opt-out provisions, the current social insurance program, *Jamsostek,* only covers about 15 percent of all formal sector workers, that is, some 4.1 million workers and dependents. The International Labour Organization and Asian Development Bank estimate that as many as 100 million people could be covered through this contributory system if these restrictions are lifted (ILO 2003; ADB 2007).

- While the BBPs among the three major existing programs are similar (table 3.2), *Jamsostek* does not cover certain catastrophic conditions, and *Askes* and *Jamkesmas* require beneficiaries to use public facilities. In addition, extra billing is rampant in both *Askes* and *Jamkesmas*, denying beneficiaries effective financial protection and failing to curb private health spending.
- Modern provider payment and purchasing mechanisms are largely absent, and public supply-side subsidies for capital expenditures and staff salaries in public hospitals preclude both the effective use of provider payment incentives to encourage efficient individual provider behavior and the creation of a level playing field between the public and private sectors.
- The complex intergovernmental fiscal situation and the inequities and inefficiencies in the *Dana Alokasi Unum* (general allocation fund), or DAU, and *Dana Alokasi Khusus* (special allocation fund), or DAK, mechanisms, along with the vague language in Law No. 40/2004 concerning local and regional contributions, make designing financing options that require local contributions a serious challenge.

Practical Issues in Options Development

In developing practical options for the implementation of UC, two critical areas need to be addressed: (i) the ultimate steady-state system envisaged needs to be defined, and (ii) the transition steps to get to the steady state system need to be enumerated. Figure 5.7 displays the transition steps that most developing countries have followed as they moved toward UC. In most ways, Indonesia represents a typical middle-income country with a fragmented system composed of social health insurance programs for public and private sector workers and government funding for the poor and disadvantaged. The question is, where will Indonesia wind up?

Figure 5.7 Evolution of Health Financing Systems



Reform Options

The Social Security Law, as enacted, appears to envision a single national mandatory health insurance system based on social health insurance and equity principles—contributions from the employed and government contributions for the poor and others unable to pay (GTZ 2008; Thabrany 2005; World Bank 2008c; ILO 2003). Existing public health insurance programs would convert to nonprofit entities and be absorbed into the administrative structure of the MHI system. There are, however, various possible permutations of this approach, including having a single national MHI system based on multiple programs for different groups, as is the case in the Philippines, Thailand, and Turkey.[8]

Several challenging policy decisions are embedded in a multiple program approach. Will there be multiple public or private (or both public and private) HI mechanisms with a separate program run by the government for the poor and perhaps informal sector workers? Will benefits be standardized across these programs? Will beneficiaries have access to the same range of public and private providers? Will extra billing by certain providers (for example, private providers) be allowed? How will financing work? Will there be cross-subsidies among programs based on both differential risks and ability to pay? How will the government create an equitable reimbursement program between public and private providers when public providers receive significant supply-side subsidies in the form of general budget contributions for salaries and capital costs independent of the HI reimbursement systems? Could there be an employer mandate for all private employers to purchase private health insurance policies for their employees and dependents?

Another fundamentally different approach to MHI (albeit consistent with the recent creation and expansion of *Jamkesmas*), which might well require new legislation, is to extend *Jamkesmas* to the entire population, in effect creating an Indonesian NHS as in Sri Lanka and Malaysia. An NHS system pools population health risks at the national level, with the system financed by the general budget. Whether this NHS-type approach or a single or multiple fund MHI approach is chosen will depend on political economy considerations, and ideally on which approach can best achieve sustainable, equitable, and affordable improvements in health outcomes, financial protection, and consumer responsiveness.

Based on deliberations of the Social Security Council, as well as the perspectives of key high level policy makers, there appear to be two basic competing long-term visions under serious consideration, in addition to a willingness to allow local experiments (opt outs) in health insurance coverage to continue. Although much of the focus has been on a single fund MHI system, given the potential transition

[8] GTZ (2008) discusses a multiple fund option.

paths as well as the fact that several regional partners have adopted a multiple program approach, a third option embodying this approach is also presented.

Option One: *Jamkesmas* for All (An Indonesian National Health Service)

The first approach approximates an NHS like those in Sri Lanka and Malaysia. It reflects the fact that over half the Indonesian population are poor or near poor, and thus have very limited ability to pay. It also recognizes the inherent difficulty of identifying the more than 60 percent of workers who are in the informal sector and having them pay premiums. By covering formal sector workers through general revenues, firms might be more competitive because their 3–6 percent payroll contributions would be eliminated or could be replaced by more efficient and equitable taxes.

Option Two: A Single Integrated MHI Fund

This approach approximates the new national SHI model (now called MHI), in which MHI would be funded through both wage-based contributions (perhaps shared between employer and employee) for public and private sector workers (and retirees) and general revenue contributions by the government for the poor and other disadvantaged groups. Under this approach there would be a single standardized national HI fund (although multiple funds could be established, as in Germany or Japan). The government would need to decide if informal sector workers would be covered like the poor (as in Thailand) or whether mechanisms can be developed to effectively identify them and have them contribute some share of their earnings.

Option Three: Universal Coverage through an MHI System

This approach could be conceived of as a variant of Option Two or a combination of Options One and Two. Such a system would incorporate a single set of rules applying to multiple SHI and NHS-type programs. Existing programs would be scaled up to include the entire population. All the poor and other disadvantaged groups would be covered through *Jamkesmas*. All private sector workers would be covered through *Jamsostek* (possibly though elimination of the opt-out, employer size, and wage ceiling restrictions and adding requirements to cover retirees). Civil servants and civil service retirees would be covered through *Askes* (or the *Askes* program could be folded into *Jamsostek*, or conversely).[9] A decision would need to be made about how to handle informal sector workers. The three programs would have separate administrative structures but would operate under the same set of rules concerning issues such as benefits, contracting for services, and provider

[9] One administrative option under consideration is to have Askes administer all health insurance programs and *Jamsostek* administer all retirement programs.

payment. Cross-subsidies across programs might be required on the financing side.[10]

The three options would all result in UC and all would have sufficiently large numbers of enrollees for effective risk pooling. Efficiency, equity, and financial sustainability are major issues under all the options and their achievement will depend on the extent of the BBP, cost sharing, payment and contracting arrangements, and gradual elimination of supply-side distortions. Option Three would probably have higher administrative costs and might require risk-adjusted transfers, but in certain respects is a less drastic change from the current system.[11] However, depending on the how diligently the "single set of rules" is implemented, it could also lead to inequalities across programs. The Philippines, Thailand, and Turkey have all implemented UC systems like this and all have encountered such problems. However, from a political economy perspective, they found this route the most practical way to move to UC. Treatment of informal sector workers is a major issue in all three countries. While Turkey and the Philippines are attempting to make informal sector workers pay premiums, Thailand decided to cover them through general revenues because of the difficulties discussed above. Provider payment reforms and differences in benefits are still issues, as are differential copayments, access to private providers for certain programs, and extra billing. All these issues are also germane to Options One and Two, although having a single uniform national program makes it easier to use the full market clout of the public HI program to deal with medical care providers.

Transition Options

Given the complexities and realities of health reform, complete zero-based overhauls of health financing systems are rare; virtually all policy makers focus on transitioning existing systems to fulfill their collective policy choices through incremental change. All three of the major existing programs in Indonesia pool revenues and provide coverage against catastrophic medical expenses although, because of benefit limitations, wage ceilings on contributions, extra billing in *Jamsostek*, and limited formularies and prohibitions on private provider use in *Askes*, enrollees in these programs face significant out-of-pocket payments. As discussed above, in 2008 some 45 percent of the population was covered through these (and other smaller) public programs and another 3 percent of the population had private insurance. Some 52 percent of the population lacks formal coverage.

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[10] Obviously, the two SHI programs could also be integrated into one along with the other smaller military and *Jaminan Pemeliharaan Kesehatan untuk Keluarga Miskin* (Health Insurance Scheme for Poor Families), or JPKG, programs. The key here, as in Option Two, is the separation of the contributory groups from the government-supported ones. One could also refine Options Two and Three further by having the MoH cover all preventive and primary care services through general revenues, while curative secondary and tertiary care would be covered through the insurance programs. This is a question of benefit package definition.

[11] Multiple-fund SHI systems have generally been shown to have higher administrative costs than single funds or NHS approaches. See Poullier (1992).

Thus, policy makers need to choose the specific configuration for the UC system described in Law No. 40/2004, and then develop options to phase up coverage through existing or new transition programs. According to 2006 figures, 74 percent of the population (about 50 percent according to MoH 2008 estimates), are not yet covered, but who they are, whether they are informally employed or not at all, where they are, and what their family circumstances are, are not known. This information is critical for estimating the costs and likely outcomes of UC.

With regard to transition, the government has significantly expanded *Jamkesmas*, which is commendable on equity grounds and is compatible with all three options. An expansion of *Jamsostek* through eliminating the firm size limitation, opt-out provision, and raising or eliminating the wage ceiling would be a logical way to improve risk pooling for those who can afford to contribute without large government subsidies.[12] Such an expansion would also be consistent with Options Two and Three. The ILO study (2003) suggested that up to 100 million people (full-time workers and dependents) might be covered through this type of expansion, which would reduce the numbers of uninsured in Indonesia by 25–30 percentage points. The issue of full-time informal sector workers is, as discussed above, a major policy dilemma under all options except Option One. There are clearly also issues regarding the possible need for public subsidies for small firms (fewer than five workers), which currently employ 85 percent of the workforce.

Issues in Costing

Costing out the broad options described above requires precise information on eligibility criteria, benefits covered; cost sharing, financing, and premium arrangements; provider payment and contracting mechanisms; and the behavioral responses of consumers and suppliers. Equally critical is assessing the baseline costs of the current programs, but this will be challenging for a number of reasons: unit cost information is lacking; detailed utilization information is lacking; there is a lack of clarity on the BBPs; information on *Jamkesmas* generally reflects budgeted payments, not the true costs of the program because in the past, hospitals were not paid or paid late. In addition, there is no relationship between actual costs of services provided in *Puskesmas* to *Jamkesmas* beneficiaries and the Rp 1,000 monthly capitation payment, which is based on number of program-eligible people in the catchment area. Payments by all three programs are based on out-of-date fee schedules and much of the actual costs of care in public facilities is offset through supply-side subsidies to providers in the form of salaries paid to public sector employees and government-financed capital expenditures. *Jamkesmas* and *Askes* beneficiaries often face large out-of-pocket costs for out-of-plan provider use and other program limitations. There are also serious supply constraints because of

[12] Some subsidies might be needed for small employers and firms and employees in very low wage industries.

geography, and limited numbers of physicians and specialists, in particular, which result in low utilization levels.[13]

Obtaining appropriate data, including claims data, to do actuarial costing studies has also been difficult. Several studies have attempted to assess the actuarial costs of coverage expansions to achieve UC. One study estimated that to cover actual costs for *Askeskin*, premiums should be on the order of Rp 8,500, 60 percent above the current levels (Hasbullah 2007).

A second study, which assessed willingness to pay for the Social Security BBP, showed a willingness to pay between Rp 3,500 to Rp 13,500 depending on the BBP (Mukti and Riyarto 2008). Another study of scaling up the existing programs to achieve UC with a standard BBP showed that the true premium costs for the poor would triple as they approached the actuarial costs of civil servants, and that public expenditures would increase from 0.7 percent of GDP in 2010 to 2.9 percent in 2025 (ADB 2007).

A study by Soewondo (2008) in one *Jamsostek* office found that it was difficult to estimate utilization rates because enrollees could be registered in one *Jamsostek* district by their employer but be managed by another district office if they sought care in facilities in that district. Furthermore, it was not possible to analyze outpatient utilization in *Puskesmas* and private clinics by detailed patient characteristics because data were submitted on an aggregate basis. However, information on inpatient and outpatient hospital claims costs for users of services could be assessed by age, sex, and diagnosis because claims were submitted by hospitals on an individual patient basis. The study found that average claim costs for outpatient care varied by hospital, from Rp 62,970/visit in Tarakan to Rp 153,181/visit in RS Islam Jakarta, with an overall average for the five hospitals studied of Rp 130,163. Average claim costs for hospital inpatients varied from Rp 70,857/admission in RS Tarakan to Rp 787,600/admission in Islam Jakarta, with an overall average of Rp 698,218. Hospital costs also varied by age, gender, and diagnosis. This study highlights the importance of using claims data to track utilization and costs and also made some important recommendations for improvements in *Jamsostek*'s claims processing systems. Such improvements would aid *Jamsostek* in improving the quality of care through utilization management techniques, and in controlling costs by denying payments for medically unnecessary services. This information could also be used to undertake the actuarial assessments of *Jamsostek* for the various transition options.

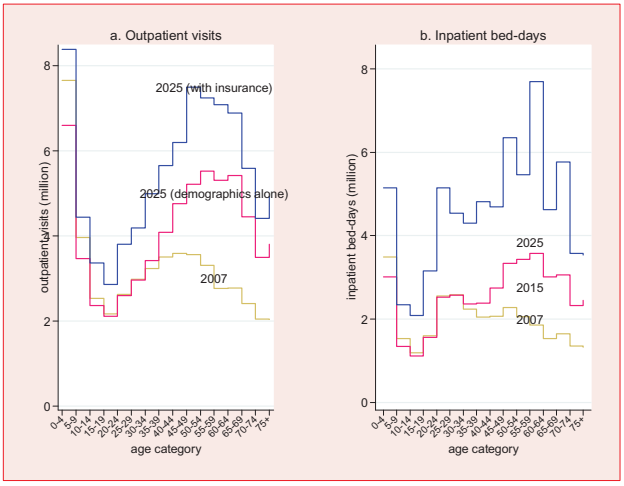
Two studies by the World Bank provided estimates of increased costs resulting from changing demographics. One of these studies also provided estimates of the

[13] See studies by Hasbullah (2007) and Mukti and Riyarto (2008), which suggest that *Askeskin* premiums should be far higher than the current Rp 5,000 per month established by the government.

increased utilization that would take place if all the uninsured were covered by *Jamkesmas*. The Choi et al. (2007) study on the impact of the demographic transition in East and Central Java found that between 2005 and 2020, under two scenarios of changing disease prevalence, private outpatient and inpatient hospital spending would increase by 84–124 percent, while public spending on infrastructure would need to increase by 51 percent in real terms by 2020. These estimates do not reflect the recent increases in *Jamkesmas* coverage and thus understate the increased demand resulting from increased insurance coverage.

The second study (Walker 2008) of the impact of demographic changes and the expansion of *Jamkesmas* to the currently uninsured population indicates that changing demographics alone will increase demand for both outpatient and inpatient services, as shown in figure 5.8. It estimated increases of 33 percent for outpatient and 30 percent for inpatient services in 2025, and if *Jamkesmas* coverage is extended to the entire population as well, there will be a 79 percent increase in outpatient utilization and a 134 percent increase in inpatient utilization by 2025, given existing supply constraints and utilization differentials between the insured and uninsured.[14]

Figure 5.8 Changes in Utilization from Demographics and Expansion of Jamkesmas to the Entire Population in 2025



Source: Author's calculations.

[14] Appendix 1 to this book contains the probit regressions based on 2007 Susenas data used to estimate increased utilization caused by moving from uninsured to insured status.

The Walker (2008) study also shows the potential large increases in costs under alternative scenarios of expanding *Jamkesmas* coverage to the entire currently uninsured population by 2015. As in all the above studies, using program costs based on 2006 *Askeskin* claims data yields estimates of the true costs of *Askeskin/ Jamkesmas* coverage that are significantly higher than the current amounts budgeted by the government, in this case several times the current budgeting levels. Under Walker's first baseline scenario, the assumption is that there is no increase in *Jamkesmas* coverage, and there is no excess hospital inflation or utilization growth, and hospital facilities continue to grow at 2001–06 historical rates. By 2025, total program costs would increase from Rp 9,046,798,000 to Rp 11,153,012,000, an increase of less than 20 percent.

Under the more expansive scenario of expanding *Jamkesmas* to 180 million people by 2010 and the entire uninsured population by 2015, spending would increase from Rp 19,127,097,000 to Rp 127,041,905,000, a more than sixfold increase. This assumes growth in hospital services of 2 percent per year higher than historical trends; excess health care inflation of 6 percent for hospital inpatient services; 5 percent for hospital outpatient services and *Puskesmas* inpatient costs and capitation rates; and 10 percent for drug costs; and newly insured individuals using services at the same rate as currently insured individuals based on the *Susenas* 2007 data. Slower expansion of *Jamkesmas* will result in cost increases falling between these extremes (Walker 2008). Clearly, the movement to UC will have sizeable impacts on Indonesia's health spending. If the expansion is financed through the government budget, there will also be significant new demands for available fiscal space in the budget to be allocated to health. To the extent such expansions are financed from employer and worker contributions, these demands on the budget would be attenuated, although concerns would then shift to employment and competitiveness effects.

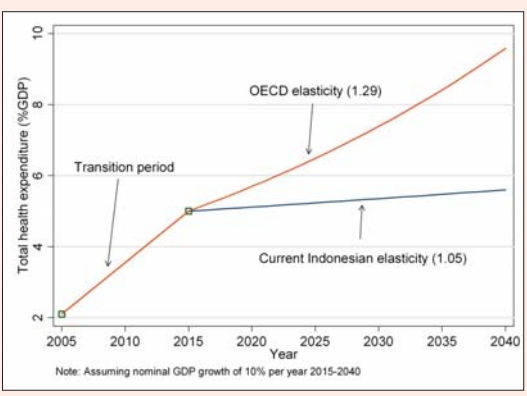
All of these studies suffer from lack of appropriate cost information as well as information on potential case-mix differences between currently insured and uninsured populations. There is also a dearth of information on demand response. Appendix 1 contains the preliminary analysis using 2007 *Susenas* data of differential utilization rates based on insurance coverage status, which was used to obtain the above estimates**.** In developing and evaluating various transition and steady-state growth options, good cost information is absolutely essential, as are definitions of the detailed features of the options. Obtaining such information needs to be a high priority for the Social Security Council, MoH, Ministry of Finance, *Jamsostek*, and *P.T. Askes*.

In addition to developing baseline estimates of the actuarial soundness of the existing programs, it will be important to develop realistic assumptions about

the expenditure growth that will occur when the coverage expansions have been completed and the system reaches a steady state. A recent study of rising public health spending across all Organisation for Economic Co-operation and Development (OECD) countries between 1981 and 2002 found that, while on average public spending on health had increased at 3.6 percent per year, two-thirds of the increase could be attributed to rising GDP per capita, over one-quarter could be attributed to a combination of changing medical technology and the so-called relative price effect (that is, the tendency for the price of health care to rise more rapidly than general inflation through time because health sector productivity tends to rise more slowly than overall productivity), while less than 10 percent of the annual increase could be attributed to demographic change (OECD 2008a).

Figure 5.9 provides a crude example of the types of analyses that need to be undertaken. In the absence of good actuarial projections, it is assumed that Indonesia reaches its steady state of UC in 2015 and is spending 5 percent of its GDP on health, slightly less than the average for other comparable lower-middle-income countries. Two scenarios are posited for the future. One assumes that Indonesia continues its historic low rate of increase of health spending based on its 1.05 elasticity. The second scenario assumes that Indonesia, once it achieves UC, will face the same cost pressures as the mature OECD health systems, in which health spending has been increasing 29 percent a year faster than GDP.

Figure 5.9 Some Future Scenarios for Health Expenditure (% of GDP)



As can be seen in figure 5.9, if Indonesia implements policies to ensure efficiency and to control costs and follows its historical trends, health spending in 2040 will be about 6 percent of GDP. If it does not, and faces the same cost pressures as OECD countries, health spending will be almost 10 percent of GDP. The illustrative point is that developing effective policies that not only control costs, but also ensure health outcomes and financial protection (areas not dealt with in this example), are critical determinants of whether Indonesia will be able to afford UC. Currently, Indonesia is spending only a little more than 2 percent of its GDP on health. Can it afford a fivefold increase? Chapter 6 looks at various means by which Indonesia could find the necessary resources to finance its proposed expansion to universal coverage.

Policy Options: Finding Resources For Health

Some of the proposed options for attaining universal coverage are likely to require large increases in government expenditure for health.[1] This chapter outlines a framework within which options and alternatives to create fiscal space for financing planned increases in health coverage in Indonesia can be assessed. Can the Indonesian government increase health spending in the short to medium term to meet the needs of universal coverage? If so, what are some options and experiences from other countries that could be considered?

Finding additional government resources—fiscal space—requires an assessment of a government's ability to increase spending for a desired purpose without jeopardizing its long-term financial solvency (Heller 2005). Although fiscal space is usually assessed in aggregate, that is, without regard to a specific sector, the analytical framework within which fiscal space is assessed can be adjusted to take into account the prospects for increasing government spending specifically

1 This chapter is a summary of World Bank (2009a).

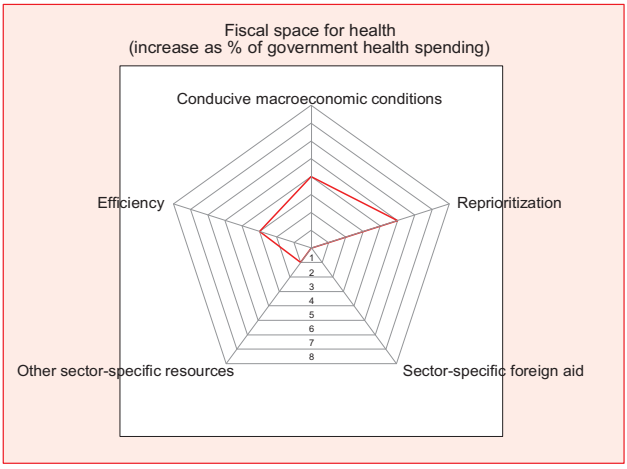
for health. One way of assessing fiscal space for health is to examine the different options for adding new sources of government financing as well as increasing the impact of current sources through efficiency gains in existing public spending on health. These include

- *Favorable macroeconomic conditions* such as economic growth and increases in overall government revenue that, in turn, lead to increases in government spending for health;
- A *reprioritization* of health within the government budget;
- An increase in *health-specific foreign aid and grants*;
- An increase in *other health-specific resources*, for example, through earmarked taxation or the introduction of premiums for mandatory health insurance; and
- An increase in the *efficiency* of government health outlays.

Favorable Macroeconomic Conditions

The first two of the abovementioned options are largely outside the domain of the health sector itself; they involve general macroeconomic policies and conditions as well as cross-sectoral political and economic trade-offs. Nevertheless, although exogenous to the health sector, it remains important to analyze the implications for government health spending of changes in the generalized macroeconomic and political environment within which the sector operates. The remaining three options are more in the direct domain of the health sector and merit particular attention given that they provide the potential for resources that are sector specific. See box 6.1 for a visual representation of the dimensions of fiscal space.

Box 6.1 Visualizing Fiscal Space for Health: Hypothetical Scenario for Indonesia



One useful means of visualizing fiscal space for health is to use a "spider plot." As can be seen in the figure below, there are five different axes, each representing a different means by which government spending on health could potentially increase. The figure shows the percentage increase in real government health spending relative to that in a given base year via each of the different options. The figure shows a hypothetical scenario for Indonesia in which a 4 percent increase in real government health spending can be expected from the appropriate macroeconomic conditions (for example, as a result of economic growth). Similarly, a 5 percent increase could come from the reprioritization of government programs and a 1 percent increase from sector-specific sources such as the introduction of earmarked taxes for health.

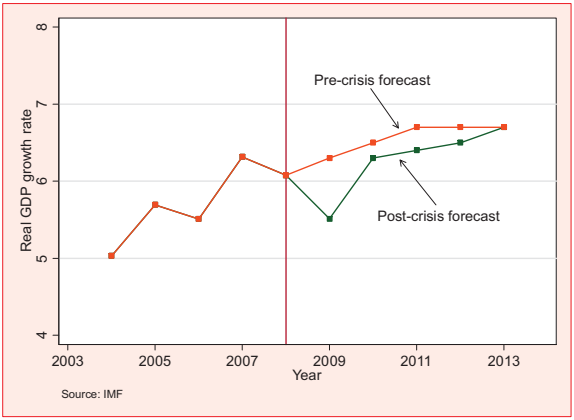
Figure Fiscal Space for Health

Source: Author.

One of the strongest predictors of fiscal space and of rising government expenditure (including for health) is national income. Among other factors, economic growth is associated with higher revenue generation—both in levels and as a percentage of the economy—and this tends to be associated with higher government spending. Indonesia's economic growth record is fairly robust. In 2007, Indonesia's GDP grew at a healthy rate of 6.3 percent (World Bank 2008a). Following significant setbacks faced during the economic crisis period of 1997–2000, the country recovered well, posting GDP growth rates in the range of 4–6 percent per year since the turn of the millennium.

Before the global economic meltdown that began in 2008, Indonesia's macroeconomic prospects appeared to be strong. Although it is difficult to predict the precise impact of the recent downturn, the likelihood of a negative impact on the Indonesian macroeconomy and on growth projections cannot be discounted, especially if export demand, foreign investment, and capital inflows are adversely affected (IMF 2008). As shown in figure 6.1, the IMF predicts a slowdown of economic growth to about 5.5 percent in 2009, recovering to precrisis forecasted levels only in 2013. Given the previous discussion, any slowdown in macroeconomic growth is likely to pose significant risks to fiscal space by potentially slowing down increases in both overall government spending and government spending on health.

Figure 6.1 Revised Economic Growth Forecast for Indonesia (2008-2013)

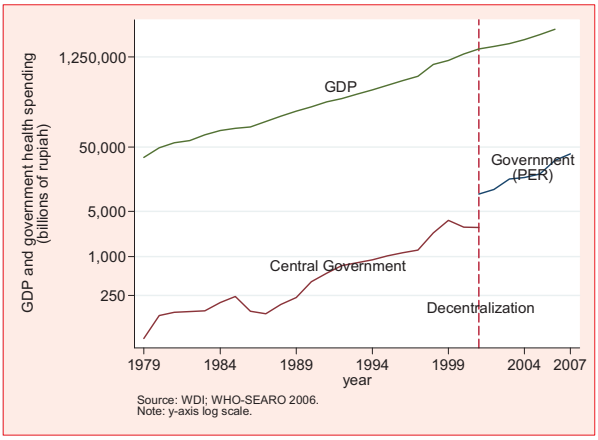


The impact of economic growth on government spending on health, although important, is not only a product of increased availability of revenues but of other factors as well. Across countries, the elasticity of government health spending to GDP tends to be greater than one, meaning that government health spending tends to rise at a faster rate than the rate of growth of GDP. There are multiple reasons why such a trend is observed, including a change in societal preferences in favor of government provision of social services generally. Based on an analysis of trend data for the period 1995–2006, the nominal elasticity of total health spending for Indonesia was 1.05, and of public health spending was 1.11.[2]

Figure 6.2 shows trends over the period 1979–2007 in central government health spending and, following decentralization, total government health spending. Although not readily apparent from the figure, government health spending has tended to increase as a share of GDP in Indonesia over time across both series. Although part of the responsiveness of nominal health expenditures to nominal GDP may also be a result of differential price changes in health versus prices for the overall economy, analysis of the health component of the consumer price index for Indonesia for 1996–2005 suggests that both the health price index and the general price index grew at the same average annual rate of about 15 percent over this period (World Bank 2009a).

[2] The corresponding elasticities with respect to nominal GDP using a global sample for 2006 were 1.09 for total health spending and 1.21 for government health spending.

Figure 6.2 Long-term Trends in Government Health Spending in Indonesia (1979-2007)



Government health spending could potentially rise from 0.99 percent of GDP in 2007 to 1.07 percent of GDP in 2013 if the elasticity of government health spending to GDP in Indonesia remains at its level of 1995–2006, 1.11, and if the economy grows at the rates recently projected by the IMF. Table 6.1 reports the projected trends for government health spending, in levels and as a percentage of GDP, using the IMF growth and nominal GDP forecasts for Indonesia through 2013. As can be seen in the table, based on economic growth–related projections, Indonesia nominal health spending levels will more than double over the period 2007–13, underscoring the importance of economic growth for generating fiscal space for health.

Table 6.1 Government Health Expenditure: Actual (2004–07) and Projected (2008–13)

Indicator	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Nominal GDP (trillion rupiah)	2,296	2,774	3,339	3,957	4,608	5,287	6,012	6,775	7,590	8,481
Government health expenditure (trillion rupiah)	16.7	19.1	31.2	39.0	46.1	53.7	61.8	70.5	80.0	90.4
Government health expenditure (% GDP)	0.73	0.69	0.93	0.99	1.00	1.02	1.03	1.04	1.05	1.07

Sources: IMF 2008 and WB staff estimates.

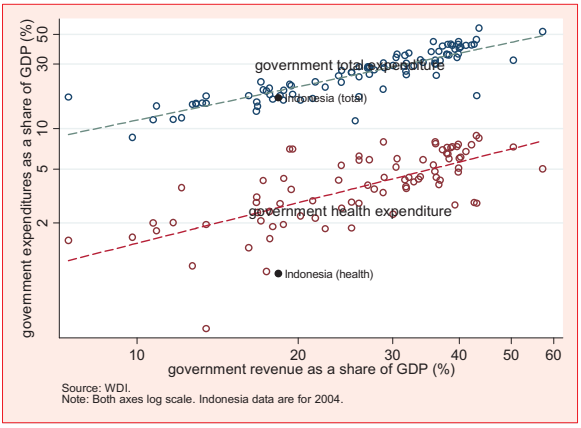
Reprioritizing the Health Budget

A second source of fiscal space for health in Indonesia could be a reprioritization of health within the budget. Several factors indicate that health is accorded a relatively low priority in the budget. WHO estimates that the Indonesian government

allocated about 5.3 percent of its budget to health in 2006.[3] This rate is far lower than the average for the East Asia and Pacific (EAP) region as well as the average for lower-middle-income countries generally, with countries in both of these groups spending about double that amount—about 10 percent on average—on health as a share of the government budget in 2006.

Lower budgetary allocations need not necessarily be a constraint to health care provision, especially if lower expenditure amounts are offset by higher levels of efficiency as in some countries. However, as discussed above, this does not appear to be the case for Indonesia. One indication of the low priority accorded to health in Indonesia comes from comparing total government expenditure as a share of revenues with government health expenditure as a share of revenues (figure 6.3). Indonesia's overall government spending is average for its level of revenue as a share of GDP.[4] However, its government health expenditure is far lower than what might be predicted for its level of revenues.

Figure 6.3 Government Total and Health Revenues and Expenditure (2006)



Source: WDI.
Note: Both axes log scale. Indonesia data are for 2004.

Health-Specific Resources

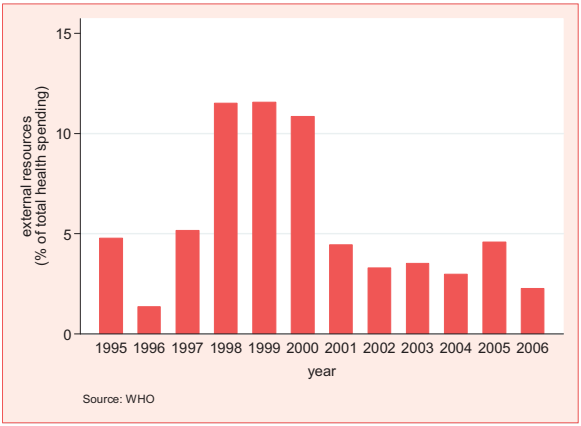
Another way to generate fiscal space for health is for governments to seek additional health-specific foreign aid and grants from international donors. Loans and grants from international organizations such as the Global Fund to Fight AIDS, Tuberculosis, and Malaria and the Global Alliance for Vaccines and Immunization could provide health-specific funding. WHO estimates that about 2.3 percent of total health expenditure in Indonesia for 2006 was financed by external sources.

[3] WHO (2009) NHA database, http://www.who.int/nha/country/idn/en/.

[4] It is also important to note that Indonesia's overall revenue collection is relatively low compared with its income level. See World Bank (2009a).

This proportion—following an increase in the postcrisis period 1997–2000—has generally declined over time (figure 6.4). The 2006 proportion for Indonesia is somewhat lower than the average for lower-middle-income countries (7.7 percent) and for the EAP region as a whole (17.5 percent), although the latter average in particular is biased upward because of the inclusion of small Pacific countries.

Figure 6.4 External Resources as Share of Health Spending in Indonesia (1995-2006)



Given recent declining trends and Indonesia's lower-middle-income status, it does not appear as though foreign aid would be a viable option for generating fiscal space for health. Unlike the previous Indonesian crisis, the current crisis originated in the United States and is having an impact on most donor countries. Foreign aid budgets are expected to face some tightening in the coming year or two at the very least. In the event that the global financial meltdown results in significant fiscal constraints, Indonesia may need to consider some stop-gap funding measures to ensure that health does not bear the brunt of this macroeconomic shock.

The health sector is somewhat unique in that, internal to the sector, there are a number of possible ways, including earmarked taxes, in which fiscal space could be generated. For instance, earmarked "sin" taxes on tobacco and alcohol are a popular way of generating fiscal space for health. One advantage of such taxes is that, even if they turn out not to be a major source of revenue, they can help reduce consumption and the ensuing morbidity and mortality related to tobacco and alcohol use. Conversely, earmarking used as a means to augment resources may end up displacing existing funding and thereby have no significant net impact on overall resources for health (McIntyre 2007).

Political obstacles could be raised to taxing tobacco in Indonesia. Indonesia is the only Asian country not to have signed WHO's Framework Convention for Tobacco Control. One cited reason is that excise taxes on tobacco production account for almost 10 percent of government revenues, and estimates indicate that the sector employs almost 7 million people (*Economist* 2007). Taxes on cigarettes in Indonesia are among the lowest in the region, amounting to only about 31 percent of the price of cigarettes. Studies have suggested that a 10 percent increase in the price of cigarettes could lower consumption by 3.5 to 6.1 percent and increase government revenues from cigarette taxation by 6.7 to 9.0 percent (Achadi, Soerodo, and Barber 2005). However, cigarette and alcohol taxation is often regressive and may result in evasion and the development of underground markets.

Although economists argue that earmarked taxes are needlessly restrictive and can lead to sustained over- or underfunding of the activities that benefit from the earmarked taxes, they are extremely popular from a political perspective. Thailand successfully implemented an earmarked tax that directly funds health promotion activities. In 2001, Thailand instituted the Thai Health Promotion Foundation (ThaiHealth), funding for which comes directly from a 2 percent earmarked tax on tobacco and alcohol consumption that provides an estimated annual revenue stream of US$50 million (WHO-SEARO 2006). Thailand has also steadily increased cigarette taxation over the years—from 55 percent in 1993 to 75 percent in 2001—leading to declining consumption rates but increased government revenue from tobacco taxes.

Another potential health sector–specific mechanism for generating fiscal space is the introduction of mandatory universal health insurance. This strategy facilitates the "capture" by the public sector of high out-of-pocket payments by collecting the premiums required in mandatory health insurance for nondisadvantaged groups. The basic economics behind any insurance mechanism is the idea that individuals would prefer payment of a predictable (and relatively small) dedicated tax or premium to avoid unpredictable (and potentially large) payments when a health or other shock materializes. There is some evidence that individuals may be more willing to pay earmarked taxes or premiums as long as there are clear benefits attached to the payment of such a tax or premium (Buchanan 1963).[5]

The successful creation of fiscal space through mandatory health insurance is dependent on the size of the population and the ability to enroll the premium-paying segment of the population. Indonesia's success in generating fiscal space from mandatory insurance would depend on the extent to which the remainder of the population can be encouraged to enroll in the national health insurance program so that some of the additional resources collected can be used to

[5] Colombia was able to generate increases in public sector health spending and declines in out-of-pocket expenditures when it introduced mandatory health insurance in 1993.

subsidize the non-premium-paying population. A significant issue in Indonesia is the size of the informal sector: at more than 60 percent of the labor force, it remains large despite periods of sustained economic growth (Sugiyarto, Oey-Gardiner, and Triaswati 2006). With such a large share of employment in the informal sector, enrollment, and thus obtaining premium contributions that would generate fiscal space, is likely to be extremely challenging.

Efficiencies in Health Spending

In addition to increasing budgeted amounts for health, effective fiscal space might be generated by increasing the efficiency of spending. Improvements in the efficiency of health systems can be an important source of fiscal space. Sri Lanka has been able to attain excellent health outcomes with relatively low levels of resources, in part because of the underlying efficiency of its health system (box 4.1).

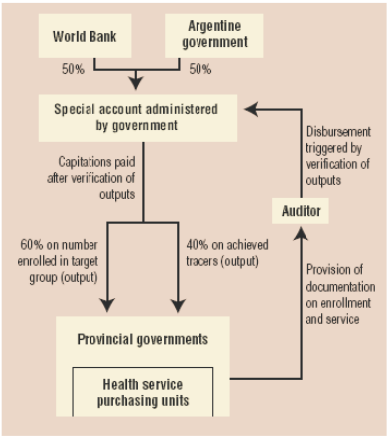
Following decentralization in 2001, up to one-half of all health expenditure in Indonesia occurred at the district level. In 2006, the central government contributed about 39 percent of all public expenditure on health with the provinces contributing the remainder (World Bank 2008c). However, district health spending remains, for the most part, nondiscretionary or routine, largely covering the wages of the publically employed health workforce. In addition, some confusion remains about accountability and responsibility of the different levels of government. The clarification of these issues could potentially help improve efficiency of the health system in Indonesia.

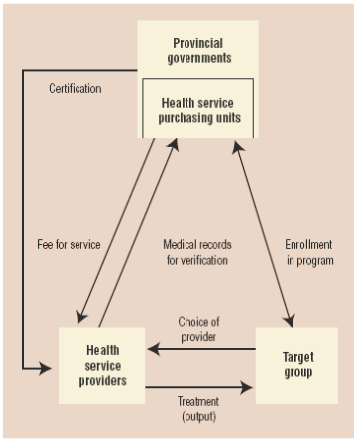
As discussed earlier, outputs vary significantly across districts in Indonesia, suggesting lessons can be learned from better performing districts. One possible avenue for improving the effective fiscal space in a decentralized context would be to design interfiscal transfers so they are geared toward attainment of health outputs and outcomes. Such mechanisms have been found to be quite successful in Argentina (see box 6.2) and Rwanda and could be considered in the Indonesian context because only a small percentage of transfers are currently tied to specific sectors and even those are not tied to attainment of specific outputs or outcomes.

In addition to efficiency gains from better coordination across all levels of government, several studies have indicated other avenues through which efficiency gains may be realized in Indonesia. For instance, an IMF analysis argues that Indonesia—by rationalizing its spending and eliminating energy subsidies—could expand overall fiscal space by almost 1.5 percent of GDP. This would entail moving the bulk of expenditure away from its current categories of personnel,

interest payments, subsidies, and government apparatus (which allow little room for investment in infrastructure, health, and education; IMF 2008). In addition, the recent Public Expenditure Review (World Bank 2007b) shows that public health expenditure is dominated by spending on salaries of personnel and primarily benefits the richer quintiles: some efficiency gains may be actualized by better targeting and increasing the discretionary elements of health spending.

Box 6.2 Designing Interfiscal Transfers to Attain Health Results in Argentina





Argentina's *Plan Nacer* was initiated in 2004 to provide coverage for the poor in provinces located in the northern part of the country. The program is designed to provide results-based financing to provincial governments based on the number of enrollees in the program as well as performance on a set of basic health indicators. About 60 percent of interfiscal transfers from the central government to the provincial governments are based on the number of enrollees and the remaining 40 percent are tied to attainment of 10 tracer indicators, such as immunization rates and average weight at birth of newborns. Service delivery is contracted out by the provincial governments to certified public and private providers and patients are free to choose among the providers. The program finances a conditional matching grant from the central government to provinces, which pays half the average per capita cost of a basic benefits package covering 80 cost-effective maternal and child health interventions to uninsured mothers and to children up to six years old.

The program has built-in incentives for increasing enrollment rates and for provision of quality care. Capitation-based and unit-costed payments encourage negotiation with providers and efficiency in delivery of services. Results are independently audited and have been encouraging.
Source: Johannes 2007.

Another indication that room for efficiency gains is available comes from a study of health worker absenteeism in Indonesia. Based on unannounced visits to primary health care facilities in Indonesia, the study found a 40 percent absenteeism rate among medical workers (Chaudhury et al. 2006). Absenteeism rates tended to be higher for doctors than other types of health workers. Clearly, there is a need to reevaluate incentives and governance issues related to delivery of health services given that—in "real" terms—expenditure outlays may not be translating effectively into human resource inputs in the health system in Indonesia.

Conclusions and Next Steps

Indonesia is at a critical crossroads in its quest for universal health insurance coverage for its population. Achieving universal coverage has proven to be a formidable challenge even for high-income countries. Not surprisingly, few developing countries have successfully achieved universal coverage with good health outcomes and high levels of financial protection, and have been able to complete and sustain their reforms. Even those that have, such as Thailand, are continually challenged by cost pressures from the demographic, epidemiological, and nutrition transitions; costly new medical technologies; the inherent market failures in health and insurance systems; and insatiable demand from their populations.

This book attempts to provide substantive guidance to the government of Indonesia on how it might proceed with its universal health insurance coverage reform. The report examines the demographic, epidemiological, socioeconomic, geographical, and political realities in Indonesia; the strengths and weaknesses of

the current Indonesian health system and health insurance programs; the global evidence base on "good practice" in health financing reform; and Indonesia's future macroeconomic realities. It attempts to build on the large Indonesia-specific health literature and provide just-in-time advice on key reform parameters and options for consideration by the government and the Social Security Council. Its focus is on (i) analytical work through new data collection and analyses and through summarizing previous Indonesian and global experiences and (ii) providing options for consideration by the political decision makers who are facing major policy issues and information needs in specifying both the configuration of the final universal coverage (UC) system and the transition steps to get there. This chapter summarizes some global conventional wisdom and raises some of the important issues that need to be comprehensively addressed as the reform process moves forward.

Wisdom from Global Health Financing Reform Efforts

A number of insights have evolved from other countries' reform "successes" and "failures" that are germane to Indonesia:

- It is much easier to expand coverage and benefits than to reduce them.
- When a uniform universal program is created from several existing programs, the benefits package generally ends up being that of the most generous program.
- Major expansions of coverage should not be undertaken from an inefficient base system.
- It is very difficult to finance a reform in the short term through efficiency gains.
- Demand-side measures are important but, from an individual's perspective, cost is often irrelevant when it comes to health; thus, physicians generally determine demand.
- Supply-side (regulatory and reimbursement) measures are absolutely critical for controlling costs in any pluralistic system.
- Substantial market failures in health care limit the inherent efficiencies underlying competition, either among insurers or providers, requiring complex regulatory mechanisms.
- Major reforms in delivery arrangements and medical practice take time, particularly if large numbers of physicians and new types of physician specialists need to be trained.
- Governments need to consider both private financing and private delivery, given the potential for self-referral by public providers, the ability for private insurers and providers to transfer the poorest health risks onto the public system, and the opportunity costs of inefficient private sector investments (the "medical arms race") that can result in lost growth and employment.

- Rationalization of the health delivery system needs to be an implicit or explicit aspect of coverage expansion and of regulatory, quality assurance, and payment mechanisms (IMF 2007).

Every one of these issues is relevant to Indonesia, which faces a highly fragmented health insurance system, serious supply-side inefficiencies and constraints, a pluralistic delivery system, and extensive benefits packages that differ across programs. While the focus of this book has been on health financing, the plethora of other public health and health systems issues must also be addressed in Indonesia's reform approach. The government should, through its ongoing policy processes and the development of its next five-year development plan, ensure a coordinated focus on the full range of health reform issues and carefully coordinate the work of the Social Security Council with the health policy processes of other public agencies at all levels of government.

The Way Forward

Indonesia has established the broad legislative base for moving forward to UC, and the Social Security Council has been focusing on specific implementation issues. In fact, Law 40/2004 requires that a Law on Social Security Administering Bodies and implementing regulations of the Social Security Law be drafted and ratified by October 18, 2009. In particular, the Coordinating Ministry of Social Welfare has devoted substantial efforts to develop draft laws in a number of critical reform areas including the following:

- Draft Law for the Social Security Administering Bodies (Carriers), which clarifies roles and functions of existing social security carriers and is the legal basis for those organizations to operate under the social security reform
- Draft Government Regulation for Social Security Beneficiaries, which focuses on identification of beneficiaries, targeting mechanisms, eligibility criteria, and beneficiary registration, as well as premiums and contributions
- Draft Concept for Presidential Regulation for the National Health Insurance Program, which addresses beneficiary coverage issues, including the BBP and uncovered formal and informal sector workers; premium setting; and contribution levels and shares among employees, employers, and levels of government.

These efforts, the details of which are displayed on the Coordinating Ministry of Social Welfare Web site, all are addressing, at various levels of detail, many of the

[1] See, for example, Coordinating Ministry of Social Welfare, Draft Concept of the Presidential Regulation for the National Health Protection Program, Early Discussion 2007 - 2008, Compilation of Papers Deputy of Social Protection and Community Settlement in collaboration with GTZ-GVG SHI, Jakarta, November 2008.

key issues raised in chapter 5.[1] While they represent a serious effort to move the health insurance reform forward, there is still a great deal of work that needs to be undertaken in an integrated and appropriately sequenced manner. This includes further development of policy details in many critical areas and analytical studies of program and administrative costs, health outcomes, financial protection, equity, efficiency, and sustainability impacts of alternative policy options. Further work is also needed to refine the ultimate vision, as well as the transition steps and timing.

In addition, a number of studies undertaken by the government, donors, and other stakeholders provide relevant contributions for decision making as the government proceeds with the development and implementation of the reform. While all these efforts are useful for planting individual trees in the complex forest of health care reform, what has not been evident to date is the final configuration for populating the forest and the road map for planting the trees to eventually get there. In short, the government needs to decide on the final national health insurance system that it has in mind, then carefully lay out the transition steps.

In developing such major policies, Indonesia, like most other countries, lacks critical information—about policy design, implementation details, and data—needed for informed decision making. In addition, big picture policy choices on the ultimate national health insurance system and transition steps can only be made in tandem with specific policy choices on more micro issues, such as the groups eligible for coverage by each program, targeting mechanisms, contribution requirements (for individuals, firms, and governments), provider payment mechanisms and levels, and the future macroeconomic environment. Rational policy choices need to be based on both the quantitative and qualitative impacts of such policies on, among other things, health outcomes, financial protection, consumer responsiveness, access, equity, efficiency, costs (public and private), and macroeconomic sustainability.

Based on global experience, the following critical policy issues should form the framework for the implementation of universal coverage:

1. Further development is needed on such data for decision making as National Health Accounts updates; insurance claims information; and cost, equity, and benefit incidence analyses to evaluate policy options. It is crucial to give high priority to developing the actuarial baselines of the current and proposed future health insurance programs and getting better estimates of the behavioral responses of both consumers and suppliers to changes in insurance coverage. Included in these analyses should be assessments of the current Basic Benefits Packages (BBPs) as well as the proposal of the Social Security Council, as measured by both cost-effectiveness and financial protection against excessive out-of-pocket spending, to enable rational choices of the BBP(s) under the national health insurance reform.

2. The initial assessments of supply-side constraints on both human resources and physical infrastructure highlighted a number of important areas where inefficiencies need to be addressed as well as areas that will come under more pressure given the underlying demographic, nutritional, and epidemiological realities.
3. Building on the pharmaceutical sector assessment and the initial identification of potential opportunities in expanding mandatory health insurance, the government is encouraged to further evaluate pharmaceutical sector policies and needed changes to aid implementation of the national health insurance reform.
4. The ongoing decentralization and health insurance reforms necessitate clarifying the residual roles of the Ministry of Health (MoH) with respect to public health and its remaining stewardship and financing functions with respect to the public insurance system. Within its broader stewardship role, assessing the effects of policies in other sectors (such as water and education) on health must also be a high priority, as is assessing the need for additional demand-side policies such as conditional cash transfers.
5. Once decisions about financing options have been made under the road map to universal health insurance coverage, it is essential to develop, experiment with, and evaluate the impacts of alternative provider payment mechanisms on costs, quality, and access.
6. The range of necessary administrative structures to implement the reform needs to be further developed, including assessing administrative costs and developing systems to ensure quality, measure efficiency, and evaluate the reform's impacts.
7. The rich local experiences in providing health insurance coverage should be carefully assessed because these natural experiments are an important source of information for the national-level health insurance reform effort.
8. Attaining universal health insurance coverage is highly likely to require large increases in government expenditures, no matter which option is chosen. Thus, continuing attention to evaluating Indonesia's future macro situation, including competing priorities in light of the current global financial and economic crises, is important, as is assessing the need for changes in the current intergovernmental fiscal structure.

The Five-Year *Rencana Pembangunan Jangka Menengah* (Medium-Term Development Plan), or RPJM, and the Social Security Council process should be structured to address these and other related issues. To tackle these numerous issues, Indonesia (as other countries have done) may need to establish additional specific working groups to address these different topical areas with the Council providing overall management of the whole set of issues, including coordination across government agencies, dealing with the interaction effects across policies and costing issues, and managing partner stakeholders such as donors and the private sector. By way of example, President Clinton's Health Reform Task Force was

composed of 24 different working groups, each group dealing with one health reform area (for example, financing, Basic Benefits Packages, malpractice insurance, health workforce, mental health, cost containment). To date, although as discussed above the Council has completed important basic institutional studies, this comprehensive approach, along with much of the needed technical input (internal and external), has been lacking.

Conclusion

Indonesia is one of the few developing countries to pass legislation and begin phasing in UC, first by covering all the poor and near poor. While the government is strongly commended for its pro-poor and human development policy focus, successful implementation of the UC reform will require carefully sequenced implementation of targeted, effective, and fiscally sound policies. To date, this has not been the case, in part because of the lack of underlying data, but also because a carefully sequenced comprehensive set of policies that go well beyond an expansion of health insurance coverage for the poor need to be developed.

The Council and the MoH have taken important first steps. The RPJM; the MoH's own internal planning efforts in developing the next *Rencana Strategi* (Strategic Plan), or *Renstra*; and the potentially large and possibly unaffordable (in the short-run because of the current global economic crisis) expenditure implications of expanding health insurance to some 76 million poor and near poor, make this an ideal time to refocus efforts on the comprehensive set of policies needed to effectively implement the UC reform.

With new data becoming available (insurance claims information based on actual utilization from existing carriers), the availability of both internal and external technical support, and the development of the new RPJM, this would be an ideal time to adjust the health reform process. Given the current economic crisis and the upcoming presidential election, much of this analysis could be initiated now with some completed for use by the incoming administration. Other more complex issues, such as the development, testing, and implementation of new provider payment systems, are long-term endeavors and should be initiated as soon as feasible, possibly in conjunction with local experiments as pilot projects.

Probit Analysis of Demand Inducement from Insurance Coverage and Socioeconomic Changes

The work in this appendix is based on the 2007 *Susenas* survey of 285,000 households. It analyzes the differences in inpatient and outpatient utilization rates by socioeconomic characteristics (for example, age, income, urban-rural residence) and insurance coverage status. The probit analysis provides crude estimates of the likely behavioral-demand response on utilization that would result from increased insurance coverage and changing socioeconomic conditions in Indonesia.

Empirical evidence, as well as basic economics, suggests that utilization rates would probably be higher among those who are insured than among those who are not. Analysis of *Susenas* data from 2007 provides some support for this insurance-inducement effect on utilization rates. As table 1A.1 shows, outpatient utilization rates in the month preceding the survey for those who had any insurance averaged 17.3 percent, compared with 12.4 percent for those who had no insurance. The inducement was even higher for those covered by *Jamkesmas*, who reported outpatient utilization rates of around 18.2 percent. Similar patterns were observed for inpatient utilization rates, with those having insurance reporting more than double the utilization rates of those without insurance.

Table 1A.1 Utilization Rates by Insurance Status

Age category	Outpatient utilization, past month (percent)			Outpatient visits, past month			Inpatient utilization, past year (percent)			Average length of stay per admission, past year (days)		
	No insurance	Any insurance	*Jamkesmas*	No insurance	Any insurance	*Jamkesmas*	No insurance	Any insurance	*Jamkesmas*	No insurance	Any insurance	*Jamkesmas*
0–4	22.9	28.5	29.4	1.5	1.5	1.6	2.3	5.0	4.2	4.9	6.3	6.5
5–9	11.9	16.0	16.2	1.5	1.5	1.5	0.9	2.1	1.8	6.1	6.1	7.1
10–14	7.3	10.7	11.2	1.5	1.5	1.6	0.7	1.8	1.6	5.1	6.7	6.4
15–19	5.8	8.4	8.7	1.6	1.6	1.6	0.9	2.0	1.9	5.9	7.8	8.5
20–24	6.9	10.4	10.9	1.6	1.6	1.7	1.5	3.4	3.0	4.7	8.1	8.0
25–29	8.1	12.2	13.0	1.6	1.6	1.6	1.6	3.6	3.0	5.1	7.1	7.1
30–34	9.4	13.6	14.8	1.6	1.6	1.8	1.5	3.8	3.1	5.3	6.0	6.9
35–39	11.0	15.2	16.3	1.7	1.7	1.8	1.4	3.3	3.1	5.4	7.5	7.8
40–44	12.6	16.6	17.8	1.7	1.7	1.8	1.2	3.0	2.8	8.0	8.1	8.3
45–49	14.2	18.8	21.3	1.8	1.9	1.9	1.4	3.8	3.8	7.9	9.3	8.7
50–54	16.1	21.6	23.4	1.8	1.8	1.8	1.8	4.1	3.7	8.0	8.7	8.3
55–59	17.6	24.6	25.3	1.8	1.9	1.9	2.1	4.7	3.9	6.4	11.0	12.7
60–64	20.6	27.0	27.0	1.9	2.0	2.1	2.4	4.9	4.1	7.5	8.3	8.4
65–69	22.3	30.6	29.2	1.8	1.9	1.9	2.7	5.9	4.8	6.7	11.6	11.4
70–74	25.1	34.2	33.4	1.9	2.0	2.0	2.8	6.0	4.5	9.2	10.5	11.0
75+	24.9	34.4	32.6	1.9	2.1	2.1	3.3	6.8	5.9	8.0	9.0	8.0
Total	**12.4**	**17.3**	**18.2**	**1.7**	**1.7**	**1.8**	**1.5**	**3.5**	**3.1**	**6.1**	**8.0**	**8.2**

Source: Susenas 2007.

Clearly, the utilization pattern differences reported in table 1A.1 are not all due to insurance inducement alone, especially if the characteristics of the people who did and did not have insurance were significantly different. It could be that those with insurance tended to have poorer health status (or were relatively better-off formal sector employees and civil servants). Or differences in the age, education, and income profiles of those with and without insurance might explain some of the differences in utilization rates across the different insurance coverage subgroups. One way to separate these effects is to measure the impact of insurance coverage on utilization, controlling for some of these other determinants, such as education, income, rural-urban residence, and age. The results of this exercise are reported in table 1A.2.

By taking other determinants into account, the basic pattern of differences in utilization rates observed in table 1A.1 remain but the magnitudes are different, and there are differences related to the type of insurance coverage (for example, *Jamkesmas* vs. *Askes/Jamsostek* vs. other insurance). Controlling for other determinants, those who had *any* insurance had outpatient utilization rates in the previous month that were 4.7 percent higher than those who had no insurance. Those with *Jamkesmas* had outpatient utilization rates about 2.5 percent higher than those without insurance. Similarly, inpatient utilization rates in the previous year were about 1.6 percent higher for those with any insurance, whereas for those with *Jamkesmas* coverage, the inpatient utilization rates were about 1.0 percent higher.

By relying, in part, on these estimates, Walker (2008) projects the following increases in utilization resulting from both demographic and insurance coverage effects, assuming the entire uninsured population is covered by *Jamkesmas* by 2015:

- Outpatient: 33.4 percent increase from demographics alone, 79.4 percent increase from demographic changes together with insurance inducement.
- Inpatient: 30.4 percent increase from demographics alone, 133.9 percent from demographic changes together with insurance inducement.

Table 1A.2 Probit Analysis of Utilization Differentials by Insurance Status and Socioeconomic Factors

Insurance status	Outpatient utilization (past month)		Inpatient utilization (past year)	
	Model I	Model II	Model I	Model II
Insurance coverage (Base = no insurance)				
Any insurance	0.047**(0.001)		0.016**(0.000)	
Askes/Jamsostek		0.061**(0.001)		0.021**(0.000)
Jamkesmas		0.025**(0.002)		0.010**(0.000)
Other insurance		0.041**(0.002)		0.018**(0.001)
Age category (Base = 0–4 years)				
5–9 years	-0.081**(0.001)	-0.081**(0.002)	-0.014**(0.000)	-0.014**(0.000)
10–14 year	-0.102**(0.002)	-0.102**(0.001)	-0.015**(0.000)	-0.015**(0.000)
15–19 years	-0.107**(0.001)	-0.108**(0.001)	-0.015**(0.000)	-0.015**(0.000)
20–24 years	-0.099**(0.001)	-0.100**(0.001)	-0.012**(0.000)	-0.012**(0.000)
25–29 years	-0.092**(0.001)	-0.093**(0.001)	-0.011**(0.001)	-0.011**(0.0004)
30–34 years	-0.084**(0.002)	-0.086**(0.001)	-0.011**(0.000)	-0.011**(0.0004)
35–39 years	-0.076**(0.002)	-0.077**(0.002)	-0.012**(0.000)	-0.012**(0.000)
40–44 years	-0.069**(0.002)	-0.070**(0.002)	-0.012**(0.000)	-0.012**(0.000)
45–49 years	-0.061**(0.002)	-0.062**(0.002)	-0.011**(0.000)	-0.011**(0.000)
50–54 years	-0.051**(0.002)	-0.051**(0..002)	-0.009**(0.001)	-0.009**(0.000)
55–59 years	-0.041**(0.002)	-0.041**(0.002)	-0.008**(0.001)	-0.008**(0.001)
60–64 years	-0.027**(0.003)	-0.027**(0.003)	-0.006**(0.001)	-0.006**(0.001)
65–69 years	-0.015**(0.003)	-0.015**(0.003)	-0.004**(0.001)	-0.004**(0.001)
70–74 years	0.002**(0.004)	0.001**(0.004)	-0.003**(0.001)	-0.003**(0.001)
75+ years	--	0.001**(0.004)	--	--
Urban (Base = rural)	-0.014**(0.001)	-0.013**(0.001)	0.001**(0.000)	0.001**(0.003)
Education				
Years of schooling	-0.003**(0.000)	-0.002**(0.000)	0.0001**(0.000)	0.0003**(0.000)
Males (Base = females)	-0.004**(0.000)	-0.004**(0.001)	-0.003**(0.000)	-0.004**(0.0003)
Economic status (Base = poorest quintile)				
Second quintile	0.023**(0.001)	0.024**(0.001)	0.005**(0.000)	0.006**(0.000)
Third quintile	0.043**(0.002)	0.045**(0.002)	0.012**(0.000)	0.013**(0.000)
Fourth quintile	0.059**(0.002)	0.063**(0.002)	0.017**(0.000)	0.018**(0.001)
Richest quintile	0.065**(0.002)	0.072**(0.002)	0.023**(0.000)	0.024**(0.001)
Pseudo R-squared	0.04	0.04	0.05	0.05
N	1,050,792	1,050,792	1,050,792	1,050,792

Source: *Susenas* 2007.
Note: — = No data available. Standard error in parentheses.
** = significant at the 10 percent level.

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