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RAPID ANALYTICAL REVIEW AND ASSESSMENT OF HEALTH SYSTEMS OPPORTUNITIES AND GAPS IN INDONESIA

December 2015
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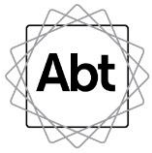

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RAPID ANALYTICAL REVIEW AND ASSESSMENT OF HEALTH SYSTEMS OPPORTUNITIES AND GAPS IN INDONESIA

CONTENTS

List of Tables

List of Figures

ACRONYMS

AIPHSS	Australia Indonesia Partnership for Health Systems Strengthening
APINDO	Employers Association of Indonesia (*Asosiasi Pengusaha Indonesia*)
ARV	Antiretroviral drug
BEmONC	Basic Emergency Obstetric and Neonatal Care
BKKBN	National Family Planning Coordinating Board
BLSM	Unconditional Cash Transfers (*Bantuan Langsung Sementara Masyarakat*)
BPJS-K	Social Security Agency for Health (*Badan Penyelenggara Jaminan Sosial-Kesehatan*)
BPS	Statistics Indonesia (*Badan Pusat Statistik*)
BSM	Cash transfer program for poor students (*Bantuan Siswa Miskin*)
BOK	Ministry of Health assistance fund for operational costs at health center level (*Bantuan Operasional Kesehatan*)
BPOM	National Agency for Drugs and Food Control (*Badan Pengawasan Obat dan Makanan*)
BUK	Ministry of Health, Directorate of Health Services (*Bina Upaya Kesehatan*)
BUKD	Ministry of Health, Directorate of Primary Health Services (*Bina Upaya Kesehatan Dasar*)
CEmONC	Comprehensive Emergency Obstetric and Neonatal Care
CRVS	Civil Registration and Vital Statistics
CSO	Civil Society Organizations
DAK	Special Allocation Funds (*Dana Alokasi Khusus*)
DALY	Disability-adjusted Life Years
DFAT	Department of Foreign Affairs and Trade (Australia)
DHIS	District Health Information System
DHO	District Health Office (*Dinas Kesehatan Kabupaten/Kota*)
DHS	Demographic and Health Survey
DJSN	National Social Security Council (*Dewan Jaminan Sosial Nasional*)
DPHO	List of drug items and prices (*Daftar dan Plafon Harga Obat*)
EMAS	Expanding Maternal and Neonatal Survival project
FP/RH	Family Planning/Reproductive Health
GFATM	Global Fund to Fight AIDS, Tuberculosis and Malaria
GMP	Good Manufacturing Practice
GONGO	Government-owned Non-governmental Organizations
GOI	Government of Indonesia
GP	General Practitioner
HIS	Health Information System

HMIS	Health Management Information System
HRH	Human Resources for Health
IBI	Indonesian Association of Midwives (*Ikatan Bidan Indoneisa*)
IDI	Indonesian Association of Physicians (*Ikatan Dokter Indonesia*)
IFLS	Indonesian Family Life Survey (*Survei Kesejahteraan Rumah Tangga*)
INA-CBGs	Indonesia Case-Based Groups provider payment system
ISFI	Indonesian Pharmacists Association (*Ikatan Sarjana Farmasi Indonesia*)
IT	Information Technology
JKN	National Health Insurance (*Jaminan Kesehatan Nasional*)
KARS	Hospital Accreditation Committee
KIP	Smart Indonesia Card (*Kartu Indonesia Pintar*)
KIS	Healthy Indonesia Card (*Kartu Indonesia Sehat*)
KKI	Indonesian Medical Council
KKS	Prosperous Family Card (*Kartu Keluarga Sejahtera*)
KPS	Social Protection Card (*Kartu Perlindungan Sosial*)
KTP	Identity Card (*Kartu Tanda Penduduk*)
LG	Local Government (*Pemerintah Daerah*)
LKPP	National Public Procurement Agency (*Lembaga Kebijakan Pengadaan Barang/ Jasa*)
M&E	Monitoring and Evaluation
MCH	Maternal and Child Health
MDG	Millennium Development Goals
MMR	Maternal Mortality Ratio
MNCH	Maternal, Newborn and Child Health
MOE	Ministry of Education (*Kementerian Pendidikan*)
MOF	Ministry of Finance (*Kementerian Keuangan*)
MOH	Ministry of Health (*Kementerian Kesehatan*)
MOHA	Ministry of Home Affairs (*Kementerian Dalam Negeri*)
MOSA	Ministry of Social Affairs (*Kementerian Sosial*)
MSS	Minimum Service Standards (*Standar Pelayanan Minimal*)
MTSP	Medium-Term Strategic Plan
NCD	Non-communicable Disease
NGO	Non-governmental Organization
NHA	National Health Accounts
NIK	Unique Identification Numbers (*Nomor Induk Kependudukan*)
OJK	Financial Services Authority (*Otoritas Jasa Keuangan*)
PBI	JKN Subsidized Premium Beneficiaries (*Penerima Bantuan Iuran*)
PERSI	Indonesian Hospital Association (*Persatuan Rumah Sakit se-Indonesia*)
PHO	Provincial Health Office (*Dinas Kesehatan Propinsi*)

PMT	Proxy Means Test
PNPM	National Community Empowerment Program (*Program Nasional Pemberdayaan Masyarakat*)
PPJK	Ministry of Health, Center for Health Financing and Insurance (*Pusat Pembiayaan Jaminan Kesehatan)*
PPLS 11	Data Collection for Social Protection Programs 2011 (*Pendataan Program Perlindungan Sosial*)
PTT	Short-term Service program (*Pegawai Tidak Tetap*)
RHIS	Routine Health Information System
RPJMN	National Medium-Term Development Plan (*Rencana Pembangunan Jangka Menengah Nasional*)
SIAK	Population Administration Information System (*Sistem Informasi Administrasi Kependudukan*)
SIKDA	District Health Information System
SIMRS	Hospital Management Information System
SRS	Sample Registration Service
TA	Technical Assistance
TB	Tuberculosis
TNP2K	National Team for the Acceleration of Poverty Reduction (*Tim Nasional Percepatan Penanngulangan Kemiskinan*)
UHC	Universal Health Coverage
USAID	United States Agency for International Development
VPN	Virtual Private Network
WDI	World Development Indicators
WHO	World Health Organization

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EXECUTIVE SUMMARY

Introduction

In January 2014, Indonesia launched an ambitious national health insurance program (*Jaminan Kesehatan Nasional*, or JKN for short), the cornerstone of its commitment to achieve universal health coverage (UHC) by 2019. Against this background of rapid and transformational change, the United States Agency for International Development (USAID) is collaborating with the Government of Indonesia (GOI) to promote sustainable financing for service delivery, health systems strengthening, and robust private sector engagement.

To inform this collaboration, USAID commissioned the Health Finance and Governance (HFG) project to conduct a rapid analytic review and assessment of Indonesia's health system opportunities and gaps. The review provided an opportunity for government, private sector, and development partner stakeholders to weigh in on the nation's highest-priority health sector challenges as Indonesia embarks on numerous systems reforms.

Methods

HFG conducted the assessment between April and July 2015. The team adapted the methodology of the comprehensive *Health System Assessment Approach*, which is organized around the World Health Organization's (WHO's) health systems building blocks and has been applied in 29 countries. The assessment particularly focused on the governance, health financing, service delivery, and information systems building blocks, and incorporated a special focus on social protection programs and efforts to target the poor and vulnerable. HFG conducted a comprehensive literature review (see Annex A) and interviewed over 150 informants representing more than 65 institutions (Annex B) at the national and sub-national levels. Respondents included representatives from national ministries, other central government institutions, provincial and district health officials, public and private health facility managers at various levels, leading academics, international development partners, private sector associations, non-governmental organizations, USAID project staff, and USAID representatives. Draft results were presented to USAID and Indonesian government stakeholders, and their feedback incorporated.

Key findings and recommendations from each component of the assessment are summarized below.

Governance

The central feature of Indonesia's health governance landscape is the decentralized nature of the overall government and the corresponding health system. The functions and roles of the national and sub-national institutions governing the health sector, while relatively well defined in policy, are evolving in practice; there is some overlap in responsibilities and varying capacity to fulfill new or enhanced roles. (See Annex C: Key Laws, Regulations and Plans Impacting the Health Sector.) While decentralization offers opportunity for sub-national governments to be more responsive to the needs of their populations, it also poses capacity challenges as greater levels of responsibility are being placed at the district and provincial levels.

The Ministry of Health (MOH) has the mandate to provide technical oversight, leadership, and a monitoring and evaluation function for health care in the public and private sectors. At the same time, with the roll-out of JKN, the role of the Social Security Agency for Health (BPJS-K) as a health care payer is growing. It is now engaged in significant health information system and quality oversight functions along with the MOH. Current

health governance challenges include overly complex policy and operational systems and processes; the pace of devolution outstripping government capacities to leverage existing laws, resources, and assets to meet increasing service demand; weak systems of accountability and coordination throughout the health system, including among national institutions; and inadequate links among government, the private health sector, and civil society.

Key recommendations:

- Rationalize the institutional oversight of BPJS-K, such that each oversight institution (Ministry of Finance, Financial Services Authority (OJK), National Social Security Council (DJSN), and MOH) has clear roles and responsibilities according to their technical strengths and as dictated by law.
- Strengthen health sector managers' capacity at both the national and sub-national levels to reflect new roles and responsibilities in implementing JKN and other recent laws (such as the new decentralization Law 23/2014 and the Village Law).
    - Reinforce MOH technical leadership around its core functions, and facilitate stronger intra-and inter-institutional relationships including data sharing and coordination.
    - Consider establishing regional hubs of learning and information sharing to address leadership and management development needs among provincial health offices (PHOs) and district health offices (DHOs).
    - Strengthen the capacity of PHOs as the MOH's agents at the regional level, and establish performance incentives for good health sector management practices at the sub-national levels, including data collection, reporting, analysis, and use.
- As Village Law is implemented, transfer and apply the learnings from prior PNPM National Community Empowerment programs (see Social Protection chapter), which have shown that community engagement, providing a menu of priority activities, guiding the prioritization process, and supporting increased transparency in spending and results, can increase health service utilization.

Health Financing

The launch of JKN in 2014 has begun to transform Indonesia's health financing landscape. JKN offers the potential for improved financial protection and access to care for the population, and the potential to improve quality and achieve better health outcomes through the new provider payment system. Nearly 90 million poor and vulnerable Indonesians now have access to fully subsidized health insurance coverage.

Indonesia spent $112 per capita on health as of 2012. This represented 3.1 percent of its GDP – lower than what most of Indonesia's neighbors were allocating to health. The government has substantially increased its health spending over the past decade, accounting for 40 percent of total health spending by 2013, and it is politically committed to expanding funding further as part of the effort to achieve universal health coverage. Data indicating whether reliance on out-of-pocket spending by households has decreased under JKN are not yet available; out-of-pocket spending represented nearly 45 percent of total health expenditure in 2013, according to preliminary National Health Accounts (NHA) estimates.

Right now, supply-side limitations mean that residents in rural and remote areas have less access to JKN benefits than those in urban areas. Financing for health is highly fragmented, making strategic resource management difficult; priorities for resource allocation are not always aligned between central and sub-national levels. There are concerns about financial sustainability of the health insurance program; it is facing challenges with adverse selection, problems with the hospital provider payment system, and weak voluntary enrollment. Voluntary premium-based financing is unlikely to achieve universal coverage for the 100 million individuals in Indonesia's informal sector, at least in the short term. However, the single-payer model

provides a historical opportunity for strategic purchasing that could improve the quality and efficiency of service delivery, especially if Indonesia incorporates performance-based financing approaches.

Key recommendations:

- Develop targeted strategies for covering the non-poor informal sector under JKN in the near term.
    - Consider using earmarked taxes on tobacco and energy to expand the proportion of the population eligible for subsidized or free coverage.
    - Use market segmentation and develop targeted marketing strategies for encouraging and facilitating JKN enrollment among key population sub-groups.
    - Use decentralization transfers to incentivize district governments to enroll beneficiaries.
    - Use innovative approaches to automatically and conveniently capture premium payments from the informal sector.
- Promote strategic purchasing, including performance-based payments.
    - Make DAK decentralization transfers to districts partly conditional on district health performance, like improvements in quality indicators. Incorporate a performance element into capitation payments to puskesmas ("conditional capitation").
    - Link health worker bonuses to demonstrable behaviors, such as routine adherence to specific quality protocols, rather than years of service or education.
- Support needed fixes to JKN provider payment systems (capitation rates and Indonesian Case-based Groups (INA-CBGs)).
- Improve financial management capacity at district, provincial, and health facility level.
- Institutionalize health resource tracking (NHA).

Service Delivery in the Public and Private Sectors

Indonesia has made extensive progress to improve health outcomes in the past several decades. In response to growing demand for health services and to continue to improve health outcomes, investments in health service delivery infrastructure have increased substantially, both in the public and private sectors. Private providers play an important and increasingly significant role, accounting for two-thirds of outpatient visits, providing nearly three-quarters of modern contraceptive methods, and attending nearly half of all institutional deliveries. The new decentralization law (Law 23/2014), intended to clarify district-, provincial-, and central-level government responsibilities, together with the updated Minimum Service Standards, provide a new foundation for strengthening and enforcing district-level responsibility for the health sector.

To continue to realize health improvements, Indonesia must also address pressing challenges. Variable quality of care, lack of skills (particularly among midwives), and constraints in quantity and distribution of health workers (physicians in particular) affect facility service readiness, with remote areas bearing the most negative impacts. Midwives attend 62 percent of deliveries in Indonesia, and adequate numbers and skills of midwives and physicians are critical to ensuring 24-hour access to emergency obstetric services. These challenges must be addressed if Indonesia is to successfully reduce its maternal mortality ratio. Efforts to improve the capacity of DHOs to manage the health sector and to ensure than JKN/BPJS policies incentivize quality improvement can also support maternal health improvements.

Key recommendations:

- Engage the Ministry of Home Affairs, district governments, and DHOs to improve collaboration and communication around health sector regulations and quality standards.
- Strengthen technical support to district governments for health planning, budgeting, and management.
- Work with BPJS-K to support improvements in quality and access, leveraging the private sector, including:
    - Strengthen BPJS-K credentialing process for health facilities, so that it is more than administrative documentation and incentivizes quality improvements.
    - Promote performance-based payments, as described in the health financing section
    - Expand contracting with private providers to extend access; offer reimbursement rates that motivate participation in JKN.
    - Work with DHOs and health facilities to encourage use of BPJS-K payments in ways that improve services.

Human Resources for Health[1]

Adequate numbers, geographic distribution, and mix of specializations and skills among health workers in both the private and public sectors are essential to providing good health services. Indonesia faces several opportunities and challenges with regard to ensuring the right mix and numbers of health workers. Most provinces do not currently have the WHO-recommended ratio of health workers to population. A recent increase in the number of medical and nursing schools will help address this shortfall, but hundreds of thousands of health care providers must be trained in the coming years in order for UHC to be achieved by 2019. Programs such as *Nusantara Sehat* (which posts teams of five to eight doctors and midwives to remote areas for two-year assignments) are aiming to address the overconcentration of health workers in urban areas.

While the increase in medical schools is helping to increase numbers of providers, there is concern about the training they are providing, as only about 50 percent are currently accredited. To address this, the Ministry of Education has introduced a competency exam for nurses, midwives, and physicians, though pass rates are still low. The plethora of institutions responsible for overseeing and managing health care providers (education, licensure, placement, supervision, continuing education) complicates health workforce governance. The magnitude of the health workforce expansion needed to achieve UHC, coupled with the changing disease profile of the country, require careful and strategic health workforce planning and investment.

The National Ministry of Development Planning (*Kementerian* PPN) laid out six health workforce recommendations in its Health Sector Review in 2014. These included: conducting a market analysis to understand health workforce gaps; developing short term solutions to address shortages; assessing existing health workforce distribution programs; ensuring that the dual practice system aligns with national health priorities; investing in quality improvements in medical education, and conducting studies on health worker efficacy to allocate resources more strategically.

[1] The Human Resources for Health building block and the Medical Products, Vaccines and Technologies building block were not the primary focus of this analysis and were only assessed via literature review.

Medical Products, Vaccines and Technologies

Indonesia is developing an internally sustainable pharmaceutical supply, working toward self-reliance in both ingredient procurement and manufacturing; its diverse manufacturing base is capable of supplying a large number of different drugs and vaccines. Medical devices are still largely imported, as are second-line drugs for tuberculosis and HIV, which are funded by external development partners. The National Agency for Drug and Food Control (BPOM) and the MOH's Directorate General of Pharmaceutical Services and Medical Devices are responsible for regulation of pharmaceutical standards and quality.

The MOH has recently implemented two important reforms to the pharmaceutical procurement system in Indonesia: establishing a National Formulary, and utilizing an "e-catalogue" to facilitate pooled public sector procurement of essential medicines from Indonesian manufacturers at centrally negotiated prices. These reforms are intended to promote cost-effective and transparent purchasing of essential drugs. Some concerns have been raised regarding the price ceilings for certain drugs in the e-catalogue system, and stock-outs of some essential drugs do occur. An "e-logistic" supply chain management information system has been developed by the MOH; it is being rolled out at the district level, although there have been some challenges with implementation and problems with Internet access. There is significant variation in access to essential medicines across districts because of variability in district budget allocations for medicines.

Recommendations from the literature:

- Continue to strengthen the e-catalogue procurement system, including reviewing prices for certain essential drugs and addressing problems with disincentives for distribution to remote areas.
- Strengthen implementation of the "e-logistic" supply chain management information system at the district level.
- Develop a cohesive strategy for addressing counterfeit and sub-standard products.

Social Protection and Targeting

Social protection figures high on Indonesia's political agenda. This review focused mainly on the approach to poverty targeting adopted by the five main nationwide social assistance programs:

- Health insurance for the poor and near poor, which is part of JKN
- Conditional cash transfers for the poorest families (PKH)
- Unconditional cash transfers (BLSM)
- Subsidized rice for the poor (Raskin)
- Cash transfers for poor students (BSM)

Central to Indonesia's efforts to increase the effectiveness of poverty reduction programs has been the creation of a Unified Database of individuals and households eligible for subsidies. Today, this database, which is managed by the National Team for the Acceleration of Poverty Reduction (TNP2K), contains identifying information on the poorest 40 percent of the population. It is used for poverty targeting by the five main social assistance programs, which has enhanced their targeting accuracy and made targeting more progressive.

There is still considerable room for further improving targeting accuracy. The biggest challenges are (i) to enumerate the right households for inclusion in the Unified Database, (ii) to make sure that modifications made to official lists of beneficiaries at the local level improve targeting outcomes, and (iii) to keep the information in the Database up-to-date.

Key recommendations:

- Support TNP2K in its efforts to make the Unified Database more dynamic, to develop a proper appeals system, and to ensure the Database accommodates the specific requirements of each social assistance program.
- Expand the adoption of unique identifiers and the use of biometric identification within JKN for all enrollees (not just subsidy-eligible members), not only to check patient eligibility but also to track utilization of health services provided by health facilities.
- Promote greater coherence among the different social assistance and intra-government transfer programs, in terms of the incentives they introduce at the various levels – individual, household, community, health provider, and local government – in order to better align the behaviors of the different actors with the priorities and goals of the health system.
- Expand the use of mobile money and explore additional applications in the context of JKN (for premium payment and provider reimbursements).

Health Information System

Indonesia is challenging terrain for effective health information systems (HIS) given its multitude of islands, decentralized governance structures, resource constraints, and incomplete network connectivity. Achieving UHC by 2019 will require a highly functional HIS, and this will necessitate improvements in data collection, reporting, analysis, and use.

In light of these challenges, the government has developed a strategic road map to strengthen the HIS. Key HIS components are already in place, including routine health facility reporting managed by the MOH and an epidemiological surveillance system. However, notable data quality issues exist in the routine HIS. These are due to insufficient skills and technological capacity for completing and compiling reports; numerous parallel reporting streams; lack of strong incentives for accurate reporting (to the MOH specifically); and weak data quality assurance. While there are abundant data flowing through the routine HIS, the lack of interoperability among multiple systems inhibits reporting and data analysis. Policies exist that mandate reporting by private health providers, but there is little enforcement and low participation.

Strong capacity exists for population-based surveys, which are regularly conducted. A Civil Registration and Vital Statistics (CRVS) system has been established but is not yet fully functioning. Key health indicators are reported online. Special studies are commissioned from local research institutions, and results are used for evidence-based strategic planning and monitoring at the national level, and to a lesser extent, at the sub-national and facility levels.

Key recommendations:

- Increase funding for HIS infrastructure investments. Promote the use of capitation funds for HIS strengthening.
- Invest in hiring and training HIS staff at the PHO and DHO levels, as well as hiring data analysts and data security experts at the national level.
- Develop a clearinghouse for information system innovations – with a focus on mHealth, social media, telemedicine, and other technological innovations for health surveillance and monitoring.
- Improve cooperation among national-level health sector institutions to promote data sharing and systems harmonization.

1. INTRODUCTION

Many changes have taken place in Indonesia since 2014. On October 22, 2014, President Joko Widodo (known as President Jokowi) began his five-year term as leader of the world's third largest democracy. His stated priorities include poverty reduction, education, and health. In January 2014, Indonesia launched an ambitious national health insurance program (*Jaminan Kesehatan Nasional*, or JKN for short) the cornerstone of Indonesia's commitment to achieve universal health coverage (UHC) by 2019. Funding for JKN will come from multiple sources, including funding from fuel subsidy cuts that will expand social programs including health (The Economist Jan 10 2015). With over 155 million registered users of social insurance, Indonesia now has one of the largest single payer social health insurance schemes in the world.

Against this background of rapid change and reforms, the United States Agency for International Development (USAID) is collaborating with the Government of Indonesia (GOI) to promote sustainable financing for service delivery, health systems strengthening, and robust private sector engagement. There are exciting opportunities for continued collaboration between USAID, GOI, academia, civil society, and the private sector in Indonesia.

To inform this collaboration and promote strategic investment, USAID commissioned the Health Finance and Governance (HFG) project to conduct a rapid review of Indonesia's health systems opportunities and gaps. The review provided an opportunity for national, provincial, district, private sector, and development partner stakeholders to weigh in on the nation's highest-priority health sector challenges as it embarks on numerous systems reforms. This report summarizes the process and results of the rapid review.

1.1 Objectives

HFG conducted this rapid analytical review and assessment of health system opportunities and gaps in Indonesia in mid-2015. The assessment team was asked to identify continuing challenges and highlight opportunities to strengthen Indonesia's health system using the World Health Organization's (WHO) health systems building blocks as a framework, with particular attention to governance, health financing, service delivery (including the role of the private health sector), and information systems. Special emphasis was given to Indonesia's decentralized governance structure. In addition, the review incorporated a special focus on current social protection programs and efforts to target the poor and vulnerable.

The report highlights opportunities around health systems strengthening activities and efforts to reach the poorest and most vulnerable. The purpose was not necessarily to uncover new issues or provide new evidence, given several recent health sector analyses (such as those commissioned by the GOI in 2014 as part of the Health Sector Review to inform its National Medium-Term Development Plan 2015-2019 (Kementerian PPN/Bappenas 2014)),[2] but rather to rapidly consolidate existing information and make strategic recommendations in the area of health system strengthening.

[2] Key chapters from the Health Sector Review cited in this report include: Human Resources for Health; Pharmaceutical Review and Medical Technology; Institutional Analysis Under Decentralization; Changing Demand for Health Services; Health Financing; and the Quality and Safety of Healthcare.

1.2 Methodology

To prepare this rapid assessment report, the HFG project team conducted a literature review, key informant interviews and focus groups, and validation with USAID and Indonesian government stakeholders between April and July 2015. The team adapted and simplified the methodology and key informant interview guides from the comprehensive *Health System Assessment Approach* (Health Systems 20/20 2012), which has been applied in 29 developing countries.

The first step of this assessment consisted of desk research. The team identified documents summarizing key data points about the Indonesian health system via Internet research, recommendations from local experts, and contacts at the Ministry of Health (MOH), USAID, and other key institutions (see Annex A for a list of the literature reviewed). The team organized a comprehensive online document repository to inform the literature review. Findings from this secondary review were compiled into a literature review matrix highlighting strengths, weaknesses, opportunities, and threats according to key health system building blocks. The matrix also identified in-country stakeholders to approach as potential key informants. The project team prepared a "zero draft" report, highlighting preliminary findings and key gaps in information that served to focus the in-country data collection. The team held multiple consultations with USAID to identify key informants at the national level, identify priority areas of interest, and select appropriate districts for site visits.

The in-country assessment team included three Indonesian experts and four international experts, each with expertise in one or more priority topics:

- Dr. Laurel Hatt, Team Lead and Health Financing Specialist
- Dr. Ufara Zuwasti, Health Systems Specialist
- Grace Chee, Service Delivery and Private Sector Specialist
- Lisa Tarantino, Governance and Health Information Systems Specialist
- Dr. Anis Fuad, Health Information Systems Specialist
- Dr. Renata Simatupang, Decentralization Specialist
- Dr. Alex Ergo, Social Protection and Targeting Specialist

The project team conducted interviews over a two-week period with respondents at the national level (in Jakarta), provincial level (West Java province), and district level (Kota Bandung, Kabupaten Bandung, and Kabupaten Indramayu – three districts where the USAID-funded Expanding Maternal and Neonatal Survival [EMAS] project was operating[3]). Interviewees included representatives from national ministries and other central government institutions, provincial and district health officials, public and private health facility managers at various levels, leading academics, international development partners, private sector associations, non-governmental organizations (NGOs), USAID project staff, and USAID representatives. The team interviewed more than 150 informants representing more than 65 institutions and held two focus group discussions with health workers in the two rural focus districts. A full listing of institutions contacted is included in Annex B.

[3] Kota Bandung is a densely populated urban district in West Java with 2.5 million residents; Kabupaten Bandung is an adjacent periurban and rural district of 3.4 million; and Kabupaten Indramayu is a largely rural district in West Java with 1.6 million residents.

2. INDONESIA OVERVIEW

2.1 General

Indonesia is an archipelago of more than 13,000 islands located in Southeast Asia. It shares land borders with Malaysia, Papua New Guinea, and Timor-Leste. With a population of more than 255 million (Statistics Indonesia 2015), it is the fourth most populous country in the world. Formerly a Dutch colony, Indonesia gained its independence in 1945.

Figure 1: Map of Indonesia

Source: Central Intelligence Agency 2015 (https://www.cia.gov/library/publications/the-world-factbook/geos/id.html)

Indonesia is a presidential republic, with the President serving both as the head of state and the head of government. Administratively, Indonesia has 34 provinces divided into districts and municipalities. The official language is Bahasa Indonesia; however, there are more than 700 languages spoken. The majority of the population (87.2 percent) is Muslim. Among more than 300 ethnic groups, the largest are the Javanese (40.1 percent), followed by the Sundanese (15.5 percent).

2.2 Demographic Information

According to the World Bank's World Development Indicators (WDI), 52 percent of Indonesia's population lives in urban areas (Table 1). Indonesia's population is growing at an annual rate of 1.2 percent, compared to a 0.7 percent regional average. More than 65 percent of the population is between the ages of 15 and 64. However, 29 percent of Indonesia's population is under the age of 15, compared to 21 percent for the region, making Indonesia younger than its regional neighbors.

Table 1: Selected Demographic Indicators in Indonesia, Compared with the East Asia & Pacific Developing Countries Average

Indicator	Source	Indonesia	East Asia & Pacific (LMIC* only)	Year of Data
Population growth (annual %)	WDI-2013	1.2	0.7	2013
Population ages 0-14 (% of total)	WDI-2013	28.9	21.0	2013
Population ages 15-64 (% of total)	WDI-2013	65.9	71.1	2013
Population ages 65 and above (% of total)	WDI-2013	5.2	7.9	2013
Rural population (% of total population)	WDI-2013	47.7	49.1	2013
Urban population (% of total)	WDI-2013	52.3	50.9	2013

*LMIC = Low- and Middle-Income Countries

2.3 Political and Macroeconomic Environment

The country has experienced strong economic growth since the end of the Asian financial crisis in the late 1990s and is the largest economy in Southeast Asia, as well as a member of the G-20. With a gross domestic product of US$3,475 per capita (WDI 2015, 2014 estimate), the World Bank categorizes Indonesia as a lower middle-income country. Its Human Development Index value is 0.684, and it ranks 108th for medium human development (UNDP 2013). Despite a net decrease in both the number and the proportion of poor people over the past five years, 28 million people still live in extreme poverty. Around 40 percent of the population (100 million people) is considered either poor or vulnerable (i.e., living on US$2 a day or less) (WDI 2015, 2014 estimate). Various factors, including corruption, terrorism, and natural disasters pose potential threats to the country's political and economic stability.

President Jokowi's "nine priorities agenda," or *Nawacita*, outlines a vision for improved governance, with a particular focus on the sub-national levels, and improved health and quality of life. The second, third, and fifth priorities, below, are directly relevant to the health sector:

- Second Priority. Develop clean, effective, trusted, and democratic governance: This calls for improved performance reporting, open access to information and public participation, improved public services, etc.
- Third Priority. Develop Indonesia's rural areas: This priority aims to improve public services at the sub-national level (villages, sub-districts, and districts) to increase regional allocations for public services, to implement the village law, etc.
- Fifth Priority. Improve the quality of life: This priority calls for increased public health services through the "Healthy Indonesia" program, in addition to the improved quality of education, increased social welfare, and land reform.

2.4 Health Status Indicators

2.4.1 Morbidity and Mortality Indicators

Indonesia's average life expectancy is about 71, lower than the average for developing countries in the East Asia & Pacific region (Table 2). Mortality rates among infants and children under five are higher than the regional averages, and the maternal mortality ratio (MMR) is more than twice the regional average.

Table 2: Selected Mortality Indicators in Indonesia, Compared with the East Asia & Pacific Developing Countries Average

Indicator	Source	Indonesia	East Asia & Pacific (LMIC only)	Year of Data
Life expectancy at birth, total (years)	WDI-2013	70.8	74.0	2013
Mortality rate, infant (per 1,000 live births)	WDI-2013	24.5	16.1	2013
Mortality rate, under-5 (per 1,000 live births)	WDI-2013	29.3	19.5	2013
Maternal mortality ratio (modeled estimate, per 100,000 live births)	WDI-2013	190.0	75.0	2013

Non-communicable diseases (NCDs), tuberculosis (TB), and injuries are the most common causes of death and disability in Indonesia. NCDs and injuries are sharply increasing as a result of a growing wealthier population and the increase of vehicles and industrial zones across the country. Pandemic diseases such as avian influenza are of growing concern. Cerebrovascular disease causes about 20 percent of deaths, while cancers and TB each cause about one-tenth of all deaths. Injuries (9 percent), mental and behavioral disorders (8 percent) and cerebrovascular disease (8 percent) are the leading causes of disability-adjusted life years (DALYs) lost. Table 3 lists the top ten causes of death and the top ten causes of excess DALYs lost in Indonesia, based on 2010 data. Significantly, very few causes of preventable maternal, neonatal, and child deaths are in this list, representing the immense progress Indonesia has made over the last 30 years.

Table 3: Top Ten Causes of Deaths and DALYs Lost in Indonesia in 2010

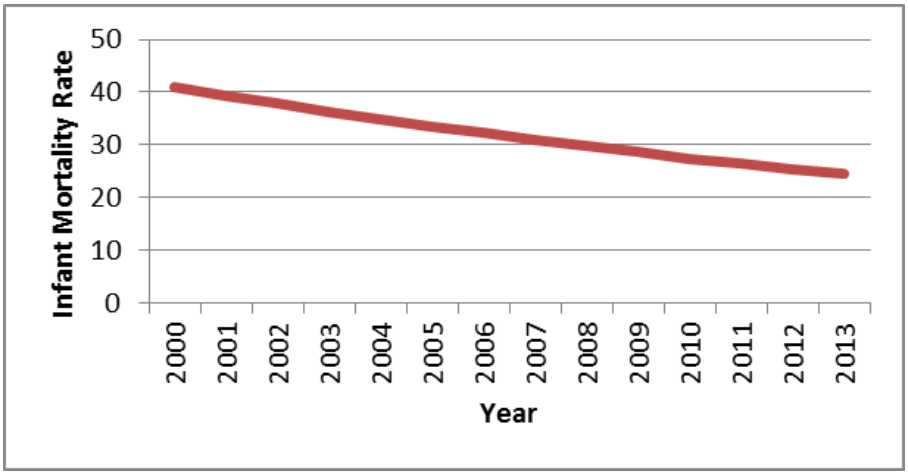
Top 10 Causes of Death (%) 2010		Top 10 Causes of DALYs Lost (%) 2010	
Cerebrovascular disease	19.5	Injuries	8.9
Neoplasms	11.3	Mental and behavioral disorders	8.1
Tuberculosis	9.5	Cerebrovascular disease	8.0
Ischemic heart disease	8.1	Tuberculosis	7.6
Injuries	7.7	Neonatal disorders	7.1
Diabetes mellitus	6.1	Neoplasms	6.4
Lower respiratory infections	4.2	Musculoskeletal disorders	6.4
Neonatal disorders	3.8	Diarrheal diseases	4.0
Cirrhosis of the liver	3.1	Ischemic heart disease	3.8
Diarrheal diseases	2.8	Diabetes mellitus	3.4

Source: Institute for Health Metrics and Evaluation 2010

2.4.2 Maternal, Neonatal, and Child Health and Family Planning

While Indonesia's infant mortality rate (24.5 per 1,000 live births) is higher than in neighboring countries, it has declined steadily over the past three decades (Figure 2). The under-five mortality rate has decreased from 84 per 1,000 live births in 1990 to 29 per 1,000 live births in 2013 (World Bank 2013), which means that Indonesia has achieved the target for the child health Millennium Development Goal (MDG) 4 – a great success story for the country.

Figure 2: Infant Mortality Rate in Indonesia, 2000-2013



Source: World Bank 2013

The MMR (190 per 100,000 live births in 2013, according to the World Bank's WDI) remains persistently high. There is some debate about the most recent figure. The 2012 Demographic and Health Survey (DHS) reported a MMR of 359 per 100,000 live births for the period of 2008-2012 (Statistics Indonesia, National Population and Family Planning Board, and ICF International 2013), while the WDI database reports MMRs of 310, 250, and 210 per 100,000 live births in 2000, 2005, and 2010, respectively (World Bank 2013). The percentage of births attended by skilled health staff has increased recently; however, at 83.1 percent, it remains lower than the East Asia & Pacific regional average of 92.4 percent. Access to antenatal care is high, and a higher percentage of women receive antenatal care compared to the East Asia & Pacific regional average. The total fertility rate has fallen to near replacement levels, another success for the country (United Nations Population Division 2015), although contraceptive prevalence is lower than in neighboring countries and unmet need exists.

Table 4 presents selected maternal and child health (MCH) and family planning/reproductive health (FP/RH) indicators in Indonesia, compared to the averages for the East Asia & Pacific region.

Table 4: Selected MCH and FP/RH indicators in Indonesia, Compared with the East Asia & Pacific Regional Average

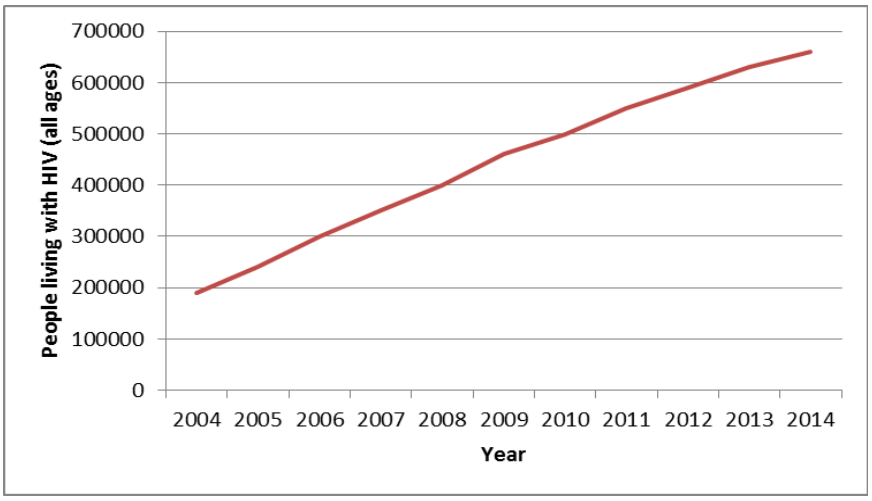
Indicator	Source	Indonesia	Year of Data	East Asia & Pacific	Year of Data
Births attended by skilled health staff (% of total)	WDI-2012	83.1	2012	92.4	2011
Pregnant women who received 1+ antenatal care visits (% total)	UNICEF-2012	95.7	2012	94.0	2009-2013
Pregnant women who received 4+ antenatal care visits (% total)	UNICEF-2012	87.8	2012	80.0	2009-2013
Fertility rate, total (births per woman)	WDI-2012	2.4	2012	1.8	2012
Contraceptive prevalence (% of women ages 15-49)	WDI-2012	61.9	2012	80.5	2011
Unmet need for contraception (% of married women ages 15-49)	WDI-2012	11.4	2012	--	--

Source: World Bank, World Development Indicators Database: Accessed July 16, 2015.

2.4.3 HIV/AIDS

Although the prevalence is still low (0.5 percent among adults aged 15 to 49), Indonesia has one of the fastest growing HIV and AIDS epidemics in Asia (National AIDS Commission Republic of Indonesia 2009). The number of people living with HIV increased from 190,000 in 2004 to 660,000 in 2014.

Figure 3: Number of People Living with HIV in Indonesia



The epidemic is concentrated among key populations (sex workers, men who have sex with men, people who inject drugs, and transgender people), with the exception of the Papua and West Papua provinces, where the epidemic is generalized and the prevalence is estimated at 2.3 percent. Although decreasing, HIV prevalence is highest among people who inject drugs (36.4 percent) followed by men who have sex with men (8.5 percent). See Table 5 for indicators related to HIV and AIDS in Indonesia.

Table 5: Selected HIV/AIDS Indicators in Indonesia

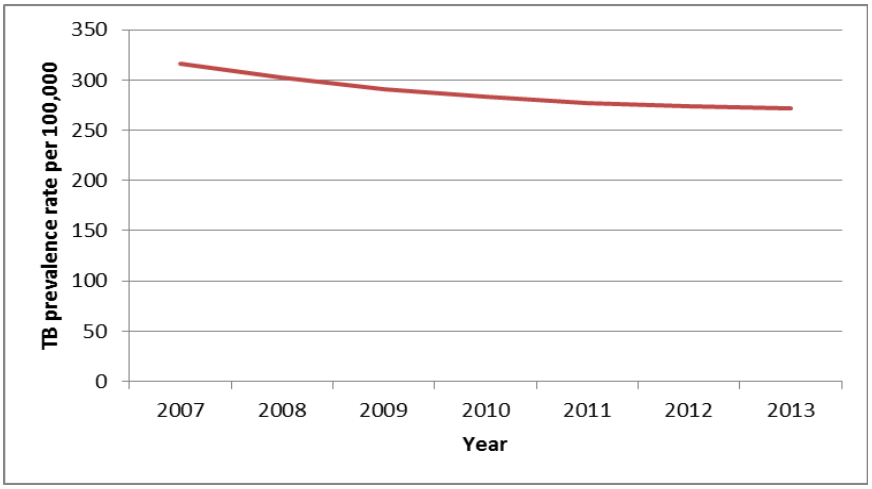
Indicator	Source	Indonesia	Year of Data
National HIV prevalence among adults 15-49	UNAIDS-2013	0.5%	2013
Number of people living with HIV	UNAIDS-2013	640,000	2013
HIV prevalence among female sex workers	HIV AIDS Asia Pacific Research Statistical Data Information Resources AIDS Data Hub-2013	7%	2013
HIV prevalence among men who have sex with men	HIV AIDS Asia Pacific Research Statistical Data Information Resources AIDS Data Hub-2013	8.47%	2013
HIV prevalence among people who inject drugs	HIV AIDS Asia Pacific Research Statistical Data Information Resources AIDS Data Hub-2013	36.40%	2013
Number of new infections	HIV AIDS Asia Pacific Research Statistical Data Information Resources AIDS Data Hub-2013	80,000	2013
Number of people on antiretroviral treatment	HIV AIDS Asia Pacific Research Statistical Data Information Resources AIDS Data Hub-2013	39,418	2013

Source: UNAIDS AIDSinfo Database. Accessed July 16, 2015.

2.4.4 Tuberculosis

TB is a major public health problem in Indonesia. As was shown in Table 3, TB is the third leading cause of death. TB prevalence steadily decreased in Indonesia between 2007 and 2013, as illustrated in Figure 4. However, with a TB prevalence rate of 272 per 100,000 and mortality rate of 27 per 100,000 in 2013, Indonesia is considered a high TB burden country (WHO 2015a). Furthermore, 21 percent of TB patients are HIV-positive, but only 2 percent of TB patients know their HIV status (WHO 2015a). The burden of multi-drug resistant TB (MDR-TB) is also high (1.9 percent of new TB cases in 2013). Preliminary results from the recent TB prevalence survey in 2014 showed a dramatically higher prevalence, at 660 per 100,000 nearly 2.4 times higher than the 2013 figures (MOH 2014e).

Figure 4: TB Prevalence Rate per 100,000 in Indonesia, 2007-2013



Source: World Health Organization 2015

2.5 Health Policy and Reform

Indonesia's National Long-Term Development Plan 2005-2025 guides the country's development planning. The plan is divided into four National Medium-Term Development Plans (RPJMN), with the current stage being 2015-2019. Each sectoral government ministry develops its own plan based on the RPJMN. Health is one of 11 national priorities outlined in the national development plan. The MOH developed a long-term health strategy for 2005-2025 in line with the RPJMN, and the most recent MOH Strategic Plan 2015-2019 (known in Bahasa as the *Renstra*) was completed in early 2015. The objectives for the MOH Strategic Plan align with the long-term health strategy, along with President Jokowi's Nawacita, and are multifaceted including: improving public health, improving disease control, increasing access to and quality of health facilities, increasing the number, types, and quality of providers, improving access to pharmaceuticals and medical devices, increasing synergy between national and sub-national levels, improving partnerships, planning, and monitoring and evaluation (M&E), increasing health research, strengthening transparent and good governance, improving capacity of the MOH, and integrating and improving the health information system.

The health sector in Indonesia has undergone major policy changes in recent years. Decentralization reforms beginning in 1999 (governed by laws 22/1999 on regional autonomy, 32/2004 on regional government, and 23/2014 on local government) have resulted in the decentralization of responsibility for health service delivery to the district (*kabupaten/kota*) level.[4] Furthermore, the country has adopted the goal of achieving UHC, aiming to reach the entire population by 2019. The National Social Security System Law 40/2004 formed the legal basis for UHC, and the Social Security Providers Law 24/2011 established the administrative arrangements for its implementation. Currently, the GOI is consolidating all existing social health insurance schemes into one umbrella program, JKN, under the purview of the single-payer social security agency *Badan Penyelenggara Jaminan Sosial Kesehatan* (BPJS-K). The *Road Map towards National Health Insurance 2012-2019* (Republik Indonesia 2012) summarizes the government's vision and plan for achieving UHC.

For more detailed information on health policy and reform in Indonesia, see the Governance chapter.

[4] Throughout this assessment, we use the English term "district" to refer to the sub-national level that includes the Bahasa terms *kabupaten* (regency) and *kota* (city).

2.6 Structure of Health System

Central, provincial, and district governments are involved in the planning and delivery of health care in Indonesia. The MOH is the overall steward and is responsible for implementing the national health strategic plan, but has little direct authority over district governments given the decentralized government and health sector structures. At the district level, the District Health Offices (DHOs) have primary responsibility for managing health service delivery. DHOs report directly to the district governments (*Pemda*) and are accountable to those offices. DHOs also provide health information to the MOH through reports submitted to the Provincial Health Offices (PHOs). The PHOs themselves function as administrative and official extensions of the central MOH.

Public health centers or *puskesmas* deliver primary health care, including both preventive and curative care. There are 9,718 public puskesmas in Indonesia as of 2014 (MOH Indonesia 2014a). Approximately one-third of puskesmas (3,317) also provide inpatient care (MOH Indonesia 2014b). Each puskesmas serves an average population of 25,000-30,000 (Dorkin et al. 2014). In addition to those puskesmas that provide inpatient services, class C and D hospitals at the district level (managed directly by the district government) also provide inpatient care, as do class B hospitals at the provincial level (managed by the PHOs). Tertiary care is provided at class A hospitals managed by the MOH. There are a total of 2,461 hospitals in Indonesia including 1,931 general hospitals and 530 specialty hospitals (MOH hospital database, http://sirs.buk.depkes.go.id/rsonline/report/, accessed December 18, 2015). Table 6 provides an overview of the types of facilities at each level of care and the services they provide.

Table 6: Organization of Health Care in Indonesia

Level of Care	Facility Type	Services Provided
Primary Care	Puskesmas (some have inpatient beds)	Preventive and curative ambulatory care
	Auxiliary puskesmas (*pustu*)	Preventive and curative ambulatory care in remote areas
	Integrated health post (*posyandu*)	Preventive and health promotion services (antenatal care and reproductive health) offered once per month, initiated by the community, and assisted by puskesmas
	Mobile health services unit (*pusling*)	Preventive and curative care in remote areas that cannot be reached by formal health services
	Village-level delivery posts (*polindes*)	Midwifery services
	Village health posts (*poskesdes*)	Often established and co-funded by the community; outreach is provided by health care personnel and sometimes the private sector. Provide a range of basic promotive, preventive, curative, rehabilitative services.
Secondary Care	Type D hospitals	General medical services (basic care, oral and dental care, MCH, and FP), minimum of two basic specialist services, and support specialist services (radiology and lab)
	Type C hospitals	Four basic specialist services (surgery, internal medicine, pediatrics, OB/GYN), three support specialist services (anesthesia, radiological imaging, pathology), and at least one oral and dental specialist service
	Type B hospitals	Four basic specialist services (surgery, internal medicine, pediatrics, OB/GYN), five support specialist services, eight out of thirteen other specialist services, two out of four basic subspecialist services, and at least three oral and dental specialist services
Tertiary Care	Type A hospitals (teaching hospitals)	Four basic specialist services (surgery, internal medicine, pediatrics, OB/GYN), five support specialist services, twelve other specialist services, sixteen subspecialist services, and seven oral and dental specialist services

Sources: MOH 2014 for basic puskesmas data; PMK 56/2014 on hospital classification and licensing

2.7 Private Sector

Indonesia has a growing private sector, operating at both the primary health care and hospital levels. "Dual practice" is legal and common in Indonesia, and about 70 percent of puskesmas physicians and 93 percent of midwives provide private services in addition to their practice in the public sector. The number of private primary health care facilities in Indonesia is unknown. A large and growing number of private hospitals also exist. As of 2015, there were 1,575 private for-profit and not-for-profit hospitals in Indonesia (SIRS Online, MOH BUK 2015). The not-for-profit private sector consists primarily of faith-based facilities, including several large networks of hospitals and clinics. Two large networks that operate throughout the country are run by the Muslim charities Muhammadiyah and its affiliated women's organization Aisyiyah, and Nahdlatul Ulama and its affiliated women's organization Muslimat. The Service Delivery chapter explores the topic of private sector delivery in greater detail.

2.8 Role of Development Partners

Various donors provide targeted support to the health sector in Indonesia, though the overall expenditure by donors on health is low as compared to Indonesia's total expenditure on health. USAID and Australia's Department of Foreign Affairs and Trade (DFAT) are the two largest bilateral donors. Multilateral donors include The Global Fund, the GAVI Alliance, as well as 25 United Nations agencies (World Health Organization 2014). The German government through the Gesellschaft für Internationale Zusammenarbeit (GIZ) along with the Japanese government through the Japan International Cooperation Agency (JICA) give some support for social protection in the health sector. DFAT's assistance to Indonesia's health sector primarily focuses on health systems strengthening, communicable diseases, and maternal, newborn and child health (MNCH). As the largest health funder in Indonesia, the Global Fund continues to provide grants to assist Indonesia in its fight against HIV and AIDS, TB, and malaria. USAID support focuses on improving access and quality of health services, particularly focusing on MCH, and on controlling infectious diseases of regional and global importance, including TB, HIV, influenza, and neglected tropical diseases. The World Bank currently has several active health loans in Indonesia, though most are winding down, and Indonesia as a lower middle-income country will no longer be eligible for International Development Association loans. The World Bank and WHO continue to provide technical assistance to the MOH in analyzing systems constraints and challenges, and will continue to provide technical support to the GOI as it moves forward with JKN. Annex D provides a list of international development partners that provide health sector and other related sector programming in Indonesia.

3. GOVERNANCE

Effective health governance can be described as the process of "competently directing health system resources, performance, and stakeholder participation toward the goal of saving lives and doing so in ways that are open, transparent, accountable, equitable, and response to needs of people" (USAID 2006). In Indonesia, effective governance at all levels of the decentralized system is essential for achieving UHC and improving the health status of the poorest and most vulnerable.

The conceptual framework governing this rapid assessment (Brinkerhoff and Bossert 2008) defines health governance according to the institutional capacities of the state, health service providers including the private sector, and beneficiaries (users) of the system; and the nature and functionalities of their relationships. This rapid review of governance in the Indonesian health sector looked at how well these actors are able to plan, oversee, and manage the activities that support the other components of the health care system. Assessment themes included voice and accountability, responsiveness, government effectiveness to implement policy, rule of law, regulatory quality, and control of corruption. The five key indicators reviewed are listed in Table 7.

Table 7: Five Key Indicators of Health Governance

1	The national government is transparent with regard to health sector goals, planning, budgeting, expenditures, and data. It regularly communicates with stakeholders in the health sector.
2	The public and concerned stakeholders have the capacity and opportunity to advocate for health issues important to them and to participate effectively with public officials in the establishment of policies, plans, and budgets for health services.
3	Public and private sector actors, civil society organizations, and other concerned stakeholders (e.g., community members) have regular opportunities to meet with managers (directors) of health service organizations (hospitals, health centers, clinics) to raise issues about service efficiency or quality.
4	Government officials rely on research and evaluation studies and existing health information systems (HIS) when they formulate laws, policies, strategic and operational plans, regulations, procedures, resource allocation decisions and standards for the health sector.
5	Health sector regulations (protocols, standards, codes of conduct, and certification procedures) are known and enforced in training institutions and health facilities.

Source: Adapted from Health Systems 20/20 2012.

3.1 Overview

As noted in the introduction, Indonesia's President Jokowi has declared increasing access to public services to be a priority of his administration. Among other services, the government aims to increase access to health care, and is doing so through efforts to attain UHC by 2019 via the new national health insurance program, JKN. In early 2015, the GOI removed most fuel subsidies, which creates some fiscal space for the new government's plans to increase infrastructure development and social services. Strong leadership and management of the large number of stakeholders with diverging interests is needed to ensure effective spending, strengthen the evolving social security system and existing social welfare programs, and increase access to services to the poor and vulnerable while managing costs (World Bank 2014b).

A key aspect of Indonesia's governance is the decentralized nature of the overall government and the corresponding health system. While decentralization offers opportunity for sub-national governments to be more responsive to the needs of their populations, it also poses capacity challenges as more and greater levels of responsibility are being placed at the district and provincial levels. Constraints to delivering frontline services also include: a) complex policy and operational systems and processes that are sometimes contradictory; b) the pace of devolution outstripping governance capacities to leverage existing laws, resources, and assets to meet increasing service demand; c) weak systems of accountability and coordination; and d) poor systemic links between governments and civil society (KOMPAK (Governance for Growth) 2015).

The MOH is mandated to provide technical oversight, leadership, and an M&E function for health care in the public and private sectors.[5] With the roll-out of JKN, the social health insurance agency BPJS-K is taking on the role of a single payer for health care, with related data collection responsibilities and some quality oversight for services financed. The relationship between the MOH and BPJS-K is evolving. The MOH is one of several national institutions, including Indonesia's Financial Services Authority (OJK), the National Social Security Council (DJSN), and the Ministry of Finance (MOF), that oversee BPJS-K.

3.1.1 Legal Framework and Key Stakeholders Engaged in Governing Health Care Delivery

Table 8 lists the major laws, decrees, plans, and regulations that provide a framework for governing Indonesia's health sector. The table also outlines the many stakeholders engaged in governing the health sector per these policies, legislation, and practices. This list is not exhaustive – it emphasizes the most recently adopted or enforced legislation and policies that impact ongoing changes in the governing of the system. See Annex C for a more comprehensive accounting of the legislative framework governing the health sector.

[5] See Annex C: Key Laws, Regulations and Plans Impacting the Health Sector.

Table 8: Selected Stakeholders, Laws, and Plans Impacting the Health Sector in the Context of Decentralization

Law or Plan	Description	Implications for Health	Stakeholders Engaged
Law 36/2009 on Health	Minimum budget for health sector is 5% of Central Budget (APBN) and 10% of Regional Government Budgets (APBD)	Legislates a funding level that the national, regional, and district levels must allocate for health. These funds are generally spent on salaries, operating expenses, and infrastructure.	Ministry of Finance (MOF) (national-level budget approval, disbursement), provincial governments, district governments, Ministry of Home Affairs (MOHA, approves budget requests), MOH, PHOs and DHOs (provide budget requests to respective governments at national, provincial, district levels), Ministry of Development Planning (*Bappenas*), and national and sub-national parliaments.
Law 23/2014 Law on Local Government	Builds on previous law on Decentralization (2004) and provides more detail on the roles and responsibilities of district and provincial governments.	District governments have responsibility for the Minimum Service Standards (MSS) for public service including health. These MSS are currently being revised and updated by the sector ministries. Under the revised law, provincial governments have an enhanced M&E role for district performance on the MSS. Defines health facility ownership according to government levels. As a result, some facilities (hospitals specifically) are changing hands. Reporting streams are clarified.	MOH, provincial and district governments (including PHOs and DHOs), hospitals, puskesmas, MOHA, and Bappenas.
Medium Term Strategic Plan (RPJMN) (2015-2019)	National plan developed by Bappenas with national line ministers. Central and sub-national governments use it to guide priority setting.	One of the six primary health priorities of the RPJMN is increasing access to public services, particularly in the outlying islands and remote areas of Indonesia. This includes expanding health coverage for basic locally delivered services to all Indonesians.	Bappenas, provincial and district governments and civil society organizations (through Musrenbang), BPJS-K, MOH, PHOs, DHOs
Law 40/2004 on National Social Security System and Law 24/2011 on BPJS-K	These laws established JKN and BPJS-K. Government, Presidential, and Ministerial Regulations (2012-2014) further define tariff setting, reporting, and roles and responsiblities	The chairman of BPJS-K reports directly to the President. The Financial Services Authority (OJK) is the financial regulator of BPJS-K. MOF develops policy governing BPJS-K. MOH and the National Social Security Council (DJSN) inform policy governing BPJS-K.	BPJS-K, OJK, DJSN, MOH, MOF, Bappenas
Law 6/2014 Village Law	Defines a village as a sub-unit of a district, with an elected leader, and describes various institutions' roles, relationships, responsibilities over the creating and governing of villages, including funding to be provided from the central Ministry of Villages and Disadvantaged Areas for village use.	While not specifically targeted for health, the amount of funding available is significant, and thus could have an impact on health at the village level by increasing funding available for investment in social welfare. Villages have an opportunity to spend these funds based in part on their own priorities – including health.	Ministry of Villages and Disadvantaged Areas, district governments, villages. MOH has an opportunity to play a role on an advisory committee consisting of sector ministries and MOF. Development partners are supporting implementation.
Human	Long-term national plan for health	Plan to increase the total number of health workers	MOH, MOE, provider associations, WHO, and

Resources for Health Development Plan (2011-2025)	worker development and distribution.	by 2025, including plans for training and qualifications, equitable distribution, and oversight. Requires increased government resources and coordination between MOH and Ministry of Education (MOE) to ensure adequate quality of health worker education and determine quantities of workers to be trained.	other development partners support this plan with technical assistance.

3.1.2 Overview of the Decentralized Governance Structure

A simplified summary of the political structure of Indonesia by level is presented in Table 9 along with the corresponding structure of the health system. Indonesia is organized into 34 provinces, including two special autonomous provinces (Aceh and Papua), one special region (Yogyakarta), and the national capital province of Jakarta. Provincial governments, including PHOs, are deconcentrated entities; that is, they are extensions of the central government and have limited autonomy. Following the implementation of decentralization that began in 2001, districts became the key administrative units responsible for providing most government services including health services. (This report uses the English term "district" to refer to the sub-national level that includes both *kabupaten*, regencies, and *kota*, municipalities.) As of December 2015, there were 514 districts (416 regencies and 98 municipalities) in Indonesia, located within 34 provinces. Within districts, there are 7,024 sub-districts (*kecamatan*) and 81,626 villages.

Table 9: Indonesian Political Structure and Health Service Delivery System by Level

Level	Political Structure		Public Health System	
	Executive	Legislative	Governance	Health Facilities*
National	President: (Elected)	Parliament	MOH	Type A National Hospitals
	Ministries by sector (ministers appointed by President)	Parliamentary committees on sectors (health (Commission 9), economy, etc.)		
Province	Governor (elected)	Regional Parliament I (DPRD I)	Provincial Health Office (PHO)	Type B Provincial Hospitals Specialized centers
District	Administrator (elected): Bupati (Regents) for Kabupaten; Mayors for Kota	Regional Parliament II (DPRD II)	District Health Office (DHO)	Type C and D hospitals Puskesmas (primary care facilities)
Sub-district	Under district jurisdiction and governance structures		DHO	Puskesmas pembantu (auxiliary primary care facility)
Village	Administrative leader (elected); often also an unelected traditional head	Village council	DHO	Posyandu (integrated health post) Polindes (delivery post)

*Owned and managed by that level of government, according to Law 23/2014

Complex reporting and financial flows overlay the structure outlined in the table above. Governors and *Bupati*/Mayors appoint the PHO and DHO staff, respectively, and the health offices' budgets come from those governments. Public sector health facility personnel are paid from a number of funding streams, including national, district, and BPJS-K funds. (See the Health Financing chapter for more details.) PHO and DHO staff report both to their sub-national government counterparts as well as to their superior in the health sector chain of command. That is, the DHO reports on health programming to the PHO, and the PHO reports to the MOH. Technical directives similarly flow down from the MOH to the PHO, and then to the districts and sub-districts. The MOH is challenged to guide the effective allocation of resources to ensure access to quality health services throughout the health sector given its decentralized nature and the size and breadth of this island nation, where communication and information sharing with some provinces and districts is very difficult.

Districts are responsible for delivering basic government services, and have oversight over health services provided by both the public and private health sectors, as defined by the Minimum Service Standards (MSS) (Box 1). According to interviewees, the MOH recently updated the specific MSS for health service provision at the district level.

Box 1: Minimum Service Standards *(Standard Pelayanan Minimal)*

During Indonesia's decentralization process, the central government established Minimum Service Standards (MSS) to hold regional and local governments accountable for providing basic services to their citizens. The Ministry of Home Affairs first introduced the concept in a 2002 circular, followed by the related law and regulation in 2004 and 2005 (Khairi 2014). The Ministry of Health issued its standards in 2008 in the form of 18 health care coverage targets that must be met by 2010 or 2015, depending on the target (MOH 2008). Targets fall into four categories: primary health care, health care referral, epidemiology and prevention, and health promotion and community empowerment. For example, one standard required 90 percent coverage of deliveries assisted by skilled birth attendants by 2015. The National Family Planning Coordinating Board (BKKBN) also issued MSS for family planning in 2010, included a minimum target of five percent unmet need by 2014 (NFPCB 2010).

Regional and local governments across the country have had varying success meeting MSS targets. These governments must consider the standards in their budgeting and planning processes. The central government intended that the standards would be met using already available funding, but regional and local governments have reported the need for additional funding to meet set targets (Khairi 2014).

3.2 Key Reforms Impacting the Health Sector

There are currently at least four ongoing major reforms impacting the health sector:

1) Implementation of JKN

The implementation of JKN is creating a tectonic shift in responsibilities, roles, and relationships among institutions at the national, provincial, and district levels. Law 40/2004 on the National Social Security System defined JKN, while Law 24/2011 spurred its implementation and greatly expanded BPJS-K's role. Prior to 2014, BPJS-K was known as Askes and provided social health insurance for civil servants using a payroll tax and decentralized fee-for-service payment system. BPJS-K is now the single payer for the JKN national insurance scheme and is responsible for covering the formally employed, those who are subsidy-eligible and voluntary enrollees in the informal sector. BPJS-K has offices and representation at the national, provincial, and district levels and reports directly to the President. Its role as payer also includes processing claims for services provided (which include some health diagnosis and service utilization data), data analysis, and some

quality oversight functions. As noted above, OJK, DJSN, the MOF, and the MOH provide various types of oversight of BPJS-K (see also the Health Financing chapter).

The roll-out of JKN starting in 2014 is partly considered to be a result of a legal action brought by citizens to hold the government accountable for the 2004 law on the National Social Security System. That law stipulated that the government must establish non-profit bodies to implement five mandatory social insurance programs covering health care, workplace accidents, death, old-age risks and pensions, to be funded by beneficiary contributions. But by 2011, the government was criticized for its resistance to transforming the four state-owned insurance companies – PT Jamsostek, PT Askes, PT Taspen, and PT Asabri – into non-profit entities. Delays motivated citizen groups to file a law suit and organize large street protests act to accelerate implementation (Jakarta Post 2011). These citizen actions demonstrate the presence of a formal accountability system as well as public support for UHC.

There are currently some inconsistencies in the laws and regulations that describe the governance and oversight of BPJS-K. According to stakeholders interviewed, these are being addressed by presidential regulations that are currently being drafted for implementation in 2016. BPJS-K's chairman reports directly to the President of Indonesia, and presidential regulations govern the institution's operations. At the same time, BPJS-K is regulated by OJK, the financial sector supervisory agency, which oversees all bank and non-bank financial institutions as well as the capital markets of the country. OJK conducts external audits and reviews indicators of financial solvency, stability, and risk management, and recommends action as needed. DJSN, the National Social Security Council, is an oversight body representing insurance stakeholders and technical experts. It is responsible for helping the President protect the interests of health insurance members, while ensuring efficient and fiscally sustainable operations of the social health insurance system (Kusnanto 2015). The MOH retains primary responsibility for regulating the delivery of health services, drug and medical devices, tariff-setting, and health policy, and it has authority over BPJS-K policy. While the oversight structure is well articulated, and the institutions themselves are highly capable, there are some inconsistencies in the legislation and regulations and some overlapping duties which, in a time of evolving roles and rapid change, may result in insufficient oversight.

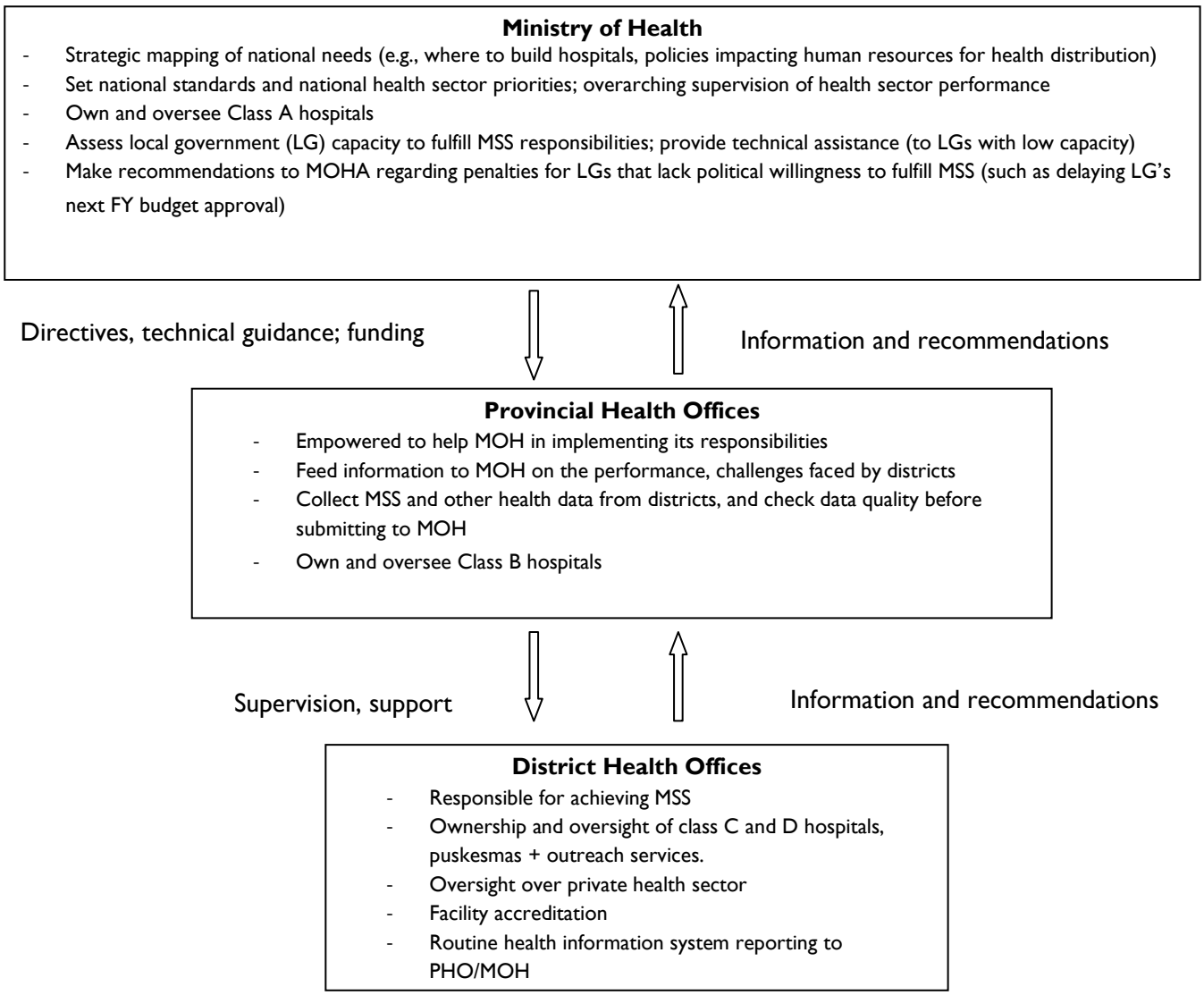
2) Decentralization reforms

Law 23/2014 clarified and provided detail on the roles and responsibilities of national-, provincial-, and district-level governments. The Ministry of Home Affairs (MOHA) and Bappenas are still writing regulations governing implementation of this law. They have 24 months (until the end of September 2016) to finalize these regulations, after which districts may write their own regulations to interpret the law. Figure 5 summarizes how Law 23/2014 distributes roles and relationships among government health sector actors.

In addition to defining roles, Law 23 gives districts the responsibility for delivering minimum service standards (MSS) to the people. The MOH is currently revising the health-related MSS with greater details, and these will be rolled out shortly.

At the provincial and district levels, decentralization has challenged health sector administrators with substantial responsibilities, including implementing MOH directives and other programs. DHOs need capacity building in health planning and financial management now. With the roll-out of the new law, PHOs will also need capacity building in the areas of information management and reporting, financial management, and program management.

Figure 5: Summary of Decentralized Responsibilities for Health Sector Oversight



3) Indonesia Human Resources for Health Development Plan (2011-2025)

This is a long-term plan to increase dramatically the total number of various cadres of health workers by 2025, including increasing the production of health workers, training and qualifications, equitable distribution, and oversight. It covers 13 categories of health workers. The plan is ambitious and the government is currently not on pace to meet its workforce targets for 2019 (World Bank 2014b). This plan will require an increase in government resources and improved coordination among ministries, notably between the MOH and Ministry of Education (MOE), which oversee medical and technical education. Lack of coordination, clear roles, and multiple funding streams for personnel coming from among MOH, MOE, and the different levels of government pose a challenge to the health system. See the Service Delivery and Human Resources for Health chapters for further details.

4) Village Law (2014)

The recently-adopted Village Law allocates funding from the national budget as direct cash transfers to villages. This was estimated at approximately Rp 5.92 trillion (US$419 million) for 2014 (Parlina and Halim 2013). Villages must propose a use for the funds. The Ministry of Villages and Disadvantaged Areas will use a variety of factors to determine funding levels per village including quality of applications, population, and need. The funds will not be evenly distributed, and will be allocated per village, with district governments acting as disbursement agents and overseers of the funding and project implementation for funds earmarked for specific villages. (The regulations on how these funds should be used were still being written at the time this assessment was conducted.) This may give the MOH the opportunity to provide input into any "menu" of eligible uses to support MSS and JKN objectives, although this was not yet happening at the time of this assessment. District governments have a role in administration, approval, and monitoring of funding to villages. National government-provided facilitators will help each village develop proposals (see the Social Protection chapter for more details).

3.3 Voice, Accountability, and Responsiveness

This rapid assessment found that Indonesia's administrative framework and laws are broadly supportive of the engagement of civil society around health service delivery issues. Members of the general public and other non-government stakeholders, such as civil society organizations (CSOs), private sector representatives, and provider groups, have formal and informal opportunities to advocate for attention to key health issues and contribute to the establishment of policies and plans for the health sector. CSOs, technical experts, and health service users have opportunities to provide feedback to government officials on health sector goals as well as share feedback on facility-level performance. Facility and community-based complaint mechanisms are legally mandated, although unevenly implemented. A recent study of the impact of implementing social accountability tools in Indonesia's health sector found that regardless of the underlying environment (including the relations between government and community, or capacity of health centers and health administration offices), increasing the use of these tools at the district level resulted in health service enhancements (Wetterberg, Hertz, and Brinkerhoff 2015). The social accountability tools studied included complaints surveys, a multi-stakeholder forum, and a service charter negotiated between citizens and health care providers, indicating that all may hold promise for other Indonesian districts (Wetterberg, Hertz, and Brinkerhoff 2015).

Regional Development Planning Forums (known in Bahasa as *Musrenbang*) are institutionalized forums for residents to provide inputs on proposed government priorities in the coming year, including health sector planning and budgeting. These district- and sub-district-level conferences allow residents, city officials, and councilors to discuss problems and to make suggestions regarding district and municipal budgeting. Priorities articulated at lower levels are (in theory) presented for provincial- (and then national-) level consideration. However, the connection between these formal advocacy mechanisms and the budgeting process is weak, according to multiple stakeholders interviewed at national and sub-national levels. Several stakeholders interviewed in this assessment indicated that the Musrenbang process is not always well-timed for consideration in the budgeting process at the district or central levels. These stakeholders also indicated that the budget requests from the Musrenbang could be relegated to special, one-time projects. Higher-level government officials have expressed concern that district, sub-district, and municipal leaders may disregard the inputs of residents. In Jakarta, this concern resulted in Musrenbang budget recommendations being posted online, so that citizens can see what their leaders actually recommend at the conclusion of the process (Jakarta Post April 1, 2015). Interestingly, the new Village Law describes a consultative process that will engage villages in setting funding priorities for village grants via the use of outside facilitators. This process seems very similar to the Musrenbang process but is not linked to that process, as of the writing of this report.

The mechanisms described above are a good foundation and offer opportunities for strengthening voice and accountability in the health sector at the sub-national levels.

3.4 Non-government Actors' Roles in the Health System

Non-government actors that play a role in the health system include health care provider associations, private health care providers, NGOs and other CSOs, communities, and the media. There is a long history of CSOs in Indonesia. In recent years, with the emergence of terrorist groups, the government has enacted legislation to reinforce the role of MOHA to regulate CSOs.[6]

There are 48,886 foundations and associations registered at the Ministry of Law and Human Rights, and an additional 65,577 societal organizations registered with MOHA, which do not have an official legal status. Countless others are registered at the sub-national level. There are complex registration procedures for foreign organizations, and insufficient legal and judicial protection for CSO human rights activists (NGO Law Monitor 03/2015). Another challenge to CSO activities is the establishment of government-owned non-governmental organizations (GONGOs). The establishment of such organizations can have the effect of diluting the influence of truly non-government affiliated organizations, and thus reduce their ability to act as a counter-balance to state power and influence. They are likely to receive preferential treatment by the government and divert resources and attention away from civil society-driven organizations. There are no specific legal barriers against CSOs that inhibit free speech or advocacy. Libel charges, however, have been brought against CSO activists (NGO Law Monitor 03/2015).

Health care provider associations, such as the Indonesian Association of Physicians (IDI) and the Association of Midwives (IBI), represent professionals working in both public and private sectors. These associations vary in size and in the services they provide for members. They are funded by dues, and membership is required for certified professionals. For example, upon graduation from midwifery schools, midwives become a member of the IBI as part of licensure. While some provider associations have limited capacity to offer member services (such as sharing information on new health policies and government programs), they do contribute to the government's health system stewardship by providing technical updates to members and providing the government with feedback on policies and regulations. For example, IBI has expressed concern to policymakers that private midwives cannot contract directly with or receive direct reimbursements from BPJS-K. See the Service Delivery chapter for more details on this concern. According to key informants, it appears to be a regular (albeit informal) practice for the government to solicit input into policy decisions from provider associations, and for the associations to provide informal monitoring of policy implementation. IDI and IBI have licensing authority, meaning that they have official sanction to regulate members' authorization to practice. These two larger associations have representation at the national and sub-national levels.

While there are many health sector associations in Indonesia, there is no dedicated private health sector "umbrella" association, despite the large role that the private sector plays in health care service delivery (Chee, Borowitz, and Barraclough 2009). Instead, provider-specific associations and general private business interest groups such as the Employer's Association of Indonesia (APINDO) represent the private health sector's interests. For example, more than half of the members of the Indonesian Hospital Association (PERSI), Indonesian Pharmacists Association (ISFI), and GP Farmasia (the main body for pharmaceutical manufacturers, distributors, pharmacies, and licensed drug sellers), are in the private health sector. The Indonesian National Chamber of Commerce and Industry mandates APINDO to

[6] Law No. 17 of 2013 on Societal Organizations (*Organisasi Kemasyarakatan*)

represent employers on issues related to industrial relations and manpower. APINDO voices the needs and preferences of private employers (from all sectors) to the MOH and BPJS-K.

Membership in APINDO and the provider associations is not voluntary; employers, physicians, and midwives are members of these groups per regulation. The mandatory nature of that membership and the close affiliation with the government may dilute the independent nature of the organizations as a "voice" for their members. One indication of the low value that members may place on the organizations is the low percentage of member dues collected, even though the dues themselves are very low; in the past one national body estimated only 10 percent of members paid dues (Chee, Borowitz, and Barraclough 2009). Thus, volunteers perform much of the work of the associations. In some cases, professional associations have been recipients of donor funds to support projects aimed to improve quality of service delivery.

Associations are meant to oversee the quality of care provided by their members through licensing, and some get involved to mediate malpractice disputes. Overall, however, the associations do not have strong capacity to improve quality of service delivery. See the Service Delivery chapter for more details.

Along with the private commercial health providers, several large NGOs registered as foundations (such as Muhammadiyah and Nahdlatul Ulama) are also providers of health care. The GOI consults with these larger networks of providers on health care policy and implementation matters at the national level through ad hoc national and sub-national meetings and committees.

3.5 Policy Formulation and Use of Data for Decision Making

Indonesia's policy formulation process comprises formal mechanisms for citizen engagement, the use of routine health information and special studies, and multi-stakeholder consultations.

This assessment found that data are used for decision making at all levels, including national, provincial, district, and facility levels, although the degree of use and the effectiveness (due to uneven data quality) are not consistent. There is some evidence that government officials rely on research and evaluation studies and the national health information system (HIS) when they formulate laws, policies, strategies and operational plans, regulations, procedures, and standards for the health sector; however, there are concerns about the quality of the underlying data. A number of universities, NGOs, private companies, and foundations have high capacity to conduct health, demographic, and economic research to inform policies, and the government regularly commissions such research. Statistics Indonesia (*Badan Pusat Statistik* or BPS) produces regular population-based studies, including the census and surveys used to support the Universal Database of poor and vulnerable groups. Routine health information systems at the puskesmas and hospital level are fairly weak, which makes it difficult for district and provincial managers to use data for decision making. (See the chapters on HIS and Social Protection for more information on the use of data.)

3.6 Directives, Oversight, and Resources

The GOI provides overall direction to the health system through legislation, policies, and regulations. At the national level, there is evidence of sufficient expertise and human resources to develop laws and regulations. Indonesia has a very large number of laws and regulations governing the health sector – in some cases, these add to the complexity of managing service delivery, making financial transfers, and providing oversight.

The MOH is the main stewardship body for the health system, responsible for its regulation and monitoring. Some program monitoring functions are deconcentrated to provinces and decentralized to districts. See Table 9 and Figure 5 above. Selected governance and stewardship challenges faced by the MOH include:

- *Technical authority disconnected from financial flows.* A disconnect between health sector financing (less than half of which is controlled by the MOH) and authority for health services diffuses the MOH's influence. Procedures do exist for reporting, investigating, and adjudicating misallocation or misuse of resources. Audits are conducted by the GOI's Financial and Development Supervisory Agency (BPKP) which is responsible for auditing central government entities, local governments, state-owned enterprises, public services, and others. However, while MOHA (which oversees disbursement of funding to the sub-national level) is empowered to take action against districts or provinces that misallocate or underspend their health budgets, such action requires evidence, and the data that might demonstrate poor performance must come from both the MOH and provincial governments. Currently, the data flows and other connections that would facilitate the MOH holding sub-national health offices accountable with financial incentives are weak.
- *Complex public financial management rules, numerous funding flows, and frequent policy changes.* DHOs, puskesmas, and hospitals receive or manage multiple sources of funding, including funding from BPJS-K, MOHA, MOH, district and provincial governments, private insurance companies, and out-of-pocket spending from patients. See the Health Financing chapter for more details. The rules for reporting and the purposes to which these revenues may be put differ for each funding stream. According to stakeholder interviews and documents reviewed for this assessment, this contributes to a problem of underspending of some program funds as officials and health managers fear that they will incorrectly manage funds. During this review, some DHO officials interviewed expressed frustration that managing new JKN procedures had increased their workload, given that they receive no additional remuneration for the additional time and tasks associated with administering JKN.
- *Lack of clarity and possibly some overlaps in roles and responsibilities for overseeing JKN per legislation may result in a temporary risk of ineffective or contradictory policy implementation*. For example, BPJS-K instituted a seven-day waiting period in early 2015 for newly enrolled informal workers who had paid into the system, as an attempt to minimize adverse selection. However, according to key informants, DJSN and/or the MOH should have initiated this policy change with approval and review by the MOF and OJK. The OJK is a highly capable institution, but it does not have experience overseeing a social health insurance fund, and could benefit from learning more about international best practices in this specialized area of financial sector oversight. The overlaps and lack of clarity of roles and responsibilities may weaken the function of oversight over BPJS-K.
- Communication and enforcement of directives is difficult given the vast geography of Indonesia's

Box 2: Challenges to Communicating Directives and Engaging Communities

In a 2012 survey, 92 percent of the population had watched TV in the previous three months, but only 15 percent of the population had used the Internet in that period. While that latter percentage is likely higher now, it highlights a communication challenge that governments may face when implementing policy.[1] Statistics and other important data are available online, yet much of that information is difficult for most of the population to access in a useful form. Local government leaders, NGOs, and the media thus have essential roles in communicating policies such as those related to JKN.

highly decentralized health system, and varying resource capacities among provinces and districts. Human resource capacity needs are growing as decentralization proceeds and JKN places more demands on local governments. Some areas outside of Java and Sumatra have inadequate Internet network capacity and thus computer-based reporting and communication is impossible for the time being. See Box 2. Even among those puskesmas with computers, most are not connected into the MOH online platform for data reporting and data submission; only 20% of puskesmas have internet access. The MOH has a goal of all puskesmas connected and 20% of all medical records to be available online by 2019 (MOH 2014d).

- *Data flows need strengthening.* Within the MOH, two departments are responsible for health sector data collection and analysis, the Directorate of Health Services (BUK) and the Center for Data and Information (*Pusdatin*). In addition to the multiple challenges each department faces collecting and analyzing data, such as incomplete reporting and data quality issues, communication between the two seems to be incomplete with some overlap of roles. See the HIS Chapter for more details.

The revised MSS offer an improved opportunity for the national government and citizens to hold districts accountable to provide quality basic health services. However, until now these standards have been only loosely enforced and unevenly met, due to a combination of lack of understanding and/or capacity at the DHO level, lack of awareness among communities of their rights to health services (and therefore they do not demand services or hold providers accountable), and weak enforcement from the national level. It will be important for districts to be properly updated on their legal responsibilities, for citizens to be made aware of their rights, and for the national government to provide support for districts with low capacities to meet these standards. There is some evidence that community-level support to both government offices and citizens can increase the effective use of these standards to increase access to quality care (Morgan 2012).

At the facility level, most government-owned facilities have limited financial and management autonomy. A small percentage of puskesmas (4 percent) and some hospitals have institutional autonomy (called "BLUD"). BLUD status allows them greater administrative freedom, particularly related to flexibly managing their capitation funds (TNP2K 2015). BLUD status hospitals report directly to the MOH.

3.7 Transparency and Corruption Control

According to the Law on Public Information Transparency no. 14/2008, national government data, including health statistics, vital statistics, policies, budgets, and plans, must be publicly available and communicated to stakeholders. The MOH, Statistics Indonesia (BPS), and other government bodies post much of this information on their websites in a timely manner, although not always in a form that is user-friendly to non-specialists.

Indonesia's media regularly report on health care issues, and display a relatively high level of technical ability to report on the sector. There are perceptions that some publications may report in a manner that reflects one political party in a more favorable light than another. The country's ranking in the Reporters without Borders' World Press Freedom Index has remained constant in recent years, with a ranking of 138 out of 180 countries in 2015 (1 indicating the most free press) (Reporters without Borders, 2015). While in the not very distant past the press was reluctant to report critically on government initiatives, in recent years Indonesia's media have begun establishing standards for critical analysis.

Indonesia ranks 107 out of 175 countries (with the 175th country having the highest corruption perception) on the Transparency International Corruption Perceptions Index, which measures perceptions of corruption in the public sector (Transparency.org 2015). This score places Indonesia slightly higher (less perception of public sector corruption) than China, and follows a slightly declining trend of corruption perception in recent years. Corruption clearly still affects the economy, but the government is taking steps to fight it, including anti-corruption campaigns and high-profile prosecutions. Corruption in service delivery, specifically at the puskesmas level, is reportedly not the major concern. While the MOH fares well in financial audits, there is concern over the huge potential for corruption in the procurement of equipment, supplies and pharmaceuticals, as evidenced by some recent high profile corruption cases involving the MOH (Indonesia Corruption Watch 01/2014).

Indonesia ranks 114 out of 189 countries in the World Bank's 2015 Doing Business Report (World Bank Group 2015b), only a slight improvement over the country's 2014 ranking. Higher rankings indicate greater ease of doing business in a country. The ranking falls short of the goal of 75 per Indonesia's Medium Term Plan of 2010-2014, and indicates the difficulty of the business environment, which can negatively impact private health sector growth.

3.8 Strengths, Weaknesses, Opportunities, and Threats

Overall, governance of Indonesia's health sector is characterized by numerous strengths and opportunities, according to the framework guiding this rapid assessment. The weaknesses and threats listed in Table 10 are the key areas identified in this assessment where the government and donors may consider strengthening governance, with the goal of increasing access to quality care for the poor and vulnerable on the path to UHC.

Table 10: SWOT Analysis For Governance

Strengths and Opportunities
• High-level political support and multiple stakeholders are engaged to achieve UHC • Institutionalized efforts to use data for decision making at all levels • Generally functional policy process engages stakeholders and experts • New laws and regulations offer opportunity to expand access to health services • MSS being elevated in importance and enforcement strengthened – this is an opportunity to increase accountability for health • Vibrant civil society • There are formal and informal mechanisms for civil society to express preference and monitor performance at all levels • Decentralization offers opportunities to increase responsiveness • Corruption perception trending slightly downward • Donor and government initiatives are in place and planned to improve data for decision making • Competent institutions are engaged in the oversight of BPJS-K (OJK, MOH, DJSN, and MOF)
Weaknesses and Threats
• Institutions governing the health sector are in flux with some overlap of responsibilities, variations in capacity (compared to existing or new roles/responsibilities), particularly related to the emergence of BPJS-K and new decentralization regulations • Capacity of some key actors needs strengthening in this context including PHOs and DHOs (in management); provider associations (advocacy/member representation); and OJK and others charged with oversight of BPJS-K • Relationships and coordination among technical oversight body (MOH), funding streams (various, of which

MOH is not the largest), authorities that can take punitive or rewarding actions (MOHA, BPJS-K, Ministry of Villages, etc.) need strengthening

- New laws, policies, funding streams, and regulations that impact health sector are confusing and can be difficult for health managers to navigate
- Formal mechanisms for MOH and other levels to engage and regulate private sector providers are underdeveloped
- Mechanisms for civil society, communities, and patients to express preference could be better connected to the budgeting process and formal accountability mechanisms
- Public financial management rules are overly burdensome, different streams of funding increase administrative burden and do not allow sufficient flexibility in managing finances at the facility level.
- Potential for corruption in the procurement of equipment, supplies, and pharmaceuticals could increase costs to the health sector

3.9 Opportunities

This assessment found a number of opportunities for the GOI and development partners to strengthen the governance of the health system, and thereby expand access to quality care through JKN.

- Specifically, now is the time to strengthen health sector management at both the national and sub-national levels, to reflect new roles and responsibilities in implementing JKN and in the context of recent laws (Law 23/2014 and Village Law).

One approach to consider is the idea of regionally based hubs of learning, information sharing, and accountability that could address leadership and management development needs among PHOs and DHOs. These hubs could be a vehicle for cross-district and cross-provincial learning as successful experiences (including those with or without donor support) and can be highlighted for learning opportunities.

- The GOI office of the president or vice president may wish to lead efforts to rationalize the institutional oversight of BPJS-K, such that each institution (MOF, OJK, DJSN, and MOH) has clear roles and responsibilities according to their technical strengths and as dictated by legislation.

Any overlap or lack of clarity regarding roles should be addressed as soon as possible. In the interim, OJK's role in regulating BPJS-K's finances could be strengthened with technical support in the form of development partner expertise and/or peer learning among other countries with social health insurance entities on best practices and lessons learned in regulating such entities.

- Capacity building is warranted for the MOH, PHOs, and DHOs in core functions related to M&E of health system performance and health sector management.

This should focus on the oversight of quality of care, administration of new and existing government programs, and data collection and analysis. Capacity building should include investments in both human resources (in the form of management skills building) and improving infrastructure needed for reporting, such as computers, Internet access, etc. The government should explore ways to strengthen the capacity of PHOs as the MOH's agents at the regional level, and financial and non-financial incentives for management performance at the sub-national levels (DHOs/PHOs). A recent study based on the experience of USAID's Kinerja project (2011-2015) found that the promise of greater financial autonomy, equipment, and promotions motivated puskesmas facility managers to be more responsive to client health needs (Wetterberg, Hertz, and Brinkerhoff 2015).

- The MOH should seek to strengthen its role as the technical steward of the health sector, especially

in areas such as drafting technical protocols for clinical quality, promoting access to quality care, and M&E of the health sector.

In the context of Indonesia's decentralized health system, with a strong third-party payer, the MOH can emphasize its role as the steward of the system as opposed to the main provider of services or the purchaser. This is a common structure and role in other health systems that have some structural similarities (see Kenya and the Philippines). The GOI and development partners should explore mechanisms to reinforce MOH technical leadership and facilitate stronger intra- and inter-institutional relationships. It is important that MOH retain its role in monitoring the health care needs of the nation, and timely, accurate, and complete data are essential. The newly negotiated agreement to share data among BPJS-K, MOH, and others at the national level is an important step in maintaining this central role of the MOH. Within the MOH, coordination between the two departments responsible for health information reporting could be strengthened with roles and responsibilities clarified. Incentives and adverse consequences should be put in place to ensure complete and timely reporting from public and private health care facilities and government health offices.

- Development partners and the GOI should reinforce and build on locally developed governance mechanisms, such as Musrenbang, complaints mechanisms, village meetings, and national-level coordination groups.

As part of this effort, education and capacity building among non-government stakeholders, especially at the sub-national level, can increase use of effective accountability mechanisms. It is difficult to achieve impact at scale starting at the community level in such a large, decentralized country. Development partners can consider building on successful experiences of recent programs (for example, National Community Empowerment Program (PNPM), Kinerja) and to employ a peer-to-peer learning mechanism for districts and provinces to share lessons learned, tested tools, and techniques for rolling out successful interventions. It is time to invest more in communicating the specifics of JKN policy: eligibility among the poor, how to enroll, and the benefits covered. Development partners should continue to prioritize sustainability and country ownership, and support Indonesia's move toward JKN by integrating governance and health components in their programming. Development partner support for capacity building is needed at the district, provincial, and national levels, and work with CSOs could focus on increasing accountability. Programming must address regional levels of government to ensure local buy-in, and national-level engagement to ensure that programs align with national priorities, and are tracked and supervised; and to allow for potential replication and dissemination of lessons learned. It is only by embracing the political reality of the decentralized nature of the country that health sector programming will achieve its full potential in scale and lasting impact.

- The Ministry of Villages and Disadvantaged Areas, the MOH, and sub-national governments can learn from the success of prior community empowerment programs (such as PNPM – see Social Protection chapter), which have shown that community engagement, providing a menu of priority activities, guiding the prioritization process, and supporting increased transparency in spending and results can increase service utilization.

At the local level, people appreciate clear targets, flexible uses of funding, and the ability to track progress against objectives. The GOI can provide support to villages and districts in the form of templates for proposals and a menu of activities/funding uses villages can propose. Implementation of the village application process could be monitored by the Ministry of Villages and/or by provincial or district government offices with assistance offered by the Ministry of Villages (potentially with development partner support) where the system shows weakness (as indicated by funds not effectively being allocated and utilized to meet the communities' needs).

4. HEALTH FINANCING

4.1 Overview

As a lower middle-income country with an increasing resource envelope for health and an ambitious agenda to achieve universal health coverage by 2019, Indonesia is at a turning point in its health financing history. The initiation of the JKN, the single-payer national health insurance scheme, in 2014 has already begun to transform parts of the health financing landscape. JKN is consolidating various previously existing financing schemes under one umbrella scheme, expanding access to voluntary insurance to those without prior coverage, and recentralizing the locus of a portion of health financing authority. As such, it offers the potential for improved financial protection and access to care for the population, and the potential to improve quality and achieve better health outcomes through the new provider payment system. But Indonesia also faces serious challenges in making the JKN vision a reality, and only a relatively small portion of total health financing is flowing through JKN thus far.

This chapter presents an overview of health financing strengths, challenges, and opportunities in Indonesia.[7] The WHO defines health financing as the "function of a health system concerned with the mobilization, accumulation and allocation of money to cover the health needs of the people, individually and collectively, in the health system." It states that the "purpose of health financing is to make funding available, as well as to set the right financial incentives to providers, to ensure that all individuals have access to effective public health and personal health care" (WHO 2000).

Health financing has three key functions: revenue collection (raising sufficient money for the health system), risk pooling (combining funds raised so individuals are protected from catastrophic costs and the burden of health spending is distributed equitably), and purchasing of services (allocating funds efficiently and effectively to health service providers). This chapter addresses each key health financing function in turn, and concludes with a set of strategic opportunities for consideration by key stakeholders.

[7] In preparation for the development of the MOH's Strategic Plan (the *Renstra)* in 2014, Indonesia's National Development Planning Agency commissioned a series of background papers, including an excellent review on health financing issues (Langenbrunner et al. 2014). The reader is encouraged to consult that highly comprehensive and extensive review for more details than can be presented in this brief analysis.

4.2 Selected Actors in Health Financing

For reference throughout this section, key actors in the stewardship of health financing are below.

Table 11: Key Actors in Health Stewardship

Actor	Acronym	Role
Ministry of Finance	MOF	Sets national budget, including budget for MOH and BPJS Approves JKN provider payment rates and premiums
National Social Security Council	DJSN	Appointed Board that oversees and monitors the implementation of the JKN national health insurance scheme; reports to the President Formulates social security policies in health and social protection sectors
Financial Services Authority	OJK	Regulates and supervises the financial services sector (including banking and capital markets) and provides financial oversight of BPJS
Ministry of Health, Center for Health Financing and Insurance	PPJK	Oversees development and revision of health financing policy and regulations on behalf of the Ministry of Health (MOH) PPJK's Health Financing Division is responsible for conducting National and District Health Accounts, economic evaluations, and costing studies PPJK's Health Insurance Division is responsible for setting JKN provider payment rates and premiums (in collaboration with MOF), and collaborates with other MOH units to establish drug lists and develop clinical guidelines for JKN Oversees financing for subsidy-eligible JKN beneficiaries
Ministry of Health, Directorate of MCH	MOH, DG GIKIA	Oversees DAK and BOK funding to district-level facilities
Social Security Agency (Health)	BPJS-Kesehatan	Implements the JKN insurance scheme, including enrolling beneficiaries, collecting premiums, managing funds, and processing payments to health care providers
Ministry of Home Affairs	MOHA	Oversees allocation of decentralization funds to districts
District Governments, District Health Offices	DHO	District governments set district health budgets DHOs oversee district-level health system, including service delivery at primary and secondary care levels
Health care facilities (puskesmas, hospitals)		Plan for, allocate, and utilize government funds to provide services (including capitation payments and claims reimbursements for INA-CBG-covered services)

4.3 Generating Revenues for Health

The government of Indonesia has made significant efforts in recent years to increase health spending and spend more on the poor and on priority health needs, such as reducing maternal and newborn mortality and improving maternal and child health. Nearly all of Indonesia's health financing is sourced domestically.

4.3.1 Sources of Health Financing as of 2012/2013

The most recent National Health Accounts (NHA) estimation is for the year 2012, prior to the roll-out of JKN (MOH, University of Indonesia, and DFAT 2015); preliminary 2013 estimates have been produced but not yet finalized. For 2012, Indonesia's total health expenditure was Rp. 252.4 trillion (US$26.9 billion[8]), or approximately Rp. 1.05 million (USD$112) per capita per year. This represented 3.1 percent of Indonesia's GDP – lower than what most of Indonesia's neighbors were spending on health in 2013, such as Thailand (4.6 percent), Philippines (4.4 percent), China (5.6 percent), and Vietnam (6.0 percent) (WHO 2015a). On a monthly basis, total health expenditures per capita totaled about Rp. 88,000 (around US$9). By way of comparison, the monthly JKN premium paid by the government for the subsidy-eligible poor is much lower, set at Rp. 19,225 (US$2).

The Indonesian government's contribution to health spending (as a proportion of total health expenditure) has been increasing over the past decade. It accounted for 39 percent of total health expenditure by 2012 and an estimated 40 percent by 2013. Of that government contribution, approximately 18 percent was managed by the central government (the MOH and other ministries), 64 percent was managed by districts and provinces, and 18 percent was managed by the various social security funds that were precursors to JKN.

Districts have their own directly raised revenue sources (local taxes, excise taxes, and fees on natural resources), but the bulk of their funds derive from transfers from the central-level budget. Although Law 36/2009 mandates that all local governments allocate at least 10 percent of their budgets (APBD) to health, fewer than half of all local governments did so in 2013.

Table 12: Health Financing Indicators for Selected Countries (2012 and 2013)

Country	Total Health Expenditure per Capita (US$)	Total Health Expenditure as Percentage of GDP	Government Health Expenditure as Percentage of Total Health Expenditure	Government Health Expenditure as Percentage of Total Government Expenditure	Out-of-pocket Expenditure on Health as a Percentage of Total Health Expenditure
China	$367	5.6%	56%	12.6%	34%
Indonesia	**$112**	**3.1%**	**39%**	**6.6%**	**45%**
Philippines	$122	4.4%	32%	8.5%	57%
Thailand	$264	4.6%	80%	17.0%	11%
Vietnam	$111	6.0%	42%	9.3%	49%
Southeast Asia regional average	$71	3.8%	39%	6.0%	51%
Lower middle-income countries	$88	4.2%	37%	6.2%	55%

Source: WHO Global Health Expenditure Database 2015a; MOH, University of Indonesia and DFAT 2015

[8] 2012 exchange rate used for NHA 2012 results (US $1 = Rp. 9,383).

Box 3: Tracking Health Spending Using National and District Health Accounts

The System of Health Accounts (SHA), also known as National Health Accounts (NHA), is the internationally standardized methodology for describing and analyzing the financing of health systems. By systematically tracking the flow of expenditures in the health system, Health Accounts provide critical information for health policymakers and planners, answering questions such as *Who pays for health care? How much do they spend and on what types of services? How are funds distributed across different health services and health care facilities? What proportion of spending goes to HIV/AIDS, tuberculosis, or other specific disease areas?* Health Accounts data help in developing national health financing strategies, making financial projections of a country's health financing requirements, and comparing a country's experiences with the past or with those of other countries. The WHO recommends that all countries conduct Health Accounts estimations at least every two years (WHO Health Accounts website).

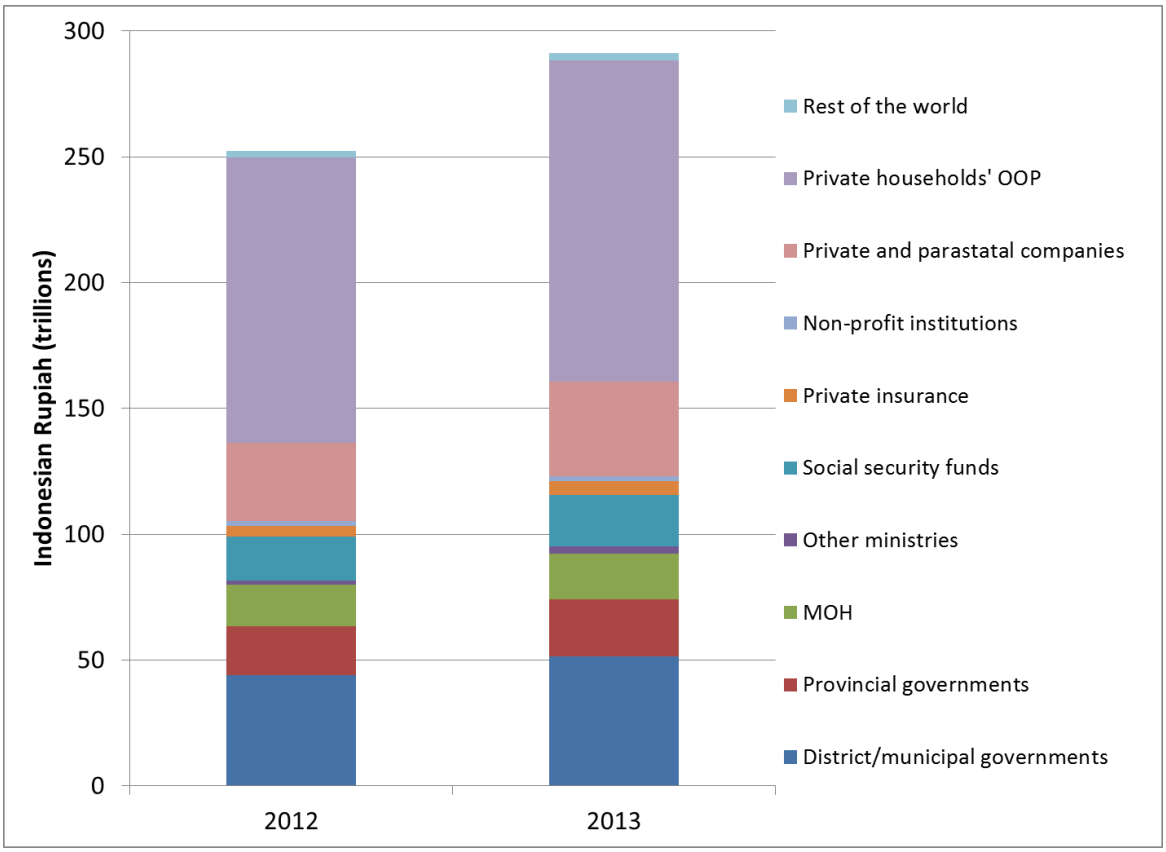
Indonesia's MOH has been compiling NHA estimates since 2004 in collaboration with the University of Indonesia. The most recent completed estimation is for 2012 (MOH et al. 2015), preliminary results have been estimated for 2013, and efforts are currently ongoing to generate updated estimates that will reflect the roll-out of JKN in 2014. The DFAT-funded AIPHSS program has provided extensive technical assistance to help in the production and use of Health Accounts data (although currently the capacity for health accounting lies with the University of Indonesia). In addition, given the importance of district-level health financing, academics in Indonesia have adapted and applied the Health Accounts methodology at district level.

Previous Health Accounts estimates in Indonesia highlighted that little government funding was being spent on preventive services, and led to the establishment of the "BOK" dedicated financing stream for public health services at the puskesmas level. Health Accounts also capture information on out-of-pocket spending, which can be measured through household health or consumption surveys. Several respondents in this review suggested that doing District Health Accounts estimates should be made mandatory across Indonesia and conducted at least biannually, if not annually, to help monitor the effects of JKN. Many districts would likely need technical assistance to learn and apply this methodology.

On the private health spending side, out-of-pocket spending by households – though it has been declining as a share of total health expenditure over the past decade (Figure 6) – still represented nearly 45 percent of total health expenditure in 2012. It dropped slightly to 44 percent in 2013, according to preliminary NHA estimates. This is above the average compared to other countries in the region and a greater share than recommended by the WHO (15-20 percent) (WHO 2010). It puts many low- and middle-income households at risk of impoverishment from health spending (Xu et al. 2005), especially given that around 40 percent of Indonesia's population lives on less than US$2 a day (World Bank 2015a). High levels of out-of-pocket spending also pose significant financial barriers to accessing health care. Out-of-pocket spending goes to private health sector providers, medicines, and user fees at public facilities.

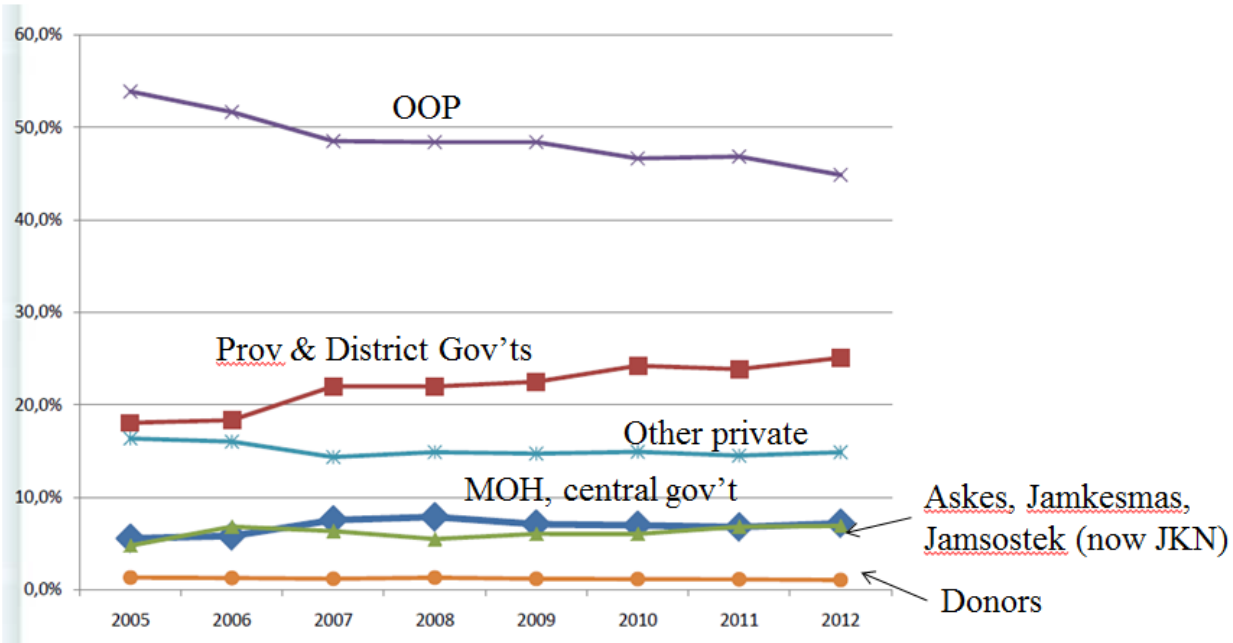
Private health insurance played a minor role in health financing in 2012, accounting for less than 2 percent of total health expenditure. Private employers played a more substantial role in funding health care for their employees, contributing over 12 percent of total health expenditure.

Figure 6. Who Managed Health Spending in 2012 and 2013?



Sources: MOH, University of Indonesia and DFAT 2015; Center for Health Economics and Policy Studies (CHEPS) 2015

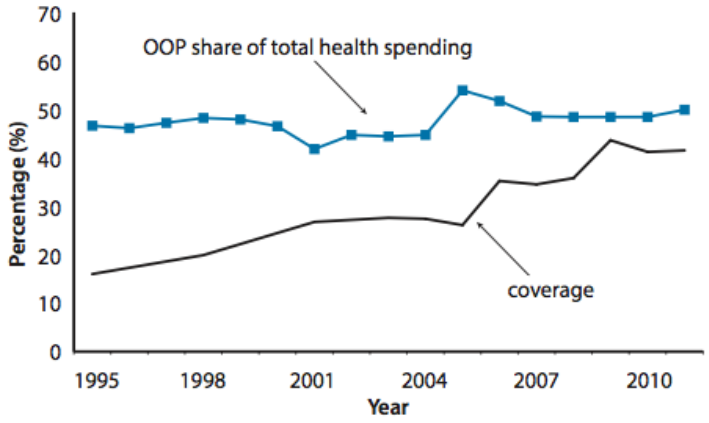
Figure 7: Trends in Sources of Health Financing, 2005-2012



International development partners play a relatively minor role in Indonesia's overall health financing, contributing around 1 percent of total health expenditure. Donor contributions constitute a substantial portion of some vertical programs, however; more than 60 percent of spending on HIV/AIDS, TB case-finding, and malaria surveillance comes from donors (MOH, University of Indonesia, and DFAT 2015).

Of course, transformational reforms in the health financing landscape have taken place since 2012, quickly dating this NHA information. Central-level government spending has increased since 2012, and it is hoped that out-of-pocket spending has been reduced as a proportion of total health expenditure. There is no guarantee of this however; as household health insurance coverage rates increased between 2005 and 2011 (Figure 7), the out-of-pocket share of total health spending remained persistently high (Harimurti et al. 2013a). Several government respondents in this assessment shared their perception that the poor continue to pay a lot out-of-pocket; one hypothesized that many are still unaware of their JKN benefits, and many don't use their benefits because of other barriers, such as transportation costs.

Figure 8: Coverage Versus OOP Share of Total Health Spending, 1995-2011



Source: Harimurti et al. 2013a

At the Indonesian Health Economics Association conference in April 2015, the Minister of Finance stated that the GOI will increase the national budget for health from 3.9 percent (2015) to 5.0 percent (2016) of the national budget (APBN); later news reports have confirmed this greater than 30 percent increase. This represents a dramatic increase and demonstrates the government's commitment to expanding funding for health as part of the effort to achieve UHC. The increase will reportedly largely be allocated to increased spending on subsidized insurance premiums for the poor and near-poor, as well as some increased transfers to district-level primary health care facilities for prevention and outreach activities, and increased allocations for medicines and supplies ("vertical program" drug procurements, vaccines, and buffer stocks of essential drugs), among other priorities.

Given increasing resources being made available for health, one challenge for the MOH continues to be budget execution rates (or the amount of the allocated budget that is actually disbursed and expended). Audited MOF reports have indicated rates from approximately 92 percent to 94 percent in the past three years (MOH 2012, MOH 2013, MOH 2014f) meaning that the MOH is unable to utilize all of the funds it has been allocated. It will be difficult to advocate with the MOF for more health resources if spending rates remain low.

4.4 Ensuring the Sustainability of Financing

While government spending on health is growing, greater demands for health care over the next few years will mean a need for even more health sector funding. Consumer use of health care is expected to

rise substantially due to population growth (about 1.2 percent per year), aging (the number of elderly will almost double to 23 million by 2025), the ongoing epidemiologic transition (changing disease profile to non-communicable diseases (NCDs) requiring chronic management), a growing middle class with expectations of better quality care, and the "insurance effect" as JKN expands coverage in the future (Langenbrunner et al. 2014). The government is aware that a substantial supply-side expansion – of health care workers, infrastructure, and medicines and supplies – through both the public and private sectors will be needed to handle this increase in demand (see the Human Resources for Health and Service Delivery chapters for more details). Key informants interviewed cautioned that supply side-constraints are acting as an implicit cost-management strategy; if health infrastructure and the health workforce were adequate to meet demand, utilization and hence the costs of the JKN program would be higher. The World Bank made a similar assessment of supply-side constraints to the former Jamkesmas program as well (Harimurti et al. 2013b). Indonesia's National Medium-Term Strategy for Health 2015-2019 outlines targets for this supply-side expansion, including the construction of 184 regional referral hospitals and 14 national referral hospitals.

In the short term, the MOF and BPJS-K are focused on ensuring the sustainability of the BPJS-K health insurance fund. In its first year of operation, the BPJS-K fund reportedly ran a deficit; claims reimbursements exceeded contributions received by 4 percent. This has been witnessed in other countries in the early years of implementing social health insurance; health care utilization typically increases among those newly covered by insurance, especially those with the greatest health needs. The MOF has set aside some funding to cover initial expected deficits, and it essentially serves as a guarantor of the BPJS-K fund. However, to meet growing demand, projections show that government spending and premiums will likely need to be adjusted upward in the future (Langenbrunner et al. 2014). In these early years of social health insurance expansion, the tension between the BPJS's function as social insurance agency (to achieve universal coverage) and as a financially sustainable insurer (to control costs and remain solvent) is visible. Open questions that the government must consider include:

- Is the government's top priority expanding coverage of health services and ensuring access for the sick – which is likely to manifest as adverse selection and cost escalation in the short term – or is the priority promoting financial solvency of the fund? Stated differently, in the early phases of JKN implementation to what extent should BPJS-K focus on cost containment measures (such as waiting periods and reducing payments to providers) that could suppress utilization among those in need of services? With the currently available resource envelope and the current premium collection and provider payment system, the two priorities are in tension. Is there political will to expand the resource envelope further?
- To what extent should the MOF continue to guarantee the liquidity of the BPJS-K fund?
- Should premium levels be increased to accommodate greater expected utilization of services? To what extent should premium levels reflect the actual costs of health care, given Indonesia's highly subsidized government health system? Over time, will a greater proportion of government health financing flow through the insurance system – such as provider salaries, which are currently funded through a separate stream?
- What savings could be gained through improved clinical case management (especially of chronic diseases) and better prevention efforts?
- How could more insurance contributions from healthy citizens be encouraged? Are the costs of gathering premiums from informal sector workers worth the value of funds collected? How could these administrative costs be minimized?

The government is also actively considering innovative options for raising additional revenues for the health sector. Other options under consideration include so-called "sin taxes," such as tobacco taxes,

earmarked for health; countries such as the Philippines, Costa Rica, and India have very successfully used this approach (WHO 2015c; Cotlear et al. 2015). Indonesia already earmarks some tobacco taxes for social sector programs (Policy Cures 2013). Several academics interviewed for this assessment were supportive of exploring additional tobacco tax options.

Facilitating automatic collection of premiums from organized groups of informal sector workers (such as agricultural workers) may be another strategy, as could taxes on mobile phone airtime, but the global evidence base is very limited. Vietnam has used individual home-based visits to collect premiums in rural areas, as well as working with local communes; Ghana and the Philippines have leveraged organized community groups and cooperatives; and Mali is exploring mobile-based premium collection by mutuelles (Bonfert et al. 2015). The administrative costs for collecting premiums from the informal sector are usually quite high, especially in remote and difficult-to-reach areas. In general, international evidence (from Ghana, Peru, and Vietnam, for example) indicates that voluntary premium contributions from the informal sector rarely constitute more than a small fraction of total revenues for UHC programs (Cotlear et al. 2015). This is an area ripe for additional research and support.[9]

4.5 Risk Pooling

This section describes strengths and challenges in Indonesia's efforts to remove financial access barriers for those in need of health care and to provide households financial protection from burdensome health care costs.

Risk pooling implies an insurance function – spreading financial contributions to health care across the healthy and sick, rich and poor. It is important to emphasize, however, that insurance is not the primary mechanism for pooling health financing risks in Indonesia. Supply-side government budgets (for infrastructure, operational costs, and health worker salaries), financed through taxes and other general revenue sources, play a much larger role. In fact, as of 2012 less than one-quarter of all government spending on health flowed through health insurance

Box 4: Setting Contribution Rates Under JKN

Setting appropriate levels for premium and payroll tax contributions under JKN (however one may define "appropriate") is a highly politicized task with significant repercussions for government expenditures, health services availability and quality, and household outlays. Premium rates are encoded in law. They establish the contribution made by the MOF on behalf of subsidy-eligible beneficiaries – currently around 35% of the population.

MOF contributions for subsidy-eligible beneficiaries: The Askeskin program, established in 2005, provided subsidized coverage to the poor, and its MOF contribution rates were originally set at Rp. 5,000 per beneficiary per month. Benefits covered primary care services. MOF contributions were increased to Rp. 6,000 per month when the program was renamed Jamkesmas (2009) and to Rp. 8,000 per month in 2013 as benefits expanded. With additional hospital care coverage under JKN, the contribution for the subsidy-eligible (PBI) was increased to Rp. 19,255 per month in 2014.

Premiums for voluntary enrollees: Premiums range from Rp. 25,500 (for class III hospital wards) to Rp. 59,500 per month (for class I hospital wards).

Payroll taxes for formal sector employees: Payroll tax rates for JKN were set based on employee contributions under the former ASKES insurance system.

Several key informants interviewed are currently conducting data analysis to inform increases to the premium levels for subsidy-eligible groups. This analysis is being overseen by DJSN with funding from GIZ, and the higher premium levels are intended to be incorporated into law in 2016. Reportedly, premium levels will reflect the value of health care services reimbursed by BPJS and the likelihood of health care use among covered beneficiaries. However, because public sector facilities are largely financed through direct budget transfers, premiums are only intended to reflect a fraction of total government health care costs.

[9] See for instance Nakhimovsky et al. (2014), *Domestic Innovative Financing for Health: Learning From Country Experience*.

(NHA 2012 and authors' calculations). This proportion has increased since 2012 (by an unknown amount) as subsidized premiums for the poor were increased in 2014 with the rollout of the JKN insurance program. But the remaining approximately three-fourths of government health spending does not flow through insurance. It supports salaries for public sector health workers; government health infrastructure construction and maintenance; some of the operating costs for puskesmas and government hospitals (utilities, drugs, supplies, fuel, in-service training, and administrative costs); health sector management; and pre-service training for health workers. Most funding for health prevention activities is funded through supply-side budgets, not insurance. These costs are covered through funding from various sources (section 4.6 describes funding flows in more detail).

4.5.1 Risk Pooling in JKN

As noted in the introduction, the JKN program is Indonesia's new social health insurance system through which the government aims eventually to expand coverage to all citizens via a combination of subsidized (non-contributory) and contributory financing. As of November 2015, BPJS-K estimated that 155 million individuals or approximately 61 percent of the population were covered by JKN (BPJS-K website).

The legal framework for Indonesia's national social security program was adopted in 2004 (see Governance chapter), laying the foundation for national health insurance. In 2011, BPJS-K was established as the agency responsible for administering the health insurance fund. JKN was launched on January 1, 2014 with a mandate to provide comprehensive health care services and social protection in health.

Key aspects of JKN include the following (for more information, see Langenbrunner et al. 2014; Republik Indonesia 2012; Marzoeki et al. 2014, among others):

- JKN is consolidating a number of previously existing health coverage programs under one umbrella (see Table 12). Expansion to various population segments is being phased in from 2015 to 2019.
- It is financed through a mix of payroll taxes (collected from formal sector employers and employees), premiums (to be paid by those not employed in the formal sector), and government subsidies (premiums for the poor and near-poor, who are referred to in Bahasa as PBI, are fully paid by the MOF, via the MOH budget). According to the Health Planning Unit at the MOH, 42 percent of the MOH budget was allocated to cover premiums for the poor and near-poor in 2014, 39.7 percent in 2015, and a proposed 39.5 percent in 2016.
- JKN covers a comprehensive benefits package of primary and hospital care services, with few exclusions (such as in vitro fertilization, cosmetic surgery, and medical devices). There are no lifetime limits on payments, and there are no co-payments or other co-financing from beneficiaries for covered services.
- JKN has a single benefit package for all beneficiaries, with one exception: individual contributors can pay higher premiums to permit stays in nicer (class I or II) hospital wards. Subsidy-eligible beneficiaries (PBI) may only stay in class III hospital wards.
- Limitations in the supply of health care infrastructure and human resources in many parts of Indonesia mean that residents in rural and remote areas have less access to JKN benefits than those in urban areas. De facto, this means that government subsidies for JKN flow to areas where service coverage is greatest.
- JKN uses a single-payer model, with BPJS-K handling all payments to public and private health facilities. In general terms, primary care facilities received fixed payments per enrolled beneficiary

(capitation) and hospitals receive case-based payments through the INA-CBG payment system. (Provider payment is discussed in greater detail below.)

- Private insurance plays a minor role in the health financing system (accounting for less than 2 percent of health expenditures, as of the 2013 NHA). It primarily provides additional coverage for services not included in JKN. Prior to JKN, some private sector employees were covered under more generous private insurance schemes; there is some resistance to giving up these superior benefits, and integrating these beneficiaries into the broader scheme is a challenge (The Economist 2015).

Table 13: Categories of Health Insurance Schemes Being Consolidated into JKN and Their Coverage as Jan. 1, 2014

Former program	Population covered	Number (2014)	Payment mechanism
Askes	Civil servants, dependents, retirees	16.3 million	Payroll tax deductions, with contribution maximum† • Government workers: 2% of (worker), 3% (government) • Other workers: 1% (worker), 4% (employer)
Military and police	Military and police	4.2 million	
Jamsostek	Private formal sector workers, dependents	8.1 million	
Jamkesmas	Poor and near-poor (35% of population) according to government listing – now referred to as PBI	86.4 million	MOF pays full premium (Rp. 19,225 or US$2 per month)
Jamkesda	District and provincial schemes for poor and near-poor groups	Estimates range from 4.5 million to 65 million*	Premiums may be paid by district and provincial governments
(none)	Informal sector workers and nonworkers		Voluntary monthly premium contributions • Class 1 hospital wards: Rp. 59.500 (US$5) • Class 2 wards: Rp. 42.500 (US$3) • Class 3 wards: Rp. 25,500 (US$2)

Source: Moeloek 2015 except where noted. *CHEPS 2014

† The monthly salary maximum for calculating the health security program contribution in 2015 was Rp. 4,725,000 (US$369/month).

4.5.2 Challenges Related to Risk Pooling

1) Covering the non-poor informal sector

Arguably one of the greatest challenges facing the JKN program is expanding coverage to the "missing middle" of Indonesia's population – meaning those who are not categorized as poor or near-poor (these two groups being eligible for fully subsidized coverage paid for by the government) and those who are not formally employed (who are covered through payroll tax contributions). Largely consisting of non-poor informal sector workers, these more than 100 million individuals are intended to begin making premium contributions voluntarily by 2019.

As noted above, international evidence suggests that voluntary premium payment is an unpromising mechanism for covering the informal sector at scale, at least in the short term (Langenbrunner et al. 2014; Tandon 2015). Countries such as Vietnam that have relied on voluntary contributory schemes have not yet

achieved UHC. Thailand achieved universal coverage not through voluntary contributions, but rather through subsidized coverage paid for with general government revenues. Key informants interviewed for this review in academia and the government concurred with this view, expressing concern that the government will not be able to achieve universal coverage of the informal sector through this approach. Informants noted that the administrative costs of premium collection from the informal sector can be very high, possibly higher than the premiums themselves (Langenbrunner et al. 2014). Research currently being conducted with support from BPJS-K is finding low willingness to pay for JKN coverage among the non-poor informal sector because of a perception that the quality of care in puskesmas and public hospitals is poor, and not enough higher-quality private clinics have contracted with BPJS.

In the first year of JKN implementation, BPJS-K has been focused on scaling up its basic systems for managing beneficiary enrollment and provider payment. As such, it is just beginning to make a concerted effort to enroll informal sector families. In the coming year, it will be important for the government to articulate a clear strategy to promote enrollment and contributions from these groups. This might necessitate market segmentation analysis, targeted approaches for sub-groups (agricultural workers, factory workers, street vendors, etc.) based on their specific financial circumstances and situations, and efforts to maximize the "convenience" of making contributions (such as using mobile money, facilitating payments at local kiosks, adding premiums to electricity bills, or encouraging payments at harvest time). PhilHealth has public-private partnerships with banks and money transfer companies to make premium payment accessible to the informal sector. It has also sought to offer flexibility in payment schedules to its enrollees: payments for the Informal Economy Membership Program can be paid quarterly, semi-annually, or annually (Bonfert et al. 2015). In Kenya, the National Hospital Insurance Fund is partnering with a leading telecommunications company to facilitate mobile money payments for premiums from informal workers. An incremental payment option allows workers to transmit funds to the Fund as they become available over the course of a payment period.

In addition, the government may need to change its assumptions about the timeframe by which informal sector workers will start paying into the system; it seems unlikely that this will happen by 2019.

2) Integrating coverage for private sector employees

Working with private employers to transition their employees from the former Jamsostek mandatory insurance program for private formal sector workers and other private insurance plans to JKN is also a challenge for BPJS. This transition is mandated by law, and including these workers in the JKN risk pool is essential to the long-term financial sustainability of JKN since private sector employees tend to be both healthier and have higher incomes than the general population. However, some private employers have reportedly been slow to join JKN because they perceive that the quality of services at many covered facilities is poor and the benefits package less generous than what their workers had access to previously.

3) Integrating the Jamkesda district and provincial schemes

A third challenge for BPJS-K is integrating district- and provincial-level government health insurance schemes, known as *Jamkesda*, into JKN. The majority of these have been established by district governments over the past decade to provide basic health coverage to those not covered by *Jamkesmas* (CHEPS 2014; Trisnantoro et al. 2014b). Estimates of the number covered by such schemes range from 5 million (Moeloek 2015) to 70 million (CHEPS 2014) and the exact number of schemes is not known (a CHEPS study estimates that as many as 460 districts may have a *Jamkesda*). The schemes vary greatly in terms of the population groups and benefits they cover, premium levels, and the ways in which they are managed and organized (Harimurti et al. 2013a; CHEPS 2014).

Jamkesda integration into JKN is reportedly a politicized subject. MOF respondents commented that no single institution has clear responsibility for managing the process of *Jamkesda* integration, making the exact manner by which this integration will occur murky. The central-level government is eager to access any possible contributions from district and provincial sources, while local governments may be reluctant to lose

authority over their funds by contributing to the national scheme. With varying benefit packages, premium levels, and categories of eligible beneficiaries, the process is likely to be complicated at best. One respondent in this analysis suggested that the government should consider what complementary roles the district and provincial schemes might play in health financing, such as funding transportation subsidies or vouchers; covering meal allowances for family members accompanying loved ones to hospital; or covering long-term care for the elderly.

4) Adverse selection and moral hazard

Given their implications for financial sustainability, both adverse selection (the phenomenon that sicker people are more likely to enroll in health insurance than healthy people) and moral hazard (the tendency for insured beneficiaries to utilize more health care services than they truly need, because the services are "free") are topics of concern for central-level government institutions that oversee JKN. Both phenomena can cause health care expenditures to increase more rapidly than premium contributions. Indeed, as noted above, in 2014 BPJS-K claims ratios (the ratio of health care reimbursements paid to premium contributions received) were much higher among those who voluntarily enrolled in JKN than among those whose premiums were paid by the government (whose claims ratio was far below 100 percent), according to key informants interviewed.

Over time, encouraging healthy individuals to contribute premium payments to JKN will strengthen the insurance scheme's financial sustainability. But at this point in JKN's history, it is arguable that adverse selection should not be the government's the primary concern; the initial goal of JKN is to help expand access to individuals who are sick and who historically have not had financial access to services – exactly those most in need of insurance. Attention should be paid to encouraging the subsidized poor and near-poor to use their benefits and getting the healthy to sign up. Steps such as delaying eligibility for insurance benefits (BPJS-K instituted a seven-day waiting period in January 2015, which was increased to 14 days in June 2015) and limiting the benefits package should be reviewed carefully for their impacts on utilization, costs, health outcomes, and catastrophic spending on health.

4.6 Strategic Purchasing: Resource Allocation and Provider Payment

This section reviews strengths and challenges related to how financial resources are allocated and distributed to providers of health care services. Strategic purchasing in health refers to government entities proactively

> "deciding which [health] interventions should be purchased, from whom these should be purchased, and how to pay for them. … The purchaser … can focus scarce resources on existing and emerging priorities rather than continuing entrenched historical spending patterns." (Langenbrunner, Cashin, and O'Dougherty, eds. 2009)

With the advent of JKN and the establishment of a single payer agency, Indonesia faces a great historical opportunity to leverage its purchasing power in health – to improve the quality and efficiency of service delivery, focus on core health priorities, and achieve greater value for money. This section first maps how government health sector resources are allocated to different levels of the health system, then describes the specific mechanisms used to pay providers.

4.6.1 Geographic Patterns of Health Resource Allocation

In Indonesia, there are large variations in per capita spending on health across urban and rural settings and across provinces and districts. According to MOF 2012 district expenditure data, the highest-

spending district was spending 164 times more per capita on health than the lowest-spending district (Dunlop 2015). Differences in funding allocations across districts reflect the fact that poorer, more remote districts have fewer local resources, greater demands from other development sectors (such as infrastructure and education), and sometimes weaker governance. Central government transfers to districts in the form of block grants are meant to compensate somewhat for these geographic inequities (Trisnantoro et al. 2014a). Unfortunately, inequity may actually be widening because of higher JKN payments for hospital care, while geographic access to care for the poor remains limited.

Approximately half of total health expenditure in 2012 was spent on hospital-based care (MOH, University of Indonesia, and DFAT 2015). Around 8 percent was allocated to preventive and public health services. One concern that has been raised about JKN's provider payment mechanism is that it may incentivize the provision of curative and clinic-based services at the expense of preventive and community-based care (Gani 2015). Over the coming years, it will be important to evaluate this concern empirically using Health Accounts estimations and survey data.

4.6.2 Decentralized Governance and Resource Allocation

District governments are responsible for providing primary health care services and basic secondary services. Since decentralization, the MOH has had little authority over the allocation of spending at district level, including spending on health (Trisnantoro et al. 2014a). Law 36 of 2003 mandated that district governments allocate at least 10 percent of their budgets to health, but as of 2013 fewer than half of all districts had done so; the actual range is around 6-8 percent (Ministry of Health, University of Indonesia, and DFAT 2015). As noted in section 4.3 above, district governments spent over half of government health financing in 2012; the central government spent less than one-quarter of the total and provincial governments managed the remainder (Dunlop 2015). Tables 14 and 15 summarize some of the complex funding transfers that characterize Indonesia's health financing landscape.

In 2010, in response to concerns that since decentralization the MOH now had too little influence over district health service provision and that primary care had been under-prioritized by district governments, the central government established a special funding channel from the MOH to the puskesmas, called BOK. BOK funds were earmarked for the provision of prevention, outreach, and health promotion services, though they were not tied to performance. District Health Accounts (DHA) estimations conducted since 2010 showed that the BOK was sometimes the only source of public health spending in some districts. However, local auditors questioned the legality of the BOK transfer mechanism, according to key informants. The central government had used a "work-around" to channel this money to districts; the specific mechanism was technically permissible only for capital investments, not operational costs. As of 2016, the BOK transfers will be discontinued and rolled into DAK transfers, which are decentralization transfers to districts earmarked for specific development priorities including health (see Box 4.3). DAK funds are transferred directly to district governments – not district health offices or puskesmas – so this new arrangement could lead to delays in the release of funds to the puskesmas, as DAK funds are overseen by district parliaments. Clearly, there is significant ongoing debate around the locus of control over resource allocation.

Table 14. Summary of Intra-governmental Funding Streams for Health (non-JKN)

Revenue stream	Flow	Use or purpose

APBN (Central budget)	From MOF to MOH
	
	From MOF to BPOM, BKKBN, and other health agencies
		• MOH operations, which includes among other things:
		  ○ Health sector stewardship and management
		  ○ Funding for tertiary (class A) hospitals, overseen by the MOH
		  ○ Funding for JKN premiums for the poor and near-poor (transfer to BPJS-K)
		• Operations of other national agencies involved in the health sector, such as BPOM (Food and Drug Administration) and BKKBN (Family Planning Agency)

BOK	From MOH to puskesmas [*Discontinued in 2016 and incorporated into DAK*]	• Earmarked transfers directly from MOH to puskesmas to support provision of preventive and public health services
Dekonsentrasi	From MOH to PHOs	• Funding for regional (class B) hospitals, overseen by the PHOs

DAU	From MOF to provincial governments and district governments	• Decentralization block grants from central government transferred monthly to provinces and districts.
		• Formula-based allocation mechanism:
		  ○ A "basic allocation" (lump sum + allocation to cover the full wage bill of each sub-national government) and
		  ○ A "fiscal gap" component (calculated as the difference between local fiscal capacity and local expenditure needs). This component aims to improve inter-regional equity, but it is only a proportion of the total DAU pool
		• DAU is partially earmarked for civil servant salaries (including health workers) and the remainder is used at discretion of province/district.

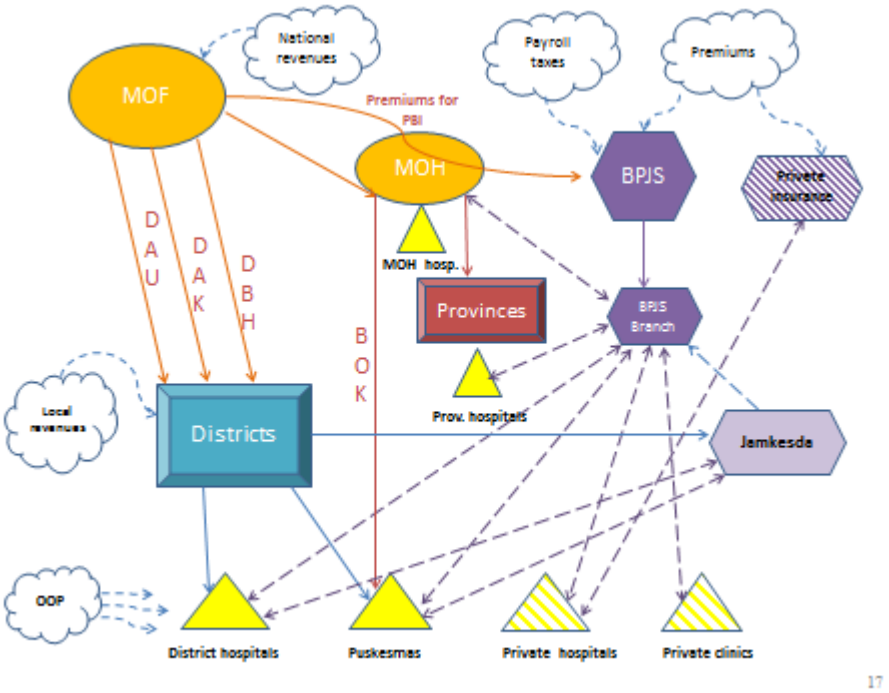
DAK	From MOF to selected provincial governments and district governments	• Earmarked funds for health and other social sectors, and intended for national priority programs. Districts must report to the central government quarterly on the use of these funds.
DBH	From MOF to provincial governments and district governments	• Shared tax and natural resource revenues transferred to subnational level. Can be allocated at local governments' discretion and are sometimes used for health.
OTSUS	From MOF to Special Autonomous Regions	• Transfers to Papua and Aceh regions that may be allocated to health.
PAD (Local revenues)	From district governments to DHOs, from provincial governments to PHOs	• Locally-generated revenues (from taxes, fees, interest, and natural resources) can be allocated by local governments to the health sector at their discretion • Supports operating budgets of the puskesmas, auxiliary health centers, health posts, and district hospitals

Sources: Key informant interviews; Langenbrunner et al. 2014; Trisnantoro et al. 2014a; World Bank 2008.

Table 15. Summary of JKN funding streams

Funding Stream	Flow	Use or Purpose
Payroll taxes	From central government, private employers, and employees to BPJS-K	Pooled in the BPJS-K social insurance fund
Premiums for subsidy-eligible poor and near-poor beneficiaries	From MOH to BPJS-K	Pooled in the BPJS-K social insurance fund
Voluntary premiums	From individuals and families to BPJS-K	Pooled in the BPJS-K social insurance fund
Jamkesda premiums	From District and Provincial Governments to Jamkesda regional insurance schemes *or* From District and Provincial Governments to BPJS-K	Pooled in the Jamkesda schemes *or* (for those schemes which have been integrated into JKN) pooled in the BPJS-K social insurance fund
Capitation payments	From BPJS-K to puskesmas and private sector primary care clinics	Fixed, per- beneficiary payments for primary care services At least 60% of the payment must be allocated for staff incentives and up to 40% may be allocated to operational costs
INA-CBG payments	From BPJS-K to hospitals, private clinics, and puskesmas	Case-based payments that reimburse health facilities on a per-case basis for a list of specific clinical diagnoses. Facilities must submit claims on behalf of JKN beneficiaries. Primarily used by hospitals, but puskesmas and clinics can submit claims for selected priority services such as maternity and delivery care and family planning.

Figure 9: Graphic of Financing Flows



Source: Key informant interviews; Langenbrunner et al. 2014; Trisnantoro et al. 2015a

Perhaps the most important take-away from this complicated resource allocation picture is that financing flows for health remain quite fragmented, especially at the district level, and these flows are particularly difficult for DHOs, puskesmas, and hospital administrators to manage strategically. Developing budgets and plans, tracking resources received, reporting on how various funding streams were used – each of these tasks requires significant management competency. As noted in the Governance chapter, many respondents indicated that DHOs, hospital administrators, and puskesmas heads are in need of capacity strengthening around financial planning and management and budget execution.

4.6.3 Provider Payment Mechanisms

Payments to health facilities and individual providers can have a substantial influence on how well providers perform – including the volume of patients they attract and serve, the types of services they provide, and the quality of those services.[10] The remainder of this section will focus in greater detail on the two main provider payment mechanisms utilized by BPJS, the single payer for the JKN insurance program.

1) Capitation

Capitation can be defined as a payment system where a payment agency pays health care providers a fixed amount per covered patient for a defined set of benefits for a defined period of time – regardless of how much health care the patients actually use. The theoretical advantages of capitation include the ability of the payer to control costs for a known set of services, and the incentive for providers to keep their covered population healthy (via preventive services and good quality care) so as to minimize expensive curative health care use (Langenbrunner, Cashin, and O'Dougherty, eds. 2009). To be effective, a capitation-based payment system requires that the payer have an effective quality monitoring system in place, and that providers are held accountable for under-provision of services or excess referrals (Langenbrunner et al. 2014). If there is no mechanism to monitor and hold providers accountable for quality, providers receiving capitation payments have an incentive to cut costs by underproviding or lowering the quality of services.

Under JKN, Indonesia has put some of these capitation principles into practice. Capitation is used to prospectively pay primary care providers (puskesmas and private primary care clinics) to provide a relatively defined set of services. Facilities receive a fixed payment based on the number of enrolled JKN beneficiaries – subsidy-eligible beneficiaries living within their catchment area, and premium-contributing beneficiaries who have selected that facility as their primary care provider. Initially, the magnitude of the capitation payments varied somewhat based on the size and staffing mix of the facility (for instance, puskesmas with more physicians on staff received higher capitation payments). Recently (subsequent to the field research for this assessment) BPJS-K announced plans to begin varying capitation payments according to a larger set of service-readiness criteria, including the size of the facility, and the presence of particular types of health workers (dentists, nurses, midwives, physicians); patient contact ratios for selected health services; accreditation indicators; and extent of opening hours. Reportedly, capitation rates could be increased by up to 15 percent if a facility meets the targeted service readiness indicators and reduced by up to 25 percent for not meeting any indicators.

Some of the challenges with Indonesia's capitation system, reported by key informants interviewed for this assessment, include:

- Publicly owned puskesmas receive numerous supply-side subsidies from other sources, as described above. For these facilities, capitation payments serve as a "top-up" rather than a prospective payment designed to cover the full cost of service provision.
- Privately owned clinics do not receive other government supply-side subsidies. While capitation payments are slightly higher for private clinics, they still effectively cover a smaller proportion of their full service costs. This is a disincentive for private facilities to contract with BPJS.
- Because JKN has not yet optimized effective systems for tracking and managing referrals, primary

[10] The topic of provider payment mechanisms is broad and complex. For an excellent reference to the payment options available and how to implement them, readers can consult Langenbrunner, Cashin, and O'Dougherty, eds. (2009), *Designing and implementing health care provider payment systems: how-to manuals*.

care clinics may simply refer cases to high-level facilities, rather than absorbing the risk associated with caring for a sicker population. Thus, the incentives to provide well-managed primary care, and to avoid excess referrals, seem to be lacking.

- The central government has provided guidance defining how capitation payments should be utilized, with at least 60 percent of the payment being allocated to staff incentives and up to 40 percent for "operations." As described in greater detail in the Service Delivery chapter, these staff incentives are not generally linked with provider performance, but rather are associated with staff qualifications such as years of education and experience. This represents a lost opportunity to motivate improved quality and performance, and implies that capitation payments may just be a "windfall" to many salaried health workers.

2) Indonesia Case-Based Groups ("INA-CBGs")

BPJS-K pays for hospital care using a prospective case-based system called INA-CBGs, first used under the *Jamkesmas* program. Health care providers are paid for the expected cost of "bundles" of hospital services associated with clinically defined episodes of care. Case-based payments have been described as the middle ground between fee-for-service reimbursement (in which providers are paid for each individual service given to a patient) and capitation; when carefully designed, they may more effectively control overall costs than fee-for-service systems, while still encouraging the provision of good-quality care. In Indonesia, government hospitals and contracted private hospitals submit claims to BPJS-K for each case, listing a specific diagnosis using an ICD-10 code and procedures using ICD-9, and are reimbursed by BPJS-K according to a set reimbursement schedule.

Many sources, including Indonesian government sources, have described the challenges associated with the INA-CBGs in detail (Kementerian PPN/Bappenas 2014, Dunlop 2014, Brodjonegoro 2015). Selected key challenges include:

- Simply put, serious distortions in the case-based grouping software and the associated hospital payment formulas are resulting in some interventions being overcompensated and other undercompensated. This could quickly lead to distortions in clinical care practices, provision of poor quality care, cost escalation, and/or unwillingness of hospitals to contract with BPJS. A continuous mechanism for routinely reviewing service costs, case groupings, and clinical best practices, and then updating case-base payment rates accordingly, is needed. Changes need to be made now but rates will also need to be revised over time, and capacity to manage this process continuously should be institutionalized.
- Inadequate payment amounts to private hospitals are reportedly causing serious problems for participating facilities and creating a disincentive for private hospitals to contract with BPJS. Unlike with capitation, public and private providers receive the same INA-CBG payment amounts for facilities at the same level.
- The INA-CBG distortions combined with insufficient payments mean that hospitals are rapidly learning to "game the system" – upcoding their claims codes to obtain more favorable reimbursements. BPJS-K is still building its capacity to effectively monitor claims for fraud and upcoding, and to conduct medical utilization review that will ensure that the services provided were appropriate for the diagnosis given. Additional capacity building is needed in this area.
- According to key informants, BPJS-K and the MOH are still coming to agreement around standard clinical guidelines for each covered diagnosis code (e.g., which treatments are required for a given diagnosis and are thus reimbursable). Key informants also stated that BPJS-K claims verifiers and hospital coders need more medical coding training; there is a need for more claims verifiers with

medical expertise, as well as a certification program for claims verifiers.

- The capacity of the BPJS-K information technology network is strained. Some facilities are not Internet-connected (only 20 percent of puskesmas have Internet access), and the online claims submission page has been overwhelmed at times. The government is working on this, aiming to have 100 percent of puskesmas connected by 2019 (MOH 2014d).

Currently, PPJK (the Center for Health Financing and Health Insurance at the MOH) in conjunction with the DFAT-funded AIPHSS project is supporting efforts to revise the INA-CBGs. This will reportedly include work on the "grouper" software so that it better reflects actual clinical practice in Indonesia. Revisions to the payment rates themselves may also be made. This is an important opportunity to improve strategic purchasing, given that hospital care accounts for a substantial portion of Indonesia's health spending.

4.6.4 Connecting Payments with Performance

One of the core components of effective strategic purchasing is connecting payments to providers with their performance, as measured by any number of indicators (such as service volumes, rates of referral, population service coverage, health outcome measures, and efficiency measures) (Eichler and De 2008). Under JKN, the two provider payment mechanisms (capitation and CBGs) both could be leveraged to improve this provider-performance link. Indeed, the MOH Strategic Plan 2015-2019 references "pay for performance" initiatives as an important priority (MOH 2015).

The ongoing revisions to the INA-CBGs will of course directly influence health facility and health provider behaviors. In addition to these, a performance element could also be added to capitation payments at the primary care level – there is a huge opportunity here to enhance providers' focus on priority services, such as family planning, high-quality maternal and newborn care, and TB care. In addition, the distribution of incentives within each primary care facility could more explicitly be tied to individual provider or team performance. Looking beyond JKN, budgetary transfers from the central level to the district or health facility level – such as the DAK transfers – could explicitly incorporate a performance element, for instance by providing rewards for achievement of particular coverage targets.

4.6.5 Governance Issues in Strategic Purchasing for Health

As described in greater detail in the Governance chapter, institutional roles and relationships in the health sector are changing quite dramatically with the advent of JKN. This is playing out particularly vividly in the evolving relationship between the MOH – the steward of the population's health and the driver of health policy, but a minority contributor to health financing – and BPJS, the single payer and key implementer of the national health insurance system, which does not have authority to revise health sector policies that impact its functioning. This division of authority offers both opportunities for appropriate stewardship, and governance challenges.

On the opportunities side, the MOH is now mainly responsible for developing "norms, standards, procedures and criteria" for clinical practice. These functions are a good fit for a public health steward. BPJS-K is responsible for implementing the INA-CBGs and reimbursing providers quickly and accurately; these are a good fit for a social insurance agency.

On the challenges side, BPJS-K does not have the authority to revise the INA-CBGs grouping software or payment rates. It is concerned about being held accountable for financial solvency within a system whose payment parameters it does not control. The MOH has the authority to make such changes, but lacks easy access to BPJS-K data; according to some key informants, BPJS-K is not yet openly and proactively sharing its vast repository of diagnostic and payment data. As a payment institution, BPJS-K is

extremely well-placed to promote the provision of high-quality clinical care: it can withhold payment for services of poor quality or inappropriate services, and in theory it could discontinue contracts with facilities that have quality problems. It could also do more to analyze existing data to identify quality of care problems (such as hospital readmissions, excessive lengths of stay, over-provision of C-sections, etc.) However, promoting clinical quality through the establishment and enforcement of standards falls under the MOH's purview.

The two entities can work on improving their collaborative relationship. Developing this relationship and establishing trust will be essential for overcoming the early challenges of JKN implementation.

4.7 Strengths, Weaknesses, Opportunities, and Threats

Table 16: SWOT Analysis for Health Financing

Strengths and Opportunities
• Significant political commitment to achieving UHC by 2019 through JKN. Over 53% of the total population was covered as of the end of 2014 • Fully subsidized health insurance coverage for almost 90 million poor and vulnerable Indonesians • Increasing resources being allocated to health at the central level, almost entirely from domestic sources • Tobacco and other sin taxes could further expand fiscal space for health, while improving health outcomes; taxes on mobile phone airtime, airplane travel, and other innovative strategies could also be considered • Out-of-pocket spending by households has been declining as a share of total health expenditure over the past decade • Single-payer model through BPJS-K provides a historical opportunity for strategic purchasing that could improve the quality and efficiency of service delivery • "Pay for performance" approaches present opportunity to enhance emphasis on priority services and improve the quality of care
Weaknesses and Threats
• Per capita spending on health is still low, relative to regional averages • Increasing demand for health care over the coming years (due to population growth, aging, the growing NCD burden, and improvements in socioeconomic status) may cause cost escalation and need for more health sector funding • Continued reliance on out-of-pocket spending puts families at risk of impoverishment and creates barriers to accessing health care • Supply-side limitations mean that residents in rural and remote areas have less access to JKN benefits than those in urban areas • There are concerns about financial sustainability of BPJS, along with challenges with adverse selection, problems with the hospital provider payment system, and weak voluntary enrollment • Voluntary premium-based financing is unlikely to achieve universal coverage for the informal sector, at least in the short term • Low budget execution rates may limit government willingness to allocate more funding for health • Financing for health is highly fragmented, making strategic resource management difficult; priorities for resource allocation are not always aligned between central and regional levels

4.8 Opportunities

Based upon this rapid review and analysis, we outline a number of opportunities that USAID, the MOH, BPJS, and other government stakeholders may wish to consider.

- Strengthen national-level capacity for stewardship of health financing system

As noted in the Governance chapter, the roles and responsibilities of two of the leading health financing bodies (the MOH's Center for Health Financing and Health Insurance [PPJK]; and the National Social Security Agency [BPJS]) need clarification. DJSN, the Social Security Council with oversight authority over the JKN program, could assist in officially clarifying these roles and responsibilities as well as brokering a more open and trusting relationship between the two institutions.

Both PPJK and BPJS-K would benefit from specific types of capacity building:

- PPJK would benefit from capacity building related to economic evaluation, policy analysis and design, and change management processes. Its technical and advisory role as an oversight, policy development, and regulation agency should be nurtured. In particular, it should play a prominent role in designing and overseeing "pay for performance" pilot programs and promoting their link with improvements in clinical quality. These could include bonus payments to DHOs or health facilities for the achievement of particular population health targets (such as reductions in newborn mortality) or clinical indicator targets (such as use of partograph during labor).
- BPJS-K would benefit from capacity building related to the operational challenges of implementing and managing a vast insurance program. This includes support with functions such as actuarial analysis, medical utilization review and auditing for quality improvement, effective provider credentialing, and IT systems strengthening.
- Both agencies should collaborate around necessary fixes and refinements to the provider payment system, including institutionalization of a mechanism for monitoring and revising INA-CBGs and provider payment rates. Better collaboration is also needed around data sharing and data analysis.
- Institutional responsibility for integrating Jamkesda schemes into BPJS-K needs to be clarified.
- Develop targeted, evidence-based strategies for covering the non-poor informal sector

Encouraging non-poor informal sector workers, especially those who are young and healthy, to enroll in JKN and contribute premiums will be one of Indonesia's core challenges in achieving universal coverage and improving the financial sustainability of the scheme. There are no easy solutions. Several opportunities are worth exploring:

- First, until a better premium collection infrastructure is in place in Indonesia, the government should consider alternative non-contributory approaches for financing care for some of the informal sector – for instance, earmarked taxes on tobacco and energy – and expanding the proportion of the population eligible for subsidized coverage. The MOF and donors may wish to invest in analytics around these alternative resource mobilization strategies.
- Second, BPJS-K should identify sub-groups of this population (such as farmers, fishermen, construction workers, or street vendors) and develop targeted strategies for encouraging and facilitating enrollment. Market segmentation analysis could identify subsets of this diverse population with similar preferences and organizational affiliations; these analytics could inform more focused marketing campaigns and enrollment strategies, such as offering discounted premiums to whole groups who register.

- Relatedly, to promote active enrollment among vulnerable population sub-groups, district governments could be incentivized to enroll targeted beneficiaries. For example, Harimurti et al. (2013a) suggested that some proportion of budget transfers to districts, like DAK, could be based on achieving verified JKN enrollment targets.
- Fourth, BPJS-K could consider innovative approaches to "capture" premium payments by connecting these payments with other common activities, such as purchasing an airplane or bus ticket, selling produce at harvest time, or paying electricity bills.
- Fifth, BPJS-K could promote greater convenience in the registration and premium payment process. Minimize the need to stand in line or travel beyond one's neighborhood by expanding the types of institutions that can accept premium payments. Explore using mobile money to facilitate premium payments.
- Promote strategic purchasing, including performance-based payments

With the advent of JKN, the government may consider myriad opportunities to allocate resources and pay providers more strategically, with greater impact on efficiency and health outcomes. Perhaps the most important overarching objective should be to better link the transfer of health sector payments with verified performance in achieving desired health sector outcomes. Specific opportunities include:

- Incorporate a performance element into BOK or DAK transfers from the central government to the district level. This could be done by holding back a portion of funds until verification that a particular target (e.g., TB treatment coverage) has been achieved, or offering a bonus payment for achieving above-average results.
- Similarly, incorporate a performance element – for achieving service volume, coverage, or quality targets – into capitation payments to primary care facilities (so-called "conditional capitation").
- Investigate how capitation payments are being allocated and utilized at the primary clinic level, and develop strategies (such as improved guidance materials, training, regulations, or payment conditionalities) to ensure that the additional funds are used to improve service provision and quality. Link staff bonuses to demonstrable provider behaviors, such as routine adherence to specific quality protocols, rather than years of service or education. Link capitation payments to provision of community health services, including outreach.
- The provider credentialing process – which is now largely an administrative/documentation process – should evolve into a true provider accreditation process that holds health care facilities accountable for minimum quality standards (see Service Delivery chapter). BPJS, as the single payer, wields substantial financial power to improve facility quality by establishing accreditation and medical utilization review processes that have financial consequences. Facilities, whether public or private, that do not adhere to minimum quality standards should not be receiving government top-ups or case-based payments. At the very least, a process to ensure that such payments are used to bring services up to minimum standards should be put into place.
- Each of these opportunities will require investment in Indonesia's health information systems. Accurate measurement, reporting, and verification of results are foundational elements of performance-based payment systems.
- Improve financial management capacity at district, provincial, and health facility level

Districts are the heart of health care service delivery, and the management burden on DHOs is significant. While health care providers are receiving additional payments from BPJS, DHOs are not singled out for such additional support. A small percentage (say 1%) of BPJS-K payments to facilities in a district could be targeted to the DHO. Under Law 23/2014, DHOs now also have increased responsibility for oversight of district hospitals – and they continue to be responsible for managing fragmented financing flows for health care. In general, many respondents at the central, provincial, and district level as well as external development partners commented that DHOs would benefit from significant capacity building and support in financial management and health sector planning. In addition to external donor programs, PHOs could become hubs for this type of training and capacity building. The role of PHOs as the extension of the MOH has been increasing lately.

- Support needed fixes to JKN provider payment systems

Efforts are already underway to address the acknowledged problems with capitation rates and the INA-CBGs. Some areas that need particular attention:

- Continue to support the revision of Indonesia's case-based payment groupings.
- Improve the evidence base regarding private health sector pricing through market analysis and costing studies. Conduct a study on setting payment rates that will be adequate to engage private providers and promote good quality. Ensure that reimbursement rates do not disincentivize private sector facilities from contracting with BPJS.
- Require empaneled providers to submit verified cost data to BPJS, so that BPJS-K and PPJK can use the data to evaluate and adjust payment rates.
- Institutionalize health resource tracking

With increasing funding allocated to health, careful tracking of those health sector resource flows will become more and more important for accountability, transparency, and effective health sector stewardship. The capacity to produce Health Accounts estimations that provide this detailed tracking data should be institutionalized within the MOH. Also, given that so much health spending is sourced and managed at the district level, the capacity for District Health Accounts also needs to be improved. External technical assistance is already supporting national health accounting, but additional support especially at the district level is needed. Automated tools such as the Health Accounts Production Tool, which is available from the WHO's website, could be utilized for efficiency.

- Advocate for targeting increases in government funding toward core health priorities, such as prevention and health promotion

It is critical to maintain and strengthen Indonesia's emphasis on prevention and community health, even as access to clinical and curative services continues to expand through JKN. Indonesia is a success story on many communicable diseases and its infant and under-five mortality statistics have dropped dramatically over the past 30 years. Adequate financing for primary care and NCD prevention must be maintained. This is a key long-term cost containment strategy for the health system as a whole, and a critical approach to reaching the poorest. More and more curative care funding will "follow the patient" given the INA-CBG reimbursement system, while non-insurance funding for population health services could potentially stagnate. This is especially of concern since capitation payments do not directly incentivize the provision of preventive and community health services under the current system.

- Improve HIV and TB financing

Currently, much of the financing for HIV and TB programs flows through vertical programs, with substantial donor support for second-line treatments and for CSOs that provide outreach (including case finding and treatment compliance) to key populations. Over time, financing for these programs needs to be transferred to domestic sources, both at central and local levels. Development partners can provide technical assistance to facilitate this process. The government should also explore contracting out services, such as outreach to key populations, where CSOs have a comparative advantage.

5. SERVICE DELIVERY IN THE PUBLIC AND PRIVATE SECTORS

5.1 Introduction

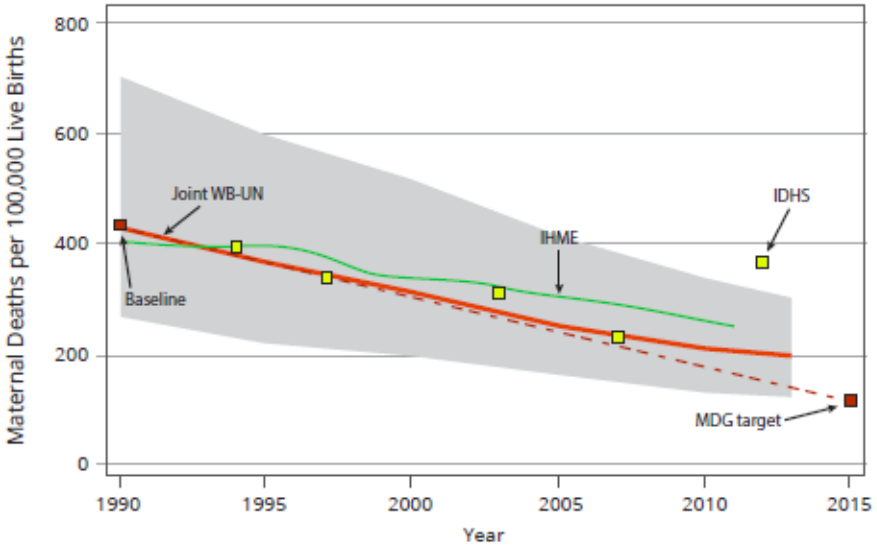
Increasing income levels, combined with expanded health insurance coverage, have led to increasing demand for services at all levels of the Indonesian health system. Responding to these trends within Indonesia's decentralized governance system poses additional challenges given the mix of stakeholders and funding streams. The key themes covered in this chapter are service quality, service readiness and supply constraints, the impact of JKN, and challenges of decentralized management. Special attention was given to maternal health services, an area identified as a priority for both the GOI and USAID. This review of service delivery focuses on key issues most pertinent within the current health sector context; it is not a comprehensive review of health services delivery.

5.2 Overview

5.2.1 Trends in Health Outcomes

As noted in the introduction, Indonesia has made extensive progress in improving health outcomes in the past several decades, and is on track to meet the child health MDGs. The DHS 2012 established that Indonesia's infant mortality rate decreased from 68 deaths per 1,000 live births in 1990 to 32 in 2010, while the under-five mortality rate decreased from 97 deaths per 1,000 live births to 40 over the same period (Statistics Indonesia, National Population and Family Planning Board, and ICF International 2013). Despite progress in these areas, Indonesia's MMR remains high, particularly considering the country's economic status. Although estimates of MMR differ, Figure 10 shows that Indonesia will not achieve MDG Goal 5; the rate of progress in recent years may be declining.

Figure 10: Maternal Mortality Ratio in Indonesia, 1990-2015



Source: World Bank 2014d

5.2.2 Increasing Demand for Health Care

Health care utilization rates for public and private providers have been increasing steadily, particularly for the poorest 40 percent of the population, likely driven by the expansion of insurance coverage targeting this population over the past decade. Inpatient utilization increased dramatically between 2004 and 2012, as shown in Table 17, increasing from 1.0 percent to 1.9 percent of the population seeking services. For the poorest 40 percent of the population, this increase has been three-fold.

Table 17: Outpatient and Inpatient Utilization Rates, 2004-2012

		2004	2005	2006	2007	2009	2010	2011	2012
Outpatient utilization (all)	National	10.1%	9.2%	9.6%	13.6%	15.1%	13.6%	13.4%	12.9%
	Bottom 40%	9.0%	7.9%	8.5%	12.3%	13.5%	12.4%	12.2%	12.9%
Outpatient utilization (private)	National	5.7%	5.3%	5.1%	8.1%	9.2%	8.1%	8.2%	8.1%
	Bottom 40%	4.3%	3.9%	3.8%	6.4%	7.0%	6.4%	6.5%	7.8%
Inpatient utilization (all)	National	1.0%	1.2%	1.2%	2.0%	2.4%	2.5%	2.1%	1.9%
	Bottom 40%	0.6%	0.7%	0.7%	1.3%	1.5%	1.6%	1.4%	1.9%
Inpatient utilization (private)	National	0.4%	0.5%	0.5%	0.8%	1.0%	1.1%	0.9%	0.8%
	Bottom 40%	0.2%	0.2%	0.2%	0.4%	0.5%	0.5%	0.5%	0.8%

Source: Kementarian PPN/Bappenas 2014

Nonetheless, utilization remains low by global standards, and there are large disparities across provinces. Table 18 shows utilization in Indonesia compared with global averages and benchmarks. The number of outpatient visits per person per year in Indonesia is 0.13, significantly below the WHO benchmark of five visits (WHO 2015d). Outpatient discharges in Indonesia are 1.9 per 100 people, compared with the WHO benchmark of 10 discharges (WHO 2015d). Although Indonesia has made progress in eliminating the disparity in utilization between the bottom 40 percent and the whole population, overall utilization remains far below international benchmarks set by WHO.

Table 18: Comparison of Utilization in Indonesia with Global Averages and Benchmarks

	Outpatient Utilization (number of visits per person per year)	Inpatient Utilization (outpatient discharges per 100 people per year)
Indonesia (all)*	0.13	1.90
Indonesia (bottom 40%)*	0.13	1.90
OECD countries	6.00	15.00
WHO benchmark	5.00	10.00

Source: WHO 2015d

* Author calculations based on Bappenas data.

Private providers play an important role, accounting for two-thirds of outpatient visits, based on 2007 data (World Bank 2010). Data from the 2012 DHS show that 73 percent of modern contraceptive methods are sourced from the private sector, while 46 percent of deliveries take place in a private health facility, increasing from 69 percent and 36 percent reported in the 2007 DHS, respectively (Statistics Indonesia, National Population and Family Planning Board, and ICF International 2008 and 2013).

5.2.3 Expanding Number of Health Facilities

Indonesia relies on both public and private providers for health service delivery. The number of health facilities in both sectors has been increasing as demand for health care services has increased.

Table 19 shows a dramatic increase in the number of hospitals between 2011 and 2013, more than doubling in the for-profit private sector. Private not-for-profit hospitals represent roughly one-third of all hospitals; most of them are owned by faith-based organizations. To further develop referral services, the GOI has committed Rp. 3.5 trillion (US$275 million) to convert 110 existing hospitals to regional referral hospitals over the next five years.

Table 19: Number of Hospitals in Indonesia, 2011-2013

Number of Hospitals	2011	2012	2013
Public	751	814	838
Private not for profit	655	727	724
Private for profit	315	543	666
Total	**1,721**	**2,084**	**2,228**

Source: MOH Indonesia 2014b

At the primary care level, the number of puskesmas (public health centers) increased 10 percent from 8,737 in 2009 to 9,655 in 2013. The GOI has also made investments to improve existing puskesmas, including upgrading puskesmas to provide Basic Emergency Obstetric and Neonatal Care (BEmONC) and to provide inpatient beds. Across all types of facilities, the total density of inpatient beds has

increased from 7.5 per 10,000 population in 2011 to 12.6 in 2013 (Kementerian PPN/Bappenas 2014). By comparison, average bed density in lower middle-income countries is 18, while the WHO global benchmark for bed density is 25 per 10,000 population (WHO 2015d). Despite recent investments, bed density remains below global averages and benchmarks.

5.3 Service Readiness and Quality

5.3.1 Service Readiness

With the expansion of the service delivery network and improvements in basic amenities and equipment, Indonesia continues to face challenges in ensuring service readiness across facility types and service groups. Using the WHO Service Availability and Readiness Assessment framework and data from the Health Facility Survey 2011, a recent supply-side readiness survey (World Bank 2014b) found mixed results across key services, as shown in Table 20. The data shows that not all facilities are well-equipped and service-ready across a broad range of services, with puskesmas being most capable in some key public health areas, such as childhood immunization and TB care.

Although several service-readiness analyses have been conducted in the last few years, all rely on data collected through the Health Facility Survey 2011. The World Bank is preparing to implement a survey of *puskesmas*, *polindes*, and *posyandu* in the first half of 2016 that will provided updated data for primary care facilities.

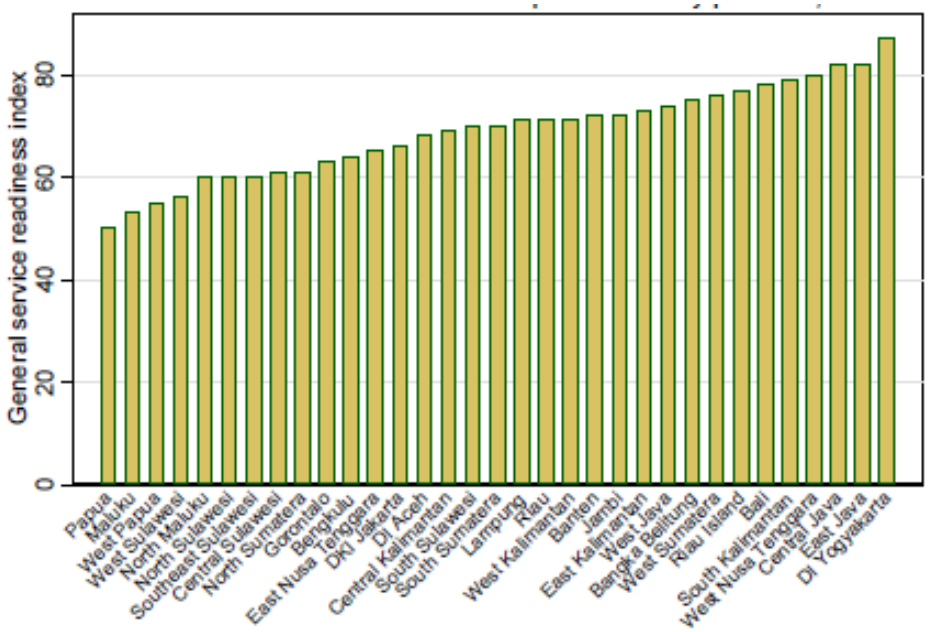
Table 20: Service-specific Readiness Assessment (Selected Services)

Service Area	Puskesmas	Private Clinic	Public Hospital	Private Hospital
Antenatal care services	Good	Poor	Good	Fair
Basic obstetric care	Fair	Poor	Good	Good
Comprehensive obstetric care	NA	NA	Good	Good
Routine child immunization	Good	Poor	NA	NA
Child and adolescent preventive and curative care	Fair	Poor	Good	Fair
Malaria	Fair	ND	Fair	Fair
Tuberculosis	Fair	Poor	Poor	Poor

Source: Dorkin et al. 2014.
NA = Not applicable, ND = No data or insufficient data.

Challenges with basic infrastructure, as well as staff, diagnostics, and supplies persist. While almost all puskesmas had electricity, only 74 percent had a functional toilet. Most puskesmas maintained gloves (84 percent) but only 34 percent had appropriate disposal for sharps. About half of puskesmas were able to conduct urine tests for pregnancy, protein, and/or glucose. Lastly, the general index of service-readiness varied significantly by province, from a score of approximately 50 out of 100 in Papua province to 85 in Yogyakarta, as shown in Figure 11.

Figure 11: General Service Readiness Index for Puskesmas by Province, 2011



Source: Dorkin et al. 2014

5.3.2 Facility Accreditation and Health Care Provider Licensing

In addition to investments to improve access, the GOI has also made efforts to improve service quality at hospital and health center levels through accreditation efforts and other initiatives. Note that BPJS-K "credentialing" – the process by which it approves which facilities may participate in JKN – is distinct from facility accreditation, which is described here. Medical councils and professional associations have also revised their guidelines for individual practitioner licensing in order to improve provider quality.

At the referral level, the Hospital Accreditation Committee (KARS) was established within the MOH in 1995, and re-launched as an independent entity recognized by Ministerial decree in 2012 (Permenkes 428, 2012). As stipulated in Law 44/2009, both public and private hospitals are required to be re-accredited by KARS every three years. KARS is self-financed through fees from hospitals, and has trained surveyors in each province who are contracted as needed to accredit hospitals. It is unclear what the sanctions are for not submitting to accreditation or failing accreditation, or who is responsible for enforcing those sanctions.

At the primary care level, the MOH Directorate for Primary Health Services (BUKD) recently initiated a program of puskesmas accreditation. At the time of this review, accreditation had been completed for four puskesmas, and the accreditation tools were being finalized. The accreditation process is designed not only to assess services within the puskesmas, but also whether it is competently providing environmental health, outreach and other community health services outside the puskesmas. BUKD plans to accredit 350 puskesmas in 2015 and 5,600 puskesmas by 2020, including establishing an independent entity, similar to KARS, to carry out the accreditation. Although this is a nascent initiative, if fully supported, puskesmas accreditation could be a useful strategy to support advocacy to DHOs and District Governments for facility improvements, staff training, and health promotion activities. At the time of the assessment, it was not yet clear how or when private primary care facilities would be similarly accredited. A summary of current accreditation requirements and comparison with BPJS-K credentialing is shown in Table 21.

Table 21: Facility Accreditation Requirements and BPJS-K Credentialing

	GOI Accreditation Requirements	BPJS Credentialing
Puskesmas	New accreditation program introduced by BUKD	Automatically credentialed
Private Clinic	No accreditation requirements currently planned	Providers previously contracted by Askes or Jamkesmas automatically credentialed New providers are credentialed based on meeting human resources, facility, and equipment standards
Public Hospital	Accreditation by KARS required every three years	Automatically credentialed
Private Hospital	Accreditation by KARS required every three years	Providers previously contracted by Askes or Jamkesmas automatically credentialed New providers are credentialed based on meeting human resource, facility, and equipment standards

On an individual provider level, licensing is a multi-step process that varies somewhat by profession. According to respondents interviewed for this review, these steps seem to be treated primarily as administrative requirements, rather than a process for ensuring quality. The specific components of licensing for doctors and midwives are:

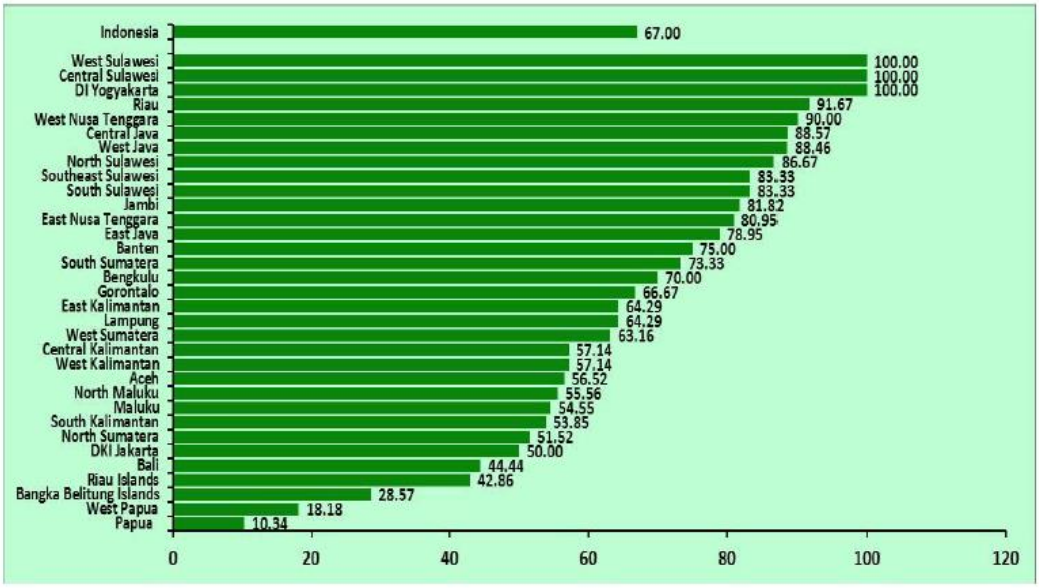
- Providers must take a written exam.
- A competency certificate is issued based on passing the exam – by the Collegium of Medical Doctors and Family Doctors of Indonesia (KDDKI) for doctors, the Central Board of the Indonesia Midwives Association (PP-IBI) for midwives, and similarly for other professions.
- Registration letters are issued by the Indonesian Medical Council (KKI) for doctors or the Indonesian Health Worker Council (MTKI) for midwives, nurses, and other health workers.
- Providers complete an internship and are certified (one-year internship for doctors and two-year internship for midwives).
- A recommendation letter is issued by the relevant professional association (IBI or IDI).

With a competency certificate and registration letter, doctors and midwives may work in puskesmas or hospitals, but cannot obtain a license for a private practice. A private practice license is only issued by the DHO after completion of an internship, and with the recommendation of the professional association. The internship requirement, introduced in 2011 for physicians and 2013 for midwives, intends to improve providers' skills and quality in the private sector. Re-licensing by the DHO is required every five years, and documentation of continuing education credits, as well as professional practice experience, is required for re-licensing for midwives and doctors.

5.3.3 Service Readiness Challenges Specific to Maternal Health

Although facility service readiness is important for all health services, the challenges for maternal health are particularly acute because of the need for emergency response. The GOI program to ensure that BEmONC[11] services are available at puskesmas is an important step to better respond to maternal health emergencies. However, only three provinces have been able to meet the target of at least four BEmONC-equipped puskesmas per district. Many eastern provinces are well below that target, as shown in Figure 12.

Figure 12: Percent of Districts/Municipalities with Four BEmONC-Equipped Puskesmas, 2013



Source: MOH Indonesia 2014b

Given the limited number of BEmONC puskesmas, physical access to emergency maternal health care continues to be a challenge in many areas. The MOH has worked with district governments to develop maternity waiting homes, where high-risk women can stay to await labor. To date, in collaboration with district governments, the MOH has established 500 maternity waiting homes.

In addition to challenges with physical access to facilities, some facilities identified as providing emergency services are not fully prepared. According to the 2011 Health Facility Survey, 78 percent of BEmONC puskesmas provided 24-hour services, while 62 percent of BEmONC puskesmas had at least one staff trained in BEmONC within the last two years (MOH 2011). The data for hospitals showed similar challenges – only 44 percent of government hospitals had complete essential Comprehensive Emergency Obstetric and Neonatal Care (CEmONC) teams, while only 7.6 percent of hospitals met all 17 CEmONC criteria (MOH 2011). These data illustrate ongoing challenges in providing an appropriate response to maternal emergencies. Although there have been investments since 2011 to improve emergency services, there are no comparable data to measure the effect on service readiness.

[11] BEmONC services are defined as: parenteral treatment of infection (antibiotics); parenteral treatment of pre-eclampsia/eclampsia (anticonvulsants); parenteral treatment of postpartum hemorrhage (uterotonics); manual vacuum aspiration of retained products of conception; vacuum-assisted delivery; manual removal of the placenta; and newborn resuscitation (National Academy of Sciences, 2013.)

Midwives play a very important role in ensuring maternal health – they provide 75 percent of antenatal care services, and attend 62 percent of deliveries in Indonesia. Despite the reliance on midwives, various studies have noted concerns with midwifery training and midwives' skills (World Bank 2010; National Academy of Sciences 2013; World Bank 2014d). As noted above, a policy instituted in 2013 requires two years of internship before newly graduated midwives can qualify for a private practice license. During district visits, the assessment team identified various mentoring and coaching programs at district level to improve midwife quality. Some previous research has suggested a need to review the pre-service curriculum for midwives and improve the quality of pre-service education to produce more qualified graduates (World Bank 2010; National Academy of Sciences 2013). Addressing pre-service education falls under the responsibility of the Ministry of Education.

In addition to improving access, facility readiness, and provider quality, studies to evaluate maternal mortality and to identify recommendations for improvement have suggested technical changes to current clinical protocols in order to reduce maternal mortality. One 2013 study found that "the most promising future strategy for reducing the MMR and NMR in Indonesia is to ensure that most if not all deliveries take place in BEmONC or CEmONC facilities" (National Academy of Sciences 2013). Another study suggested revising referral policies such that direct referral to a CEmONC facility is allowed if the CEmONC facility can be reached within two hours. Review of the current strategy and clinical protocols, as well as their cost implications, may be needed to accelerate reductions in maternal mortality.

5.3.4 Human Resource Constraints

As in many middle-income countries, underlying Indonesia's service delivery constraints are human resource shortages, particularly for physicians and specialists. Uneven distribution of health workers is also a challenge, as discussed in the Human Resources for Health chapter. The GOI's HRH plan (MOH 2011) has set ambitious targets for increasing the number of health workers in priority categories; however, achieving these targets will be challenging. Table 22 shows the targeted coverage ratios of priority health workers.

Table 22: Health Worker Coverage Targets from Indonesia HRH Development Plan

No	Category	Ratio per 100.000 population		
		Year 2014	Year 2019	Year 2025
1	Medical Specialist	12	24	28
2	General practitioner	48	96	112
3	Dentist	11	11	11
4	Nurse	158	158	158
5	Midwife	75	75	75
6	Dental Nurse	16	16	16
7	Pharmacist	12	24	28
8	Pharmaceutical Assistant	24	48	56
9	Public Health Practitioner	12	24	28
10	Sanitarian	15	30	35
11	Nutritionist	24	48	56
12	Physiotherapist	6	12	14
13	Medical technicians	9	18	21

Source: Global Health Workforce Alliance 2011

Exacerbating the planning challenges is the inconsistency in data on the number of health workers. MOH sources report 39,050 general practitioners (GPs) working at puskesmas and hospitals, while Indonesia's Medical Council KKI has records of 94,727 registered GPs. All GPs reported in public facilities are included in the KKI records as KKI certification is required to practice, but not all GPs registered with KKI are currently practicing physicians. It is unclear how much of this discrepancy represents registered GPs who work solely in individual private practice and how much represents those who no longer practice.

Despite efforts to increase production of priority health workers, current trends in production seem to indicate that targets will be difficult to achieve. Even with the assumption that there were 94,727 practicing GPs in 2013, which is likely an overestimate; Indonesia will need approximately 154,000 more GPs by 2019 to achieve the GOI target of 248,627 GPs, without accounting for attrition and retirement, as shown in Table 23. Each year, approximately 7,000-8,000 new GPs receive training, which will add at most 48,000 additional GPs by 2019.

Table 23: Targeted and Current Numbers of General Practitioners (GPs)

	Ratio per 100,000 population	Number
2014 (GOI targets)	48	117,808
2019 (GOI targets)	96	248,627
2025 (GOI targets)	112	306,490
2013 (in hospital and puskesmas)	16*	39,050
2013 (registered)	38*	94,727

Sources: Meliala and Anderson2014; Global Health Workforce Alliance 2011; MOH Indonesia 2014b

* Author calculations based on Indonesia Health Profile 2013 (MOH Indonesia 2014b) data.

Although Indonesia's "core" health workforce[12] at 29 per 10,000 population (MOH 2011) exceeds the WHO benchmark of 23 per 10,000 population (WHO 2015d), its ratio of physicians to population is low compared to other Asian countries. As shown in Table 24, countries such as Malaysia and the Philippines have physician coverage of 12.0 and 11.5 per 10,000 population, respectively, compared with coverage in Indonesia of 2.0-3.8 per 10,000 population.

Table 24: Physician Coverage Ratios for Selected Countries

Country	Ratio per 10,000 Population	Year of Data
Indonesia (author's calculations based on KKI and Indonesia Health Profile data)	3.8	2013
Indonesia (WHO Global health Observatory data)	2.0	2012
China	14.9	2011
India	7.0	2012
Malaysia	12.0	2010
Philippines	11.5	2004
Singapore	19.5	2013
Thailand	3.9	2010

Source: WHO Global Health Observatory: http://apps.who.int/gho/data/view.main.92100. Data for Indonesia

The Australia Indonesia Partnership for Health Systems Strengthening (AIPHSS) project is supporting work to prepare detailed projections of future health worker needs by district and type of health worker. That work, to be completed in 2016, will be used to refine Indonesia's HRH strategy.

Health worker shortages are most severe in remote areas, which face more acute difficulties attracting health workers. One of the MOH's priority initiatives to reduce health worker shortages is the "Nusantara Sehat" (Healthy Archipelago) program. The program, introduced in 2015, places teams of five to eight doctors and midwives in remote areas for two-year assignments. Although there are existing programs to post contract doctors and midwives to remote locations, retaining them is difficult, because they feel professionally isolated. By posting teams of health workers, as compared to individuals, and providing training prior to posting, the Nusantara Sehat program hopes to increase retention. Staff teams were identified for 20 puskesmas at the time of the assessment, although the goal is to field teams to 120 puskesmas in 2015, and eventually to 400 puskesmas. Professional isolation is often cited as a factor for staff refusing to accept, or leaving, remote postings (Henderson and Tulloch 2008, World Bank 2011) – whether Nusantara Sehat will successfully address isolation and other factors to attract health workers to remote areas is to be seen. Despite innovative programs like Nusantara Sehat, challenges with staff recruitment to remote areas will persist as long as there are overall health worker shortages.

[12] WHO defines core workforce to include physicians, non-physician clinicians, registered nurses, and midwives. The rate of 29 per 10,000 population was calculated based on MOH data of coverage ratios for medical specialist, general practitioner, nurse, and midwife (Global Health Workforce Alliance 2011).

5.4 Implications of JKN for Service Delivery

5.4.1 Service Provider Experiences

At the time of this review, JKN had been operational for 16 months. Published information on provider experiences with JKN was still quite scattered and somewhat limited, thus information in this section is based on interviews with staff at public and private facilities in three districts/municipalities in West Java, central offices of national provider networks, and Jakarta-based providers. Although based on anecdotal information, several themes emerged during the assessment that merit further investigation.

Public, private not-for-profit and private for-profit providers reported somewhat different experiences with JKN and BPJS. Staff across facility types reported that there was little "socialization" or educational outreach related to the roll-out of JKN. Both providers and patients were not well aware of how the program was intended to operate. Although facilities have generally adjusted to new requirements and procedures, consumer understanding of health insurance remains low. Many patients only enroll when they are sick, and see JKN as another way to pay for services, rather than as a contributory product that provides financial protection against potential health costs. For this reason, when BPJS-Kintroduced a seven-day waiting period[13] for new enrollees to access benefits, many patients only delayed their care-seeking.

Hospitals visited during this review reported that they received little information regarding the claims submissions process using the new case-based payment system (the "INA-CBGs") prior to the roll-out of JKN, and that the transition period was difficult. (Please see the Health Financing chapter for a more detailed description of the INA-CBGs). They had little or no previous experience with case-based payments, and initially received reimbursements that were much lower than the cost of services. Some not-for-profit facilities reported initial reluctance to contract with BPJS-K and pressure from local health authorities to participate.

The public and not-for-profit hospitals interviewed seem comfortable working within the INA-CBG codes now, and reported that they generally do not suffer financial losses on the reimbursements. There are some services for which complaints about the reimbursement rates persist (neonatal intensive care was one such service). The public and not-for-profit hospitals visited also reported that they have experienced higher patient volumes and revenues since the initiation of JKN.

The for-profit providers interviewed expressed dissatisfaction with BPJS-K reimbursement rates. Some reported that they have contracted with BPJS-K for limited lines of service (for example, only cardiology services), presumably the services with acceptable or favorable reimbursement rates. One for-profit facility reported that their specialists do not accept BPJS-K payment at all, referring BPJS-K patients in need of specialist doctors to the public hospital. (By way of comparison, most not-for-profit facilities interviewed that contract with BPJS-K provide all services, although the researchers met one not-for-profit provider that excluded deliveries from its BPJS-K contract because of the low reimbursement rate.) For-profit providers also reported "pressure" from the DHO to contract with BPJS. One DHO reported that the few private facilities that have not yet contracted with BPJS-K were sent letters requesting their participation, and most have indicated willingness to do so. If BPJS-K expands its

[13] As of June 1, 2015, the waiting period has been increased to 14 days. http://bpjs-kesehatan.go.id/bpjs/index.php/post/read/2015/348/Mulai-1-Juni-2015-Khusus-Peserta-Bukan-Penerima-Upah-PBPU-dan-Bukan-Pekerja-Proses-Pendaftaran-BPJS-Kesehatan-Jadi-14-Hari

provider network with providers only offering a limited set of services, reported numbers of providers may overstate actual network expansion.

BPJS's credentialing process for private facilities includes criteria aimed at assessing service quality, including human resources and facility and equipment standards. (All public facilities are automatically credentialed.) In practice, respondents interviewed for this review commented that the credentialing process for private sector facilities has focused on producing administrative documentation. To date, the majority of credentialed private sector providers were previously contracted by Askes or Jamkesmas. Given the continuing reluctance of some private providers to participate, and the focus on administrative documentation in credentialing procedures, the authors of this review conclude that the credentialing process alone is not currently ensuring high quality or motivating providers to improve quality.

5.4.2 Potential Challenges with JKN/BPJS Policies

This review, including key informant interviews with GOI officials, highlighted some respondents' concerns with provider payment policies (or interpretation of policies) that may adversely affect health services. (The Health Financing chapter also details some challenges around provider payment.)

Private midwife delivery. Under JKN, assisting a delivery is recognized as a separate reimbursable service – that is, it is not a service included under the primary health care capitation fee. All credentialed BPJS-K providers, including private clinics and puskesmas, file separate claims for deliveries. However, BPJS-K does not contract directly with private midwives, as they do not meet the requirements of private clinics (which must provide a range of primary care services) or hospitals. To serve patients using BPJS, some midwives have signed side agreements with private clinics or government puskesmas that can receive BPJS-K payments; these facilities then process midwives' claims for a 5-10 percent administrative fee. This policy may limit access for BPJS-K members, encourage use of traditional birth attendants, and disadvantage midwives with the administrative cost. BPJS-K could contract directly with private midwives as a specific class of provider, to encourage midwife-assisted delivery. The assessment team did not specifically examine the administrative feasibility of contracting individual midwives. However, BPJS-K currently contracts with personal practitioners and dentists, so there is precedent and capacity for contracting with individual providers.

Hospital-based delivery. There was confusion reported regarding BPJS-K coverage of delivery services – specifically, whether delivery at a hospital, *without referral from a puskesmas or private clinic*, is covered. Some providers reported that women may only deliver at these higher-level facilities without referral if the puskesmas is closed. Other providers reported that delivery can always be treated as an emergency, so that women can use any BPJS-K facility that is convenient. Women in labor who did not have referrals have reportedly been turned away from hospitals. Given the priority of reducing maternal mortality, any confusion delaying care during labor should be addressed. Further, this issue may require broader review to ensure hospitals are not moving women to other facilities because of financial disincentives to attend deliveries.

Table 25 outlines the BPJS-K rules related to payment for maternal health services, by type of provider. Services that are not covered by specified providers, or where current regulations are unclear, are highlighted in blue. For example, some BPJS-K documents specify that antenatal care and delivery provided by a private midwife can be reimbursed. However, midwives in the districts visited for this review reported that antenatal care, delivery, and family planning by private midwives are not covered because BPJS-K does not contract with private midwives, although some midwives have side agreements with puskesmas or private clinics to file claims on their behalf, as described above. Further, although

BPJS-K allows antenatal care to be separately reimbursed outside the capitation fee, practice varies as to whether puskesmas make such claims.

Table 25: Overview of BPJS-K Payments for Maternal Health Services, by Provider

Type of Service	Puskesmas	Private clinic	Private midwife	Hospital
Antenatal care	Non-capitation fee (practice of claiming for antenatal care varies)	Non-capitation fee (practice of claiming for antenatal care varies)	Not covered*	INA-CBGs (only based on medical need, and must be referred by primary care provider)
Delivery	Non-capitation fee	Non-capitation fee	Not covered*	INA-CBGs (regulations specify hospital-based delivery only with clinical emergency)
Pre-referral care	Non-capitation fee	Non-capitation fee	Not covered*	INA-CBGs
Postpartum care	Non-capitation fee	Non-capitation fee	Not covered*	INA-CBGs
Family Planning (short-term methods)	Non-capitation fee	Non-capitation fee	Not covered*	INA-CBGs
Family Planning (long-term methods excl. tubectomy)	Non-capitation fee	Non-capitation fee	Not covered*	INA-CBGs
Family Planning (tubectomy)	Not covered	Not covered	Not covered	INA-CBGs

*According to a discussion the assessment team held with 13 IBI members in one district, some midwives reportedly have side agreements with puskesmas or private clinics to process reimbursements on their behalf for a small fee.

Potential perverse incentives for understaffing. During district-level visits, puskesmas staff reported benefiting from salary incentives paid from BPJS-K capitation payments. These payments represent a new source of puskesmas revenue. Specific guidelines govern the proportion of capitation revenues to be allocated for staff incentives (at least 60 percent of capitation fees) and some guidance has been provided about how these incentives should be allocated across staff, as mentioned in the Health Financing chapter. Midwives in one rural district visited, reported general satisfaction with the additional incentives, leading to improvements in staff motivation.

However, capitation payments, calculated based on enrollees in a catchment area, are not based on the number of providers in a facility.[14] Given a fixed pot of capitation revenues, per-provider incentives go down as the number of providers' increases, which could potentially create an unintended incentive for understaffing. The system for allocating capitation fees among staff reportedly greatly favors physicians, whose incentives are up to eight times those allocated to midwives and nurses. For this reason, incentives for nurses and midwives working at a puskesmas that has few or no doctors could be several times higher than at another puskesmas with similar populations but more doctors; moreover, in this situation if a doctor were recruited, incentives for nurses and midwives would decrease significantly.

[14] The capitation payment is differentiated by staffing mix, with higher payments for facilities with physicians and facilities with dentists.

Total capitation revenues will also be lower in areas with smaller catchment populations, which may be more remote areas with dispersed populations and greater health needs that are less desirable postings for health workers. While distribution of capitation fees tied to population and workload seems fair, equivalence may pose a potential disincentive for staff to serve in remote areas where it is already difficult to recruit staff, particularly physicians.

Integration of vertical programs. Government respondents interviewed for this review did not articulate a shared or consensus vision for the future of disease-specific programs (HIV/AIDS, TB, malaria) or family planning programs as Indonesia expands coverage under JKN. There is some discussion of including these services under JKN, although there is also concern that prevention and control of diseases such as HIV and TB require targeted community-based efforts that fall outside health service delivery. There are studies underway to see the financial impact and feasibility of including HIV and AIDS services as part of the BPJS-K benefit package.

5.5 Implications of Indonesia's Decentralized Governance for Service Delivery

5.5.1 Accountability and Law 23/2014

As mentioned throughout this report, Indonesia embarked on large-scale decentralization reforms 15 years ago, transitioning greater responsibility for social services to local governments. The primary responsibility for health service delivery now resides in over 500 DHOs that report to district governments and are also subject to oversight from PHOs, based on standards and regulations set by the MOH. The 2014 Law on Local Government (Law 23/2014) is intended to clarify district-, provincial-, and central-level responsibilities, supporting improved accountability at all levels. The regulations supporting this law are not yet issued, so this review's assessment of potential impact is based on key informants' interpretations of the law, including their involvement in discussions of supporting guidelines.

Under Law 23/2014, district governments, presumably through the DHO, will have responsibility for all primary health care facilities and Class C and D hospitals within the district. For public facilities, DHO responsibilities include all operations, staffing, and improvements, while for private facilities, their responsibility focuses on licensing. The law also assigns the district government responsibility for planning and development of health workers within the district. While previously the head of a district hospital might have been in competition with the head of the DHO for district government resources, the new law's language has been interpreted to mean that the head of the DHO has clear authority over district hospitals. This change could encourage better integration of primary and referral services. It is unclear whether planning and development of health workers will be interpreted to include production and pre-service training in some districts, including development of district-operated training facilities and faculty.

5.5.2 DHO Accountability and Minimum Service Standards

DHOs have a broad range of responsibilities, including overseeing service delivery, management of multiple funding streams, and implementation of community and public health activities. At the same time, DHOs are continuously reacting to new policies and initiatives, such as JKN, which impact the health system and their responsibilities in multiple ways. Some DHOs are constrained by lack of financial and political commitment to health within their respective district governments. Although they are

responsible for health in their districts, many DHOs have limited capacity to lead improvements in service quality, and to make best use of health resources.

As mentioned in the Governance chapter, the Minimum Service Standards (MSS) define the basic package of social services district governments must provide to citizens. MSS were previously issued in 2008, but they were not enforced. The recently-updated MSS for health were formulated jointly by MOH and Ministry of Home Affairs (MOHA), with clear measurement indicators and regulations to support their enforcement. The new regulations allow MOHA, which is the central government agency with authority over district governments, theoretically to suspend a *Bupati* (the elected leader of a district) for failing to provide basic services, and to call for new local elections in extreme cases.

5.6 Strengths, Weaknesses, Opportunities, and Threats

The GOI has taken many actions to ensure health services for all Indonesians, introducing national health insurance and improving health facility infrastructure. Table 20 presents an analysis of the key strengths, weaknesses, opportunities, and threats facing the delivery of health services.

Table 26: SWOT Analysis for Service Delivery

Strengths and Opportunities
• Increasing resources to upgrade service delivery infrastructure • Robust and growing NGO and private health service delivery sectors • MSS and puskesmas accreditation could be platforms for improving service delivery quality and building MOHA relationship • JKN may provide a mechanism for integrating vertical programs (TB, HIV, etc.) into overall health system
Weaknesses and Threats
• Provider quality can be variable • Facility service readiness is challenging particularly given HRH constraints • Capacity at DHOs may be insufficient to manage multiple new policies and initiatives • Numbers of qualified health staff continue to fall behind need, with remote areas and primary care bearing the negative impacts • Implementation of some JKN policies does little to improve quality of services (e.g., credentialing process)

5.7 Opportunities

There are many opportunities that take advantage of current strengths and build on existing GOI initiatives. Two areas of priority include improving collaboration between the MOH and other actors responsible for health services delivery, and working with BPJS-K to align payment and credentialing policies to improve access and service quality.

1) *Use the new MSS and Law 23/2014 as an opportunity to engage MOHA, district governments and DHOs.*

- Strengthen collaboration between MOH and MOHA.

  MOH regulations and standards, if not implemented or difficult to implement, will not have positive impact on health services. MOH could collaborate more effectively with MOHA to identify appropriate mechanisms for communicating new or revised regulations and standards to districts, and to address constraints to implementing new regulations or standards.

- Support MOHA in its function of strengthening effective and efficient decentralized governance.

The roles and responsibilities of MOHA, provincial governments, and district governments continue to evolve. Donors could work with MOHA to strengthen its capacity to provide technical support to district governments, to monitor district performance related to provision of social services (including health), to provide incentives for improved performance, and to establish procedures for sanction when district governments fail to provide minimum services.

- Support district planning and budgeting to meet MSS.

  Districts manage multiple funding streams, including some sources earmarked for health and some funds directly flowing to health facilities. Donors could support districts to develop systems for managing and monitoring these various funding streams, improve transparency in highlighting funding gaps at district and facility levels, and allow for better estimates of additional resources needed to fulfill the MSS to inform planning and budgeting allocations.

2) Work with BPJS-K to support improvements in quality and access, and leverage the private sector

- Strengthen BPJS-K credentialing processes and link to accreditation to ensure quality services.

  BPJS-K credentialing procedures reportedly are primarily focused on administrative documentation. Working with BPJS-K to incorporate better quality measures into the hospital credentialing process, and possibly applying puskesmas accreditation criteria to private clinics, might improve provider quality.

- Differentiate payments based on performance.

  Tying BPJS-K capitation payments to measures of quality (beyond service-readiness indicators) would motivate facility improvements and higher-quality service provision.

- Work with BPJS-K to contract with accredited private providers at satisfactory payment rates to extend access.

  Current BPJS-K reimbursement rates may be insufficient to motivate full private provider participation. Many private providers report feeling pressure to contract with BPJS, and only contract for a limited number of services. Offering rates that motivate private participation would expand access and provider choice for BPJS-K members.

- Work with BPJS-K to revise policy preventing direct reimbursements for private midwife-assisted delivery.

  Current reimbursement policies requiring midwives to have private agreements with credentialed primary care providers limit access for BPJS-K members. Allowing direct BPJS-K contracting of private midwives would expand provider choice and reduce administrative cost to midwives. Although the administrative feasibility has not been fully assessed, the experience under Jamkesmas with paying midwives directly can provide useful lessons on administration.

- Work with DHOs and facilities to support allocating BPJS-K funding toward service improvements.

  BPJS-K payments represent additional funding for primary care facilities. The regulations provide that 60 to 100 percent of this funding should be used for staff incentives, with the remainder to be used for operating costs. It is important to ensure that facilities use the remaining funds to improve services, including investments in infrastructure improvement, equipment, or medicines and supplies. Facilities may also consider augmenting staffing with the additional funds, through paying staff overtime in order to provide 24-hour service, or contracting part-time medical specialists.

- Consider a higher capitation rate for facilities in remote areas.

Since capitation revenues are based on catchment populations, facilities in remote areas with dispersed populations will receive lower capitation revenues, translating into smaller pools for staff incentives, and limiting the facility's attractiveness to staff. Increasing the capitation rate for remote facilities would provide additional funds for staff incentives, which may be helpful for attracting and retaining staff.

Additionally, the review team identified a set of opportunities aimed to accelerate reduction of maternal and child mortality.

1) Support linkage of puskesmas accreditation and BPJS-K payments to target MCH.

The new MOH puskesmas accreditation program could serve as a platform to improve service quality, encompassing availability of qualified staff, equipment, diagnostics, medicines, appropriate protocols, etc. Linking an accreditation score to BPJS-K payments would motivate facilities to allocated funding where needed.

2) Review midwifery training and competency requirements to improve quality of graduates.

Indonesia will not be able to achieve significant progress in maternal mortality if the health worker cadre responsible for the bulk of antenatal and delivery care is not well-qualified. Current district based in-service training programs to improve quality are only temporary fixes. Careful review of the pre-service training content and competency requirements for midwifery license is needed to improve the quality of maternal care.

3) Revise policy preventing direct reimbursements for private midwife-assisted delivery.

Current reimbursement policies requiring midwives to have private agreements with credentialed primary care providers limit access for BPJS-K members. Allowing direct BPJS-K contracting of private midwives would expand provider choice and reduce the administrative cost to midwives. Although the administrative feasibility has not been fully assessed, the experience under Jamkesmas paying midwives directly can provide useful lessons on administration.

4) Review protocols for maternal health.

Indonesia has pursued a strategy of facility-based delivery assisted by a skilled birth attendant for several decades as a key component of reducing maternal mortality. While progress has been made, it may be necessary to review the protocols related to the minimum skills of a skilled birth attendant, and the minimum facility standards (such as raising standards to those of current BEmONC facilities).

6. HUMAN RESOURCES FOR HEALTH

Human resources for health (HRH) include "all people engaged in actions whose primary intent is to enhance health" (WHO 2006). This broad definition encompasses clinical staff, community health workers and volunteers, health sector managers, and support staff both from the public and private sectors. Adequate numbers, specializations, geographic distribution, and training of health workers are critical to provision of effective health services (WHO 2006).[15]

6.1 Quantity of Health Workers

Recent studies have cited significant health worker shortfalls in Indonesia. While the country has made significant achievements in increasing the ratio of health workers to the population, a World Bank study in 2013 estimated Indonesia still needs to increase its health workforce stock by 78 percent to meet the WHO-recommended ratio of 2.28 trained health workers per 1,000 population by 2035 (World Bank 2014b). Thirty of the 33 Indonesian provinces had fewer than the WHO-recommended 1 physician per 1,000 population in 2014 (Kementerian PPN/Bappenas 2014). At the current rate of production of medical graduates, there will be a shortfall of nearly 183,000 physicians needed to reach the government's targets by 2019. Puskesmas suffer the most from this gap.

Currently, there are 733 nursing schools (both public and private) in the country, many of which opened in the past decade. While they are graduating an increasing number of midwives and nurses, there are still shortfalls at the hospital level. An estimated 87,874 additional hospital-based nurses and 15,311 hospital-based midwives are required (Kementerian PPN/Bappenas 2014). Additionally, the country faces shortages of specialists, such as nutritionists who are needed to address the double burden of malnutrition and obesity Indonesia is facing (World Bank 2014b).

Some improvements have been made. From 2003 to 2013, there was an 80 percent increase in the number of medical schools, 60 percent of which were private; the expansion of private medical schools has helped to slightly reduce the health workforce deficit. This rapid increase has raised questions about the quality of medical education, however. The legalization of dual practice in 2003, which allows medical staff to practice both in the public and private sectors, also improved the government's ability to recruit and retain health workers at reduced cost. However, dual practice may also exacerbate the maldistribution of health workers, as physicians are drawn to urban areas where they can earn more money from their private practices (Kementerian PPN/Bappenas 2014).

6.2 Distribution of Health Workers

Indonesia's island geography and vast size exacerbate health workforce distribution challenges. There are an estimated five times as many physicians per 100,000 people in urban areas as in rural areas, with the largest concentration of doctors in Java and Bali (World Bank 2009). Similar disparities exist among specialists. Most medical schools (85 percent) are located in Jakarta. Notably, 60 percent of graduating physicians are female and may face particular impediments in relocating to remote areas, related to security and limited opportunities for their children's schooling (World Bank 2014b). A more equitable

[15] Note that this health system topic was not the focus of the USAID-commissioned rapid review and assessment. This chapter is based on published literature and was not assessed through key informant interviews.

distribution of nurses and midwives exists (World Bank 2014b, World Bank 2009), likely due to the Village Midwife (*Bidan di Desa*) program, which started in the early 1990s.

To address the problem of maldistribution, the government established the *Pegawai Tidak Tetap* (PTT) or short-term service program to draw new physicians to remote areas. Incentive packages including generous remuneration for a short-term service in underserved areas replaced previous compulsory service in those areas. The PTT in combination with the growing number of medical graduates has led to an increase in remote postings (World Bank 2014b). As mentioned in the Service Delivery chapter, the government introduced Nusantara Sehat program in 2015, which also aims to resolve maldistribution issues by posting teams of five to eight doctors and midwives to rural/remote areas for two-year assignments. The program increases worker retention by sending people out in teams, reducing the likelihood of feelings of isolation.

6.3 Quality of Health Workers

Improving health worker knowledge and skills has been a priority of the Indonesian government for many years. There are some weaknesses in provider skills. The 2007 Indonesian Family Life Survey (IFLS) for instance found only 45 percent of doctors, nurses, and midwives knew the correct protocols for antenatal care (Strauss et al. 2009). While there has been a concerted effort to improve midwife quality over the past decade, some have argued that further improvements are necessary given the fact that use of midwifery services has increased more than any other service and is particularly relevant to the poor (World Bank 2010).

The rapid expansion of private medical schools, which represents 60 percent of the total increase in medical schools from 2003 to 2013, has helped to reduce the health workforce deficit but also has introduced concerns about quality oversight and accreditation. Only 52 percent of medical schools are accredited (World Bank 2014b). Concerns over the quality of medical education have been raised a result. There is a particular need to improve training around non-communicable disease (NCD) prevention and management. A recent study of four representative medical schools, for instance, showed that there were on average only eight hours of training on counseling patients for primary care over the three years (Kementerian PPN/Bappenas 2014).

The MOE has taken a number of steps to promote improved quality among health care workers. In 2012, the MOE introduced a national competency examination for medicine. This was followed by a structured clinical exam for medicine in 2013 and the first national competency exam for nurses and midwives in the same year. The MOE also declared the national exam to be a mandatory exit exam for medicine and dentistry students (World Bank 2014b). In 2013, about 30% of physicians were not meeting the basic passing grade on the competency exam (Meliala and Anderson 2014).

6.4 Health Workforce Governance

The magnitude of the health workforce expansion needed to achieve UHC by 2019, coupled with the changing disease profile of the country, require strategic HRH planning, and the MOH with support from DFAT was engaged in a comprehensive HRH projection exercise as of mid-2015.

The evolution of the health care system in combination with decentralization has resulted in a plethora of institutions responsible for health workforce production and distribution. The MOE is responsible for pre-service health worker training, but has little dialogue with the MOH, which sets health sector targets. The Health Act from 1992 holds the central government responsible for national distribution of health workers. However, division of responsibilities between the local and central governments on staff

recruitment and distribution makes it challenging to achieve an optimal distribution. For example, the MOH hires and assigns PTT staff to regions, but local governments become responsible for PTT staff salaries after two years (with the exception of those in remote areas), and often do not have the capacity to effectively plan and manage this process. Many new private medical schools seek accreditation by district governments, instead of national institutions, creating a lack of confidence in ensuring quality standards (World Bank 2009).

6.5 Strengths, Weaknesses, Opportunities, and Threats

Table 27: SWOT Analysis for HRH

Strengths and Opportunities
• Rapid expansion of private medical schools, which contribute to narrowing the health workforce deficit • The public-private dual practice system, which helps the government recruit and retain health workers • PTT program, which has been seen as successful in attracting physicians and other health workers to rural areas, and the new Nusantara Sehat program • The introduction of HRH competency exams to help to ensure quality • The MOH could conduct a comprehensive asessment of labor market and HRH gaps
Weaknesses and Threats
• A large HRH deficit, despite the expansion of private medical schools • Maldistribution of physicians skewed toward urban areas • Accreditation of medical schools and quality of education need improvement • Health worker performance needs strengthening • Better inter-sectoral dialogue among governing bodies for the health workforce is needed • Oversight of the private sector should be enhanced

6.6 Opportunities

The National Ministry of Development Planning (Kementerian PPN/Bappenas) laid out six recommendations in its HRH Health Sector Review in 2014 that have also been emphasized by various other studies and literature. These represent key opportunities for GOI and donors to invest in.

- Conduct a labor market analysis to understand health workforce gaps, taking into account UHC targets and the changing health needs of the country.

  One key area of interest is to understand why there is a deficit of nurses despite the surplus of graduating nurses. The assessments should also cover the current stock of nutritionists who are particularly important to address problems of under-nutrition and obesity, and calculate the number of public health officials who can help to promote healthy lifestyles and smoking cessation.

- Explore short-term solutions to health workforce shortages.

  One suggestion from the 2014 Health Sector Review suggests licensing qualified accredited ASEAN Economic Community nationals from outside Indonesia to address short-term shortages, as the magnitude of the scale-up of the health workforce required will necessitate creative surge capacity measures.

- Conduct assessments of existing programs that aim to distribute the health workforce according to need and explore new methods for doing so (Kementerian PPN/Bappenas 2014).

  The PTT program has anecdotally been touted a success in reducing health worker shortages in

rural areas, but it also has experienced a few unforeseen negative consequences in terms of equity and cost-efficiency. This program should be rigorously analyzed (World Bank 2014b). Other ideas cited include building hospitals in rural areas to create a "pull" factor, reviewing the standards for bridging courses in remote areas, which could increase the probability of those people entering the health workforce, and deploying health worker teams rather than specialists alone to remote areas (Kementerian PPN/Bappenas, 2014). The Nusantara Sehat program is currently implementing the last recommendation.

- Ensure that the dual practice system aligns with national health priorities by providing greater regulation and experimenting with payment mechanisms.

  Since private providers provide many health services, ensuring services are focused on prevention of NCDs (for example) would be beneficial. Experimenting with provider payment mechanisms could promote such objectives.

- The government and donors can invest more heavily in increasing the quality of medical education to advance health worker performance.

  The curriculum at medical schools also may need to be adapted to address the current health burdens and UHC requirements. This includes a greater emphasis on counseling on tobacco cessation, lifestyle changes, and nutrition.

- Conduct studies on health worker productivity, efficiency, and quality in order to allocate human resources more strategically.

  Evidence from the 2007 IFLS study highlighted the need for continued education for all types at various levels of the health system. Further studies are needed to target future programming.

7. MEDICAL PRODUCTS, VACCINES, AND TECHNOLOGIES

A key component to ensuring the functionality of a health system is equitable access to essential medicines, vaccines, and technologies that are safe, effective, cost-effective, and scientifically sound. This brief section[16] examines the requirements of this system: a) policies, standards and guidelines for medicines; b) transparent and negotiable pricing; c) reliable manufacturing; d) mechanisms for procurement, supply, and storage; and e) rational use of commodities.

7.1 Overview

Indonesia is developing an internally sustainable pharmaceutical supply, working toward self-reliance in both ingredient procurement and manufacturing; its diverse manufacturing base is capable of supplying a large number of different drugs. Since the 1990s, government production and distribution of unbranded generics and vaccines has been handled by state-owned enterprises, namely IndoFarma, Mimia Farm, Phapros and Bio Farma (World Bank 2009). More than 200 manufacturers exist, 45 of which had Good Manufacturing Practice (GMP) certification – a system of ensuring product quality to minimize risks in pharmaceutical production – as of 2011. Ninety-five percent of Indonesia's drug volume is from domestic companies (Global Business Reports 2015). Medical devices are still largely imported (Kementerian PPN/Bappenas 2014).

The National Agency for Drug and Food Control (BPOM) and the MOH's Directorate General of Pharmaceutical Services and Medical Devices are responsible for regulation of pharmaceutical standards and quality. The latter is also responsible for developing standards for traditional medicines, while BPOM and the MOH's National Institute for Health Research and Development develop the regulations (Kementarian PPN/Bappenas 2014). There are an estimated 5,000 unlicensed drug stores and some 90,000 kiosks and peddlers selling medicines (World Bank 2009), which could be as much as one-third of the market (GOI 2008).

The MOH's DG of Pharmaceutical Services also works to ensure access to drugs by shortening the supply chain and standardizing prices. The Ministry of Health has recently implemented two substantial reforms to the pharmaceutical procurement system in Indonesia:

- Establishing a National Formulary (*Fornas*), or comprehensive list of essential medicines that should be made available to health facilities and covered by JKN. A partial list was initiated in late 2013 and implemented nationally in 2014, and it continues to be expanded and updated.
- An "e-catalogue" to facilitate pooled public sector procurement of some essential medicines from Indonesian manufacturers at centrally-negotiated prices. The online e-catalogue is based on the National Formulary, and allows hospitals to order some medicines directly as needed.

The e-catalogue is intended to promote cost-effective and transparent purchasing. It lists the lowest unit price resulting from a competitive tender process with manufacturers in each province that is managed by the National Public Procurement Agency (LKPP). The system eliminates the need for price negotiation between individual hospitals, district health offices, and pharmaceutical distributors, although drugs must be procured within each province even if lower prices may be available in other provinces. Hospitals and DHOs can order drugs through an online portal managed by LKPP. LKPP then processes orders with the

[16] Note that this health system topic was not the focus of the USAID-commissioned rapid review and assessment. This chapter is based on published literature and was not assessed through key informant interviews.

pharmaceutical manufacturers within 7 days; distributors deliver the drugs. Drugs listed on e-catalogue must be generic drugs unless the generic form is not available.

Public expenditure on medicines per capita was estimated at slightly over US$2 per year in 2013 (Kementerian PPN/Bappenas 2014). This has likely increased with the roll-out of JKN. The e-catalogue, with its published price list, should help the government procure generics at lower prices. In 2013, 432 district and provincial health offices and public hospitals used the e-catalogue, which allowed for an estimated 30% savings (MOH 2014d). Some concerns have been raised regarding the price ceilings for certain drugs in the e-catalogue system. Some prices are perceived to be too low to make production worthwhile, leading to national stock outs (for instance, prices for cotrimoxazole and some analgesics are lower than international reference prices). Others may be too high (prices for locally-produced first-line antiretroviral drugs for HIV (ARVs) and hepatitis C drugs are substantially higher than international reference prices). In addition, reimbursements for distribution costs to remote areas are reportedly not adequate; they are calculated as a percentage of medicine prices, creating a disincentive to distribute cheaper drugs to remote areas and leading to shortages of those medicines (TNP2K 2015b).

An "e-logistic" supply chain management information system has also been developed by the MOH's DG of Pharmaceutical Services to allow real-time monitoring of drug and vaccine distribution and provision. In 2013, it was utilized by pharmacies in 405 districts (MOH 2014d), although there have been some challenges with implementation and problems with poor internet connections. Consumer access to commodities varies by location and facility type.

According to Law 23/2014, the central government is responsible for supplying drugs, vaccines, medical devices, and health supplements for national programs. Local governments can use DAK decentralization funds to purchase their drugs and medical devices (see Health Financing chapter), but they are also encouraged to also allocate their local budget to fund basic pharmaceutical services. There is still significant variation in access to essential medicines across districts because of variability in budget allocations for medicines (Kementerian PPN/Bappenas 2014). Many districts experience overstocks of some products and stock-outs in others.

Before JKN, drug provision for most puskesmas was managed by the DHOs. Now, puskesmas have the ability to augment their supply of drugs using their JKN capitation payments (for most puskesmas, up to 40% of capitation payments may be used to cover operating costs, including costs of drugs and medical devices). While puskesmas receive various government funding streams for drugs, contracted private primary care clinics only receive capitation, which may affect drug availability in those facilities. Data on drug procurement using capitation funds at primary care centers (public and private) are not available.

Statistics vary on the availability of basic preventive and curative medicines and vaccines in puskesmas and hospitals in Indonesia. One source cited that only 20 percent of puskesmas had at least 80 percent of medicines in stock and only 9 percent had at least 80 percent of basic equipment/devices needed for outpatient care (Kementerian PPN/Bappenas 2014). As noted in the Overview chapter of this assessment, NCDs constitute the largest disease burden in Indonesia. A 2014 World Bank report that used 2011 facility-based data found while basic diagnostic equipment (blood pressure cuffs, stethoscopes, and adult scales) were found in 95 percent of puskesmas across the country, only 35 percent of puskesmas were able to conduct cholesterol screening tests and only 54 percent had diabetes diagnostic and monitoring supplies (World Bank 2014b). Some NCD treatments were more available: 80 percent of puskesmas had injectable glucose solution and over 75 percent had basic treatments for chronic respiratory diseases (World Bank 2014b). But there were some deficiencies in availability of treatments for heart disease and heart failure – for example 36 percent of puskesmas had simvastatin available to treat high cholesterol and around 60 percent had various hypertension and heart failure medications (World Bank 2014b).

The MOH finances and procures vaccines from Bio Farma, and Bio Farma distributes them to provinces. Provinces then distribute them to districts. GAVI, the Vaccine Alliance, assists by purchasing pentavalent vaccine and has also provided health systems strengthening support. The Global Fund to Fight AIDS, Tuberculosis and Malaria and other donors support the GOI by procuring second-line drugs for TB and HIV into their central stock (Promoting the Quality of Medicines 2013). ARVs were consistently available in 2013 at 296 hospitals across Indonesia (0.3 percent stock out rates) according to the Clinton Health Access Initiative (Sudrajat 2015). Donor-funded projects have also supported the GOI to address some commodity and supply chain issues. USAID's DELIVER project supported disease-specific programs (influenza, TB, HIV and AIDS), aiming to improve coordination among agencies within the MOH and with donor-funded programs to improve capacity along the various levels of the health system. The Clinton Health Access Initiative has supported the GOI in developing a supply chain management strategy for ARVs (Sudrajat 2015). UNICEF, WHO and other multilaterals are assisting the government with procurement of malaria prevention and treatment supplies, vaccines, and cold chain equipment.

7.2 Strengths, Weaknesses, Opportunities, and Threats

Table 28: SWOT Analysis for Medical Products, Vaccines and Technologies

Strengths and Opportunities
• Basis for good supply chain policy and standards exists in the form of drug lists and established agencies charged with monitoring commodities • Indonesia's manufacturing industry and four state-owned pharmaceutical companies provide a reliable source of drugs, at prices that are set and negotiated by the government • E-catalogue has facilitated pooled procurement of some essential drugs and price controls • Inventory levels are generally adequate, though stock-outs of some essential drugs do occur • Procurement and warehouse systems exist through which to distribute commodities
Weaknesses and Threats
• Lack of consistency in terms of types of drugs available by location and level of the system may threaten access to appropriate care in some areas • Better enforcement of regulations is needed, in collaboration with provincial and district governments. This should include standardizing the prices at which drugs are sold • Unlicensed drug stores, small stores and peddlers escape regulation and enforcement by BPOM • Availability of commodities for NCD testing needs to be monitored

7.3 Opportunities

- Continue to strengthen the e-catalogue procurement system, including reviewing prices for certain essential drugs and addressing problems with incentives for distribution
- Strengthen implementation of the "e-logistic" supply chain management information system at the district level.
- Develop a cohesive strategy for addressing counterfeit and sub-standard products. In addition to strengthening Good Manufacturing Practice systems at the production level, Indonesia should develop a framework for post marketing surveillance (pharmacovigilance), starting with the most marketed products.
- Develop policy and a means for regulating traditional drugs and private sector drug sellers.

8. SOCIAL PROTECTION AND TARGETING

8.1 Overview

Despite a net decrease in both the number and the proportion of poor people over the past five years,[17] Indonesia still counts around 28 million individuals living in extreme poverty (World Bank 2015).[18] In fact, around 40 percent of the population, or around 100 million people, are either poor or vulnerable (i.e., living on US$2 a day or less). Small shocks are enough to push large numbers of people into poverty or to further impoverish those already living in poverty. Given the high concentration of households living either just above or just below the poverty line, there is considerable movement in and out of poverty. In 2012, the World Bank estimated over 80 percent of those who were poor in a given year were living above the poverty line the year before (World Bank 2012b). All of this points to the critical need for strong social protection mechanisms.

Fortunately, social protection in Indonesia figures high on the political agenda. For example, reducing the poverty rate to 8–10 percent and developing the country's social protection system were two of the stated goals in the government's prior National Medium-Term Development Plan (RPJMN).

Indonesia's poverty alleviation strategy has three clusters (International Labour Organisation 2012):

- Household-based social assistance programs, which aim to address the basic needs of the poor
- The community empowerment cluster, which aims to improve the living conditions of the poor through community involvement in the development process
- The small and micro-enterprise empowerment cluster, which supports the development of such enterprises through improved access to credit

Given the scope of the rapid assessment, this review focused mainly on the first of these three clusters and only to a limited extent on the second.

8.2 Main Household-Based Social Assistance Programs

The five main nationwide social assistance programs are the following:

- *Health insurance for the poor and near poor:* Formerly the stand-alone *Jamkesmas* program, the subsidized health insurance program was incorporated into the National Health Insurance (JKN) as of January 2014. Beneficiaries of this program are referred to as Subsidized Premium Beneficiaries (*Penerima Bantuan Iuran,* or PBI). Households ranked in the poorest 35 percent of the population are eligible for this subsidy.
- *Conditional cash transfers for the poorest families (Program Keluarga Harapan*, or PKH*):* Households that take specific health or education actions receive cash payments. The program targets the poorest 8 percent of the population for these transfers. Preliminary results of an impact evaluation conducted by the National Team for the Acceleration of Poverty Reduction (TNP2K) in 2013-14 indicate that the program has had a significant impact on several long-term education and health indicators among recipients. Six

[17] Between 2009 and 2014, the number of poor dropped from 32.5 to 28.3 million and the nationally defined poverty rate decreased from 14.2 to 11.3 percent.

[18] The national poverty line is set at 292,951 rupiahs per month (which is equivalent to about US$24.4/month).

years into the program, secondary school enrollment increased by 2.6 percent, the dropout rate decreased by 0.7 percent and the child labor rate dropped by 1.3 percent. Over the same period, the proportion of deliveries attended by a certified midwife increased by 6.4 percent and age-appropriate immunization increased by 3.5 percent thanks to the program. Postnatal visits, however, declined (TNP2K 2014b).

- *Unconditional cash transfers (Bantuan Langsung Sementara Masyarakat* or BLSM*):* These direct temporary subsidies are part of a "social safety net" meant to prevent a decline in the purchasing power of poor and vulnerable households. Introduced most recently in response to the rising fuel prices that followed the removal of fuel subsidies in 2013, the program targets approximately the poorest quarter of the population for these subsidies. An evaluation of the two previous iterations (referred to as BLT) showed that, even though the program generally suffered from negative public opinion, the cash transfers were a useful complement to poor and vulnerable people at a time of sharp price rises (Hossain et al. 2012).
- *Subsidized rice for the poor (Subsidi Beras Bagi Masyarakat Berpendapatan Rendah,* or *Raskin):* This program reduces the burden poor households' bear in paying for basic food needs. The program has other objectives, including stabilizing rice market prices and maintaining national food stocks. The program targets approximately the poorest quarter of the population for these subsidies.
- *Cash transfers for poor students (Bantuan Siswa Miskin* or BSM*):* This program provides cash assistance directly to primary, junior secondary and senior secondary students from poor households, to remove financial barriers to education and to reduce the number of dropouts. The program targets students from the poorest quarter of households for these subsidies. Initially, a number of weaknesses in the design and administration of the program significantly limited the positive impact of the scholarships (Education Sector Analytical and Capacity Development Partnership 2013). Many of these weaknesses were addressed and the program has now been shown to increase 7th grade participation by as much as 6.6 percent (TNP2K 2014a).

Table 29 presents additional features of each of these programs, including the number of households covered and budget allocations. It is important to note that these programs are run by different government ministries and agencies.

Table 29: Main Household-Based Social Assistance Programs

Name	Transfer Type	Target Group	Number of HHs	Budget	Key Executing Agency
Health Insurance for the Poor (PBI-JKN)	Health insurance premium payment	Poor and near-poor households	~21.8 million (~35% of total population)	Rp. 19.8 trillion (2014)	BPJS Kesehatan
Conditional Cash Transfers for Poor Families (PKH)	Cash and conditions	Very poor households	~3 million (~8%)	Rp. 5.1 trillion (2014)	Ministry of Social Affairs
Temporary Unconditional Cash Transfers (BLSM)	Cash	Poor and near-poor households	~15.5 million (~25%)	Rp. 9.3 trillion (2013)	Ministry of Social Affairs
Subsidized Rice for the Poor (Raskin)	Subsidized rice	Poor and near-poor households	~15.5 million (~25%)	Rp. 18.8 trillion (2013)	National Logistics Agency (Bulog)
Cash Transfers for Poor Students (BSM)	Cash	Students from poor households	~15.5 million (~25%)	Rp. 6.9 trillion (2014)	Ministry of Education and Culture and Ministry of Religious Affairs

Other programs exist in addition to the five largest ones listed in Table 22. First, many regions still have their own district health insurance schemes for the poor that are run by the local government, known as *Jamkesda* (see Health Financing chapter). According to the *Roadmap toward National Health Insurance* (Republik Indonesia 2012), these locally administered schemes are to be incorporated into JKN by the end of 2016. Also, there are relatively small programs designed to provide assistance to the elderly, the disabled and neglected children. Finally, BPJS-K administers four social security programs other than health – namely, work accident insurance, old age benefits, pensions, and death benefits. These were introduced in compliance with Law No. 40/2004 regarding the National Social Security System. At present, these schemes only benefit formal sector workers. There are ongoing efforts, however, to extend coverage to the poor and vulnerable and to better coordinate with other social assistance programs (International Labour Organisation 2012).

8.3 Community Empowerment Programs

Community empowerment programs have a long history in Indonesia. In 2007, the National Community Empowerment Program (*Program Nasional Pemberdayaan Masyarakat Mandiri* or PNPM-Mandiri) brought all major community empowerment programs under their umbrella. Qualitative impact evaluation showed that PNPM-Mandiri had enabled members of the community to eat better, to attend school for longer, to more easily find jobs and set up businesses, to overcome some of the barriers to health care, and to participate in community and local political forums (World Bank 2012a). PNPM-Mandiri is gradually transitioning to the Village Law program (Law Number 6/2014) that will provide government funding directly to villages. The Village Law program plans to adopt the key PNPM principles, i.e., the *one village, one plan, one budget* approach.

One of the programs overseen by PNPM-Mandiri is the PNPM Generasi program, which USAID's Health Systems 20/20 project assessed a few years ago (Morgan et al. 2012). The Generasi program provides conditional block grants to villages as a reward for achievements on selected basic health and education

indicators. Villages can spend grant money on anything they argue will help them make progress on selected indicators. A rigorous impact evaluation of the Generasi program conducted by J-PAL in 2011 found the incentives led to improved performance on health indicators (Olken, Orishi, and Wong 2011). Over a period of two years, prenatal visits and immunization rates were higher in areas where the incentive scheme was operating than in control areas. The Generasi program will end in 2017. It will be important to document lessons learned, especially in the areas of accountability and improving value for money, to build into future Village Law grants.

8.4 Efforts to Enhance the Accuracy of Targeting

In response to the slowing rate of decline in poverty and to increasing inequality, the GOI established the National Team for the Acceleration of Poverty Reduction, TNP2K, in 2010. TNP2K reports directly to the country's Vice-President. Its mandate is to increase the effectiveness of poverty reduction programs, including those listed in Table 22. One of the main tasks TNP2K took on immediately after its establishment was the development of a unified database of identifying information for the country's poor and vulnerable, referred to in Bahasa as the BDT.

8.4.1 Accuracy of Targeting Prior to the Unified Database

The World Bank strongly recommended the creation of such a database, after it had conducted a comprehensive review of the targeting approaches used by Indonesia's main social assistance programs (The World Bank 2012b). The main findings from the review follow:

- The different social assistance programs used different targeting approaches to select beneficiary households and individuals, even though these programs were looking for the same people. As a result, each program ended up with different beneficiaries. For example, even though BLT (the precursor of the current unconditional cash transfer program BLSM), Jamkesmas (the former health insurance scheme for the poor and vulnerable) and the rice subsidies for the poor program (Raskin) were all aiming for the poorest 30 percent of households, less than one-third of these households actually benefited from all three programs.
- In all the main social assistance programs, implementation of targeting differed in practice from official guidelines. In the Raskin program, for example, rice was supposed to go to people on the official lists of the poor, after the list had been checked at a broad-based community meeting. In reality, however, community meetings were often not held or were restricted to a few individuals; the lists of poor were often not used, with the distribution being done at the discretion of the village head instead; and rice was often shared equally among households, poor or non-poor, so as to avoid conflict and tension.
- The accuracy of targeting for all social assistance programs ranged from weak to extremely poor. One way to assess targeting accuracy is to score it on a scale from zero to 100, where 0 means no targeting (i.e., benefits distributed randomly) and 100 means perfect targeting (all the benefits reach the poor). A score of 50 is considered good. The highest score among social assistance programs was only 24 (for the unconditional cash transfer program BLT). Targeting performance was so low in the cash transfer for poor students program (BSM), for example, that non-poor students were nearly as likely to get cash as poor or vulnerable ones.

The World Bank estimated in that same report that the cost of developing a unified database would be equivalent to just over 1 percent of the cost of the three main social assistance programs combined.

8.4.2 Development of the Unified Database

The starting point for the development of the unified database was the 2011 Data Collection for Social Protection Programs (*Pendataan Program Perlindungan Sosial,* or PPLS11), a large-scale data collection effort conducted by the Statistics Indonesia in 2011. This was the third such effort to develop a registry of the poor and vulnerable,[19] and it involved several improvements compared to previous iterations (TNP2K 2014d):

- The initial list of households to be included in PPLS11 was identified through poverty mapping of the results of the 2010 Population Census.
- The number of households included was increased dramatically: PPLS11 covered 45 percent of the Indonesian population (or approximately 25 million households), as compared to 29 percent for PPLS08 (World Bank 2012b).
- Consultations with poor communities were held to identify unrecorded poor households.
- Characteristic variables of individuals and households[20] were added to better predict the socioeconomic conditions of households and better accommodate the needs of the programs.
- The poorest households among PPLS11-surveyed households were then selected for inclusion in the unified database using Proxy Means Tests (PMT). Based on the findings from a number of experiments, the World Bank and J-PAL found that PMT provided more accurate results than alternative targeting methods.

8.4.3 Use of the Unified Database

The unified database contains identifying information on the poorest 40 percent of the population, which represents around 25 million households. TNP2K is in charge of its management. Since 2012, the five main social assistance programs listed in Table 22 have used the database for targeting.[21] The database sorts households in ascending order of socio-economic position. Using its own specific eligibility criteria, each program identifies its beneficiaries starting with the poorest.

The use of the unified database has enhanced targeting accuracy and made targeting more progressive. Both errors of exclusion and errors of inclusion have been reduced (TNP2K 2014d). For Jamkesmas, for example, switching to the unified database resulted in a 13.9 percent drop in exclusion errors and a 3.9 percent reduction in inclusion errors. As a result, complementarity between the different programs has slightly increased.

8.4.4 Remaining Challenges and Recent Initiatives

Despite these improvements, there is clearly still considerable room for improvement to further increase targeting accuracy.22 In 2014, Bah and colleagues assessed the relative importance of two key design issues: which households to survey for inclusion in the database and how to rank surveyed

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[19] The 2005 Socioeconomic Data Collection (PSE05) was carried out to target beneficiary households for the 2005-06 and the 2008-09 unconditional cash transfer programs. A similar data collection exercise was done in 2008 (PPLS08).
[20] Including, for example, variables relating to the ownership of certain assets or to characteristics of the household's dwelling.
[21] In addition, a number of smaller programs also use the unified database to identify their beneficiaries, including a child assistance program run by the Ministry of Manpower and Transmigration, a housing program for the poorest 1 million families that are Social Protection Card (KPS) beneficiaries, and some local social assistance programs.
[22] In 2010, i.e., prior to the unified database, Jamkesmas coverage rates among the poor and near-poor were only about 34.6 percent, and the error of inclusion was as high as 52.4 percent (Harimurti et al., 2013).

households. They concluded the biggest challenge is to enumerate the right households for inclusion in the database in the first place. If poor households are not surveyed, even a perfect ranking method cannot prevent their exclusion.23 The authors also highlight the potential incorrect assumption supposing a strong correspondence between the lists of beneficiaries extracted from the database and the households who actually end up receiving the benefits. There is evidence that official lists of beneficiaries are often modified at the local level. This may affect targeting outcomes either positively or negatively. It can be positive if the modifications allow the community to exert their greater ability to identify the very poor or if the capture of program benefits by local elites is limited. Another major challenge is keeping the information in the unified database up-to-date. As mentioned earlier, a considerable number of households move in and out of poverty each year. Those identified as poor in 2011 may no longer be poor today, and many households that were not poor or vulnerable in 2011 may have fallen into poverty since. Also, the information in the database does not capture demographic changes since 2011 (migration, births, and deaths).

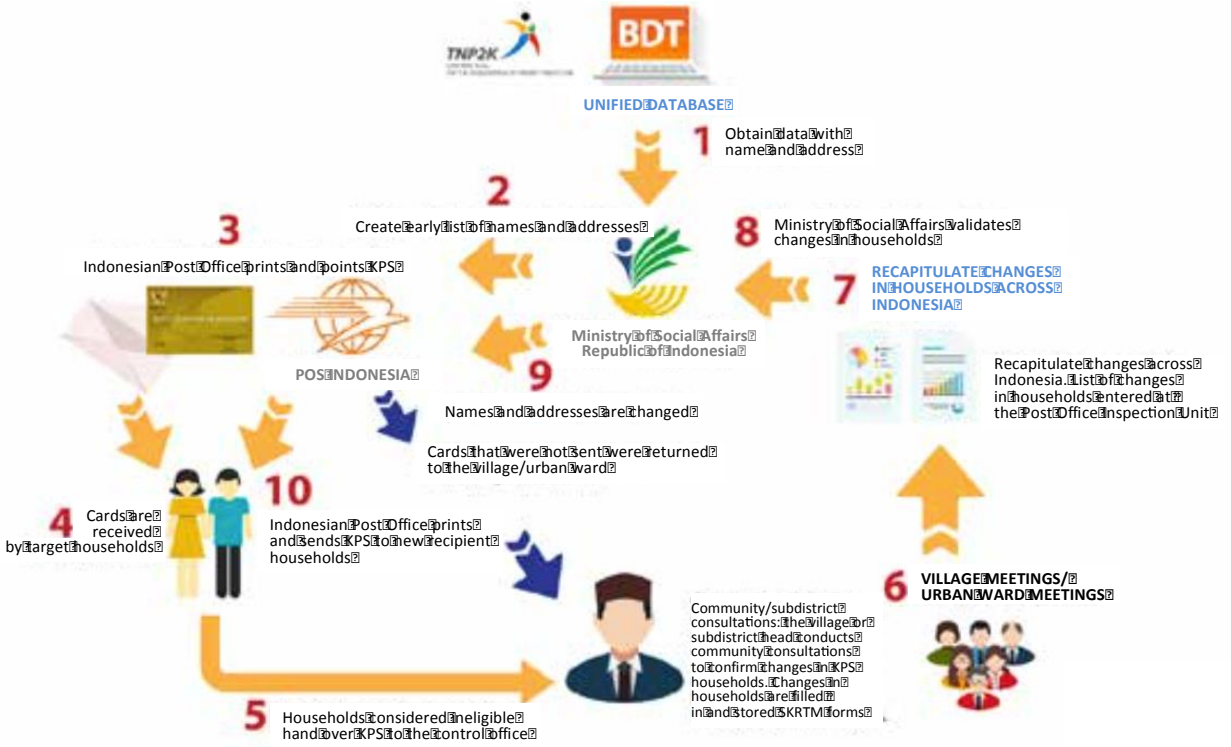
There are a number of ongoing efforts to address these challenges. First, a new large-scale poverty survey (PPLS15) will be conducted this year. While the survey provides an opportunity to refresh the information contained in the unified database, it is not a long-term solution to the challenges highlighted above. TNP2K respondents indicate they are well aware of this limitation.

Second, TNP2K has designed a process to allow ongoing updates to social assistance program beneficiary lists. Figure 13 displays the process. Managed in collaboration with the Ministry of Social Affairs (MOSA) and local social welfare personnel, it relies on community input through village and urban ward meetings. Community representatives attending these meetings work together to verify the lists sent to them by TNP2K. In 2013, this process updated 350,000 households.

Third, in partnership with MOSA and Indonesia's postal services, TNP2K has also developed a system to make changes to the list of eligible households online, the so-called *Electronic Replacement Summary Form System*. Information on necessary amendments and replacement households that results from the community-level verification process described above can be submitted to local social welfare personnel (under MOSA) and forwarded for input into the system to the district-level Audit Office of the postal services. MOSA then uses the data to validate substitute recipients.

[23] Note that the same problem applies to poor and vulnerable individuals who are homeless or who are living in institutions.

Figure 13: Process to Update Social Assistance Program Beneficiary Lists



Source: TNP2K 2014

8.5 Improving the Identification of Social Program Beneficiaries

Parallel to the development of the unified database, efforts have been made to improve the way beneficiaries of social assistance programs can be reliably identified.[24]

MOHA manages the Population Administration Information System (*Sistem Informasi Administrasi Kependudukan*, or SIAK) and issues identity cards (*Kartu Tanda Penduduk*, or KTP) and unique identification numbers (*Nomor Induk Kependudukan*, or NIK) to each Indonesian citizen as well as family card numbers to each family. The SIAK system uses multimodal biometric identification – a combination of iris, fingerprints, and face recognition – as part of its e-KTP program (Fahmi 2012). In line with Law No. 24/2013, TNP2K has worked closely with MOHA to synchronize the information included in the unified database with MOHA's SIAK. Thanks to this effort, 86 percent of all individuals in the unified database now have a unique identification number, a family card number, and other administrative data. The synchronization process has also allowed the detection and correction of many problems with the data (e.g., duplicate records, deceased individuals, or individuals who had migrated in or out) (TNP2K Secretariat 2015).

To build on and further facilitate smooth synchronization between the two systems, TNP2K is currently piloting the use of fingerprint verification for the registration of the poor and vulnerable in the unified database.

[24] Identification refers to confirming an individual's identity, while targeting refers to correctly assessing an individual's eligibility for a subsidy program.

In 2013, savings from a major reduction in fuel subsidies were redirected to existing social protection programs through the Acceleration and Expansion of Social Assistance Program, or P4S, initiative. At this time, the Social Protection Card (*Kartu Perlindungan Sosial* or KPS) was introduced. The card enables access to different social assistance programs, namely rice subsidies, temporary cash transfers, and student cash transfers. Cardholders also automatically become eligible for subsidized health insurance under JKN. The card lists all family members and each card has both a barcode and the same unique identifier as the family card. So far, 15.5 million households have received Social Protection Cards and have been added to the unified database. The postal service sends the card directly to the household's address. The use of this card has reportedly helped strengthen social assistance initiatives by further improving targeting and increasing complementarity between programs (TNP2K 2014d).

After election in 2014, President Jokowi introduced a series of new cards. First, President Jokowi introduced the Prosperous Family Card (*Kartu Keluarga Sejahtera*, or KKS) to gradually replace the Social Protection Card. This Prosperous Family Card has replaced around 1 million Social Protection Cards. In addition, President Jokowi introduced two types of individual cards for programs that target individuals rather than households, namely:

- The Healthy Indonesia Card (KIS) for subsidy-eligible JKN beneficiaries – already distributed to more than 4.4 million individuals.
- The Smart Indonesia Card (KIP) for education benefits – already distributed to 160,000 people.

8.6 Introducing Mobile Money

The introduction of the Prosperous Family Card in 2014 was combined with the piloting of an innovative payment method, namely the use of mobile money for transfers to Prosperous Family Card holders. Together with their new Prosperous Family Card, selected households receive a mobile phone SIM card with a five-year validity period, and a mobile money account is automatically opened in the name of the cardholder. Both the registration of the SIM card and the opening of the account are provided for the cardholder to ensure these administrative steps are not barriers. As indicated by Joyce and colleagues, who proposed the introduction of mobile money for social assistance programs in 2014 (Joyce et al. 2014), the move represents a shift from a managed disbursement process, in which beneficiaries rely heavily on program facilitators to access their benefits, to a self-service process, in which beneficiaries are able to select the most appropriate time, place, and method to access their money.

For households that still have a Social Protection Card, the postal system continues to handle payments.

8.7 Strengths, Weaknesses, Opportunities, and Threats

Table 30: SWOT Analysis for Social Protection and Targeting

Strengths and Opportunities
• Social protection in Indonesia is high on the political agenda • One unified database listing the country's poor and vulnerable has been developed • The unified database and the MOHA Population Administration Information System are synchronized • Biometric identification is being piloted • A process to allow ongoing updates to social assistance program beneficiary lists has been designed • The use of the unified database has enhanced targeting accuracy and made targeting more progressive • Village Law 6/2014 offers an opportunity to further strengthen the role of villages in improving targeting accuracy • Cards with a unique identifier are being issued • Use of mobile money is being piloted for transfers of payments to cardholders
Weaknesses and Threats
• Mistargeting is still considerable because of the infrequent periodicity and method of updates of the unified database • Official lists of beneficiaries are often modified at the local level, which may affect targeting outcomes either positively or negatively • With current procedures, it is still hard to keep the information in the unified database up-to-date • Limited coordination between programs providing financial incentives, leading to a risk of misaligned incentives • Risk that lessons – both positive and negative – learned from PNPM Generasi (which is to end in 2017), in particular lessons relating to performance-based grants, will not be considered in the implementation of Village Law 6/2014

8.8 Opportunities

The developments in the areas of social protection and targeting described in previous sections offer a number of opportunities to further strengthen the Indonesian health system.

8.8.1 Further Enhancing Targeting Accuracy

TNP2K's next challenges are to make the unified database more dynamic (updated on a continuous basis) and to develop a proper appeals system. TNP2K is seeking support to make these steps happen. In the future, it should be possible to update the database continuously, as opposed to relying heavily on infrequent, intermittent large-scale surveys. In fact, TNP2K hopes that the PPLS15 will be the last large-scale enumeration effort of its kind. The unified database also still needs further improvements to accommodate the specific needs of each social assistance program. Key to making the database more dynamic and accurate will be the following:

- Developing effective systems for on-demand, self-initiated applications[25]
- Developing a method to systematically take off the rolls individuals who are no longer eligible
- Facilitating regular feedback from programs that are using the unified database regarding individuals and households that register or withdraw as program beneficiaries
- Encouraging greater participation from local governments and communities

Institutions will be needed at the local level to facilitate this process. The GOI should explore efforts to further strengthen the role of villages in improving targeting accuracy, especially in the context of Village Law No. 6/2014.

8.8.2 Improving Identification of JKN Beneficiaries

When the unified database is updated, both the unique identifier for each individual and the piloting of biometric identification described earlier will be included. There is an opportunity to also expand their adoption within JKN for all enrollees (not just subsidy-eligible members), not only to check patient eligibility but also to track utilization of health services provided by health facilities.

8.8.3 Improving the Incentive Environment

There is an opportunity to build on potential synergies among a number of social assistance and intra-government transfer programs, and to better align the financial incentives they introduce:

- Provider payment mechanisms under JKN, including the possible future use of performance-based payments to better incentivize services that health providers may otherwise neglect
- Conditional cash transfers (PKH) and their health-related indicators
- Village grants, drawing on lessons from PNPM Generasi, in particular those relating to performance-based grants[26]
- BOK transfers from the MOH to the primary health care level, meant to cover operational expenses linked to health outreach activities[27]
- DAK transfers from the central government to districts[28]

Ensuring greater coherence among these programs and mechanisms in terms of the incentives they introduce at the various levels – individual, household, community, health provider, and local

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[25] This would make the registration process more open in order to allow greater entry/exit. It will require an online system to allow individuals to report changes that would need to be made. For example, households that consider themselves eligible for a given program could be allowed to apply for inclusion in the registry. Likewise, people could indicate individuals or households who should no longer be included.

[26] Now is the time to take the lessons learned and see how they can be built into the guidelines that need to be developed for the village grants. DFAT (through Kompak) is already providing some support, and the World Bank is providing technical assistance that focuses on prioritization at village level.

[27] In order to be able to withdraw the money from its account at the district level, each puskesmas needs to submit a plan to the district.

[28] DAK grants from the MOF to districts are earmarked. They vary in amount as they are meant to *equalize* funding to districts. DAK money should be spent in accordance with government priorities, which is why the money is earmarked for the different sectors, and each line ministry is to provide guidance on how to spend it. See Health Financing chapter for more details.

government – would contribute to better aligning the behaviors of the different actors with the priorities and goals of the health system.

Obviously, this would require considerable inter-agency coordination, which comes with its own challenges.

8.8.4 Expanding the Use of Mobile Money

There is an opportunity to expand the use of mobile money and explore additional applications in the context of JKN. Mobile money could facilitate the payment of other financial incentives – to patients, health providers, or communities. The payment of JKN contributions by non-poor informal sector workers could be made using mobile money. An additional benefit of using mobile money is the fact that it automatically generates a database of user information and related transactions, which can be analyzed in various ways to examine incidence of benefits, use rates, etc. related to user characteristics.

8.8.5 Bringing It All Together

The different opportunities presented above could be combined on the ground. They are all inter-related. For example:

- Expanding unique identification of households included in the unified database within the district would automatically include most subsidy-eligible JKN beneficiaries (PBI).
- This could be further expanded to contributing (i.e., non-PBI) JKN members.
- Adding biometric identification to that (something that is also already being piloted for the registration for the unified database) would help fight misuse of insurance cards.
- This would also help get better data on health care utilization, which would in turn help refine provider payment amounts.
- Biometric identification would also contribute to strengthening the verification function.
- This function could be better harmonized between (i) claim verification; (ii) verification in the context of performance-based payments, and (iii) verification in the context of conditional cash transfers.
- The incentives themselves could also be better aligned across the different payment mechanisms, not only within health but also between health and social protection.

9. HEALTH INFORMATION SYSTEM

A health information system (HIS) is defined as the set of components and procedures that generate information for health care management decisions at all levels of the health system. The key components of a national HIS include:

- **Resources** (human, technical, and financial) for generating and using health information
- **Processes** for data collection, management, and analysis
- **Outputs** including dissemination and use of health information[29]

This rapid assessment provides an overall description of Indonesia's HIS and discusses broad system-wide issues, with particular focus on issues that affect or are influenced by the health system building blocks of governance (including decentralization), finance, and service delivery.

Indonesia is a challenging terrain for HIS with a multitude of islands, decentralized governance structures, resource-constrained facilities and sub-national governments, and incomplete network connectivity. In light of these challenges, the country is moving toward UHC by 2019, which requires a highly functional HIS system including data collection, reporting, analysis, and use.

9.1 Resources for Generating and Using Health Information

Sources of health data in Indonesia include routine data reporting systems (such as statistical and program reporting from health facilities and vital registration records) and population-based surveys (such as the census and household or patient surveys). The routine HIS managed by the MOH is the predominant source of data on the health sector in Indonesia. BPJS-K also collects a large amount of data from participating facilities, although this data is not integrated into the routine HIS.

9.1.1 MOH Systems for Data Collection and Management

The MOH has developed a variety of information systems to fulfill its mandate to monitor health programming in the country. First, the district health information system (DHIS) (known in Bahasa as SIKDA Generik) collects and reports data from puskesmas. Second, the Hospital Management Information System (SIMRS) was developed specifically for hospitals at the district, provincial, and national levels. Third, a patchwork of separate systems compile data on other diseases and conditions, including MCH services (KARTINI, an application for midwives); HIV-related services (SIHA); TB (SITT); malaria (SISMAL); immunizations (SIMUNDU); and overall epidemiological surveillance.

The above systems are not integrated at any level, which is an enormous challenge for reporting and analysis. The government is currently seeking to adopt DHIS2 – an open source software platform for reporting, analysis, and dissemination of health data developed by the University of Oslo and used in over 40 developing countries worldwide – to integrate all health statistics reporting at the national level. In addition, an integrated "eHealth" online platform is in development (MOH 2014d) and an "eHealth Road Map" has been prepared. There is a great deal that needs to be done to make that aspiration a

[29] Adapted from Health Metrics Network 2009.

reality over the next five or more years given the size, complexity, and dispersed nature of Indonesia's health system (MOH 2014).

The potential for efficient and effective use of the HIS is constrained by shortages of information technology (IT) equipment at facilities and health offices. Not all puskesmas have computer-based information systems. Even among those with computers, most are not connected into the MOH online platform for data reporting and data submission; only 20 percent of puskesmas have Internet access. The MOH has a goal of all puskesmas connected and 20 percent of all medical records to be available online by 2019 (MOH 2014). Currently, the MOH has limited ability to hold accountable those districts and cities that cannot or do not report via the SIKDA Generik system, as it has not been fully rolled out nationwide, and many facilities are not able to access the Internet. Of the nearly 2,500 registered hospitals in the country, only about 700 have an electronic HIS. The MOH's Directorate of Health Services (BUK) has recommended open source HMIS software for hospitals to enable more facilities to collect and report required data. Among DHOs, about 60 percent of the 500 DHOs are online now. Network connectivity remains a major challenge to timely reporting. The Ministry of Planning, Bappenas, is supporting an infrastructure plan to provide broadband network connections by 2019.

Capacity for routine data collection, compilation, and reporting among health care providers who maintain patient records and are responsible for the first level of data compilation and reporting is considered to vary among districts, according to the MOH. This capacity also varies in large hospitals, although at the national level, capacity is considered to be adequate according to key informants and documents reviewed for this assessment. DHO and PHO staff could use capacity development in this area, according to stakeholders interviewed, especially as decentralization progresses and HIS needs expand.

9.1.2 HIS Stakeholders

There are many institutions engaged in the Indonesian HIS, each with its own system and multiple corresponding data streams. While this system is functioning by and large, the complexity and number of reports at the facility level is burdensome, and greater integration and streamlining could improve data reporting and use. Table 31 illustrates this point, listing the various actors and their roles and responsibilities in the Indonesian HIS.

There are two separate HIS units at the MOH, the Center for Data and Information (known in Bahasa as *Pusdatin*), and the Program and Information Unit of the BUK. Pusdatin has overall responsibility for health statistics as well as primary care facility reporting, and BUK is responsible for collecting and analyzing data from hospitals.

Table 31: Indonesia HIS Institutions, and Roles and Responsibilities

Ministry or Agency	Unit	Roles and Responsibilities
Ministry of Health (MOH)	Center for Data and Information (Pusdatin)	• Responsible for setting overall policy on HIS and e-health • Hosts the MOH's HIS server and website; provides a secure network to provincial and district health offices; hosts the Data Recovery Center (DRC) • Maintains the SIKDA Generik software application for puskesmas • Maintains the Health Data Dictionary (version 1) and the Puskesmas Registry • Oversees DHO monthly reports to MOH • Produces health profiles and other reports (see Table 32 below)
	Program and Information Unit, Health Services Directorate (BUK), Directorate of Ancillary Services	• Responsible for the Hospital Information Management System (SIMRS) and the Hospital Recording and Reporting System (SP2RS) • Maintains the SIMRS GOS open source HIS software for hospitals, SP2RS, hospital facilities inventory (ASPAK), and the Information System for Public Hospital Planning and Monitoring (SIPERMON) • Web-based hospital registration, hospital bed availability data • Pilot-testing tele-radiology
	Program & Information Unit, Directorate of MNCH	• Oversees routine MNCH reporting by DHOs via its own distinct applications called the *Komunikasi Data Gizi dan KIA Terintegrasi* (Integrated Nutrition and MCH Data), *Pemantauan Wilayah Setempat* (PWS) Kartini (Local Area monitoring), and SMS Gateway (*clientgizi*).
	Directorate of Communicable Diseases (various sub-directorates)	• Responsible for the TB reporting system (SITT), HIV reporting system (SIHA), Excel-based reporting for malaria, and weekly SMS-based reporting for other notifiable diseases
	Directorate of Pharmaceuticals and Medical Devices	• Oversees the pilot phase of an *e-logistics* application for district drug warehouses
	Bureau of Planning	• Oversees the *e-planning* application for hospitals.
	Human Resources Development and Empowerment Agency (BPPSDM)	• Recently revised the information system for Human Resources for Health, called the *Sistem Informasi SDM Kesehatan* (human resources information system).
Indonesian Medical Council (KKI)		• Maintains physician registry (STR)
National Standardization Agency (BSN)		• Oversees adoption of 9 ISO standards on health informatics

Ministry or Agency	Unit	Roles and Responsibilities
Ministry of Communication and Informatics	Directorate of e-Government	• Partner for implementing e-Health according to Government Regulation no 96/2014 on Indonesia's Broadband Plan • Responsible for promoting interoperability among government agencies
National ICT Board (Dewan TIK Nasional)		• Partner for Indonesia Broadband Plan Implementation
National Health Insurance Agency (BPJS Kesehatan)	IT Directorate	• Provides a virtual private network (VPN)* to provincial and district BPJS-K branch offices; hosts server, website, and data recovery center • Maintains over 50 software applications, including: PCare, INA-CBGs, health facility GIS, mobile apps, premium collection via ATM, member registration • BPJS-K Research Database will be launched in 2015 • Maintains a registry of health facilities that are under contract with BPJS-K
National Family Planning Coordinating Board (BKKBN)	-Directorate of Reporting and Statistics -Directorate of Information Technology and Documentation	• Provides VPN to provincial offices; hosts server and website • Maintains a registry of health facilities that receive contraceptives from BKKBN and provide routine FP services, Family Information System • Produces FP profiles, family enumeration / PMA2020 survey (2015), a nationally representative survey on FP, water, and sanitation at household and facility levels
Statistics Indonesia (BPS)		• Responsible for maintaining standard codes for all provinces and districts • Conducts the national census, intra-census surveys, DHS, and updating of integrated poverty database (2015)
Ministry of Home Affairs (MOHA)		• Maintains national identification system including the issuance of cards (KTPs) and identification numbers (NIK); this unique ID database has been shared with BPJS-K and MOH • Responsible for Civil Registration and Vital Statistics (CRVS)

* A VPN is a network that is constructed by using public wires – usually the Internet – to connect to a private network, such as the internal network of a company or government office.

A standing inter-agency committee comprising representatives of the MOH, Ministry of Education, Ministry of Home Affairs (MOHA), Statistics Indonesia (BPS), and some academic institutions was established to guide HIS management, although it does not meet on a regular basis. Several academic and government institutions and think-tanks conduct health systems research, including the MOH's National Institute of Health Research and Development, the Gadjah Mada University, the University of Indonesia, and the AIDS Research Centre. With external support, the School of Public Health at the University of Indonesia conducts National Health Accounts (NHA) estimations, a valuable tool for estimating health expenditures for policy and planning.

BPS has 16,000 employees, of which 3,000 are located in Jakarta central office; the others are based in provincial offices. For large data collection efforts such as the national census, BPS hires as many as 800,000 people. Surveys are largely paper-based. BPS has conducted computer-assisted surveys, but this is difficult outside Java and Bali due to lack of network connectivity and unreliable electricity.

The national health insurance agency, BPJS, is playing an increasingly important health information role. Public and private health facilities that participate in JKN submit substantial amounts of data to BPJS-K on patient conditions and treatments for the purposes of reimbursement and program monitoring. The puskesmas-based information system for BPJS-K patients, called PCare, is unfortunately not integrated into the routine primary care HIS. Interoperability of the INA-CBG system (BPJS's hospital information system) is a challenge but some progress has been made. Neither PCare nor INA-CBG is accessible by DHOs or PHOs. One hundred and twenty hospitals have implemented a bridging system that connects local HIS, INA-CBGs, and member eligibility data, and a further 1,500 hospitals have implemented interoperability between INA-CBG and member eligibility data. Around 1,200 Pcare users are not yet interoperable with the local facilities' information systems. Key informants noted that disease codes in BPJS's systems do not align with those used by the MOH or medical councils; this causes some confusion among health professionals reporting to BPJS-K and could result in miscoding of diseases and treatments. This issue has been raised at the national level by the private sector and professional associations.

An agreement exists between MOH and BPJS-K to share relevant data at the national level; the obligations of each party under the agreement need to be clarified and enforced. Data sharing between BPJS-K and the MOH, as well as among units within the MOH, could be strengthened with stronger formalization and oversight of these required data exchanges.

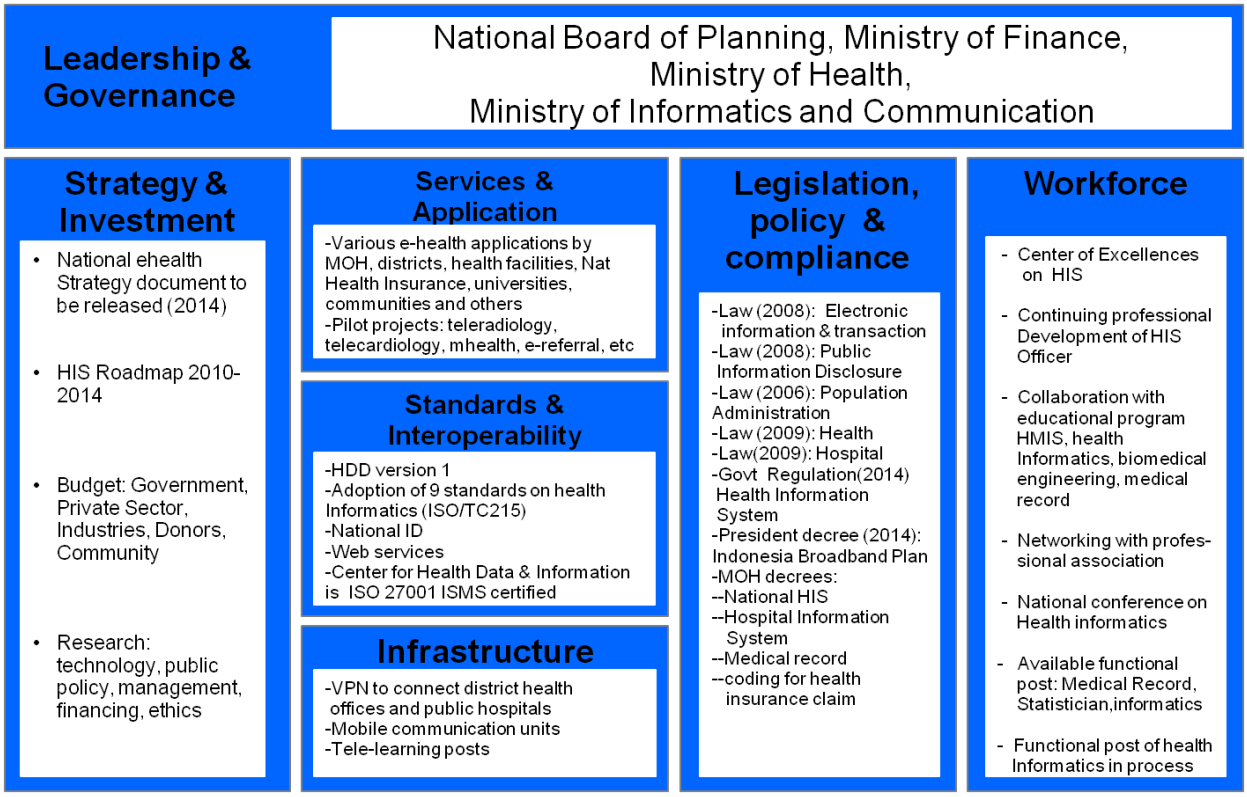
9.1.3 Policies and Planning for HIS Development

Various laws and decrees govern regular data collection and reporting through the routine health information system (RHIS). Key among these are Law No. 36/2009 (health law), Law No. 23/2006 (outlines some of the responsibilities related to CRVS), Joint Decree of the Ministry of Home Affairs and Ministry of Health (January 2010) on reporting of death and cause of death, and Government regulation No. 46/2014 on the HIS.

Improvement and integration of the HIS is one of the 12 overarching strategic objectives of the MOH Strategic Plan for 2015-2019. In particular, the plan focuses on improving district and provincial information managers' skills (MOH 2015). According to stakeholder interviews and documents reviewed, both the MOH and BPJS-K are expanding their information systems, each guided by their respective HIS strategies, and will need expanded human resource capacity to reach their 2019 objectives. This includes both a larger number of staff overall and more specialists at the national level, particularly in the areas of IT and statistics. Representatives from the MOH's Pusdatin reported that they expect a significant budget increase in the coming year to help support these objectives, though specific budget figures were not available at the time of this assessment.

Indonesia's E-health National Strategy (2015-2019) contains an e-health framework and specific strategy recommendations. It aims to expand and improve Indonesia's HIS in support of JKN, and specifically to move toward integration of systems at the national level and expansion of effective HIS in remote parts of the country. Figure 14 describes the different component supporting the implementation of the e-health national strategy.

Figure 14: Components of e-Health National Strategy



Source: Ministry of Health 2014

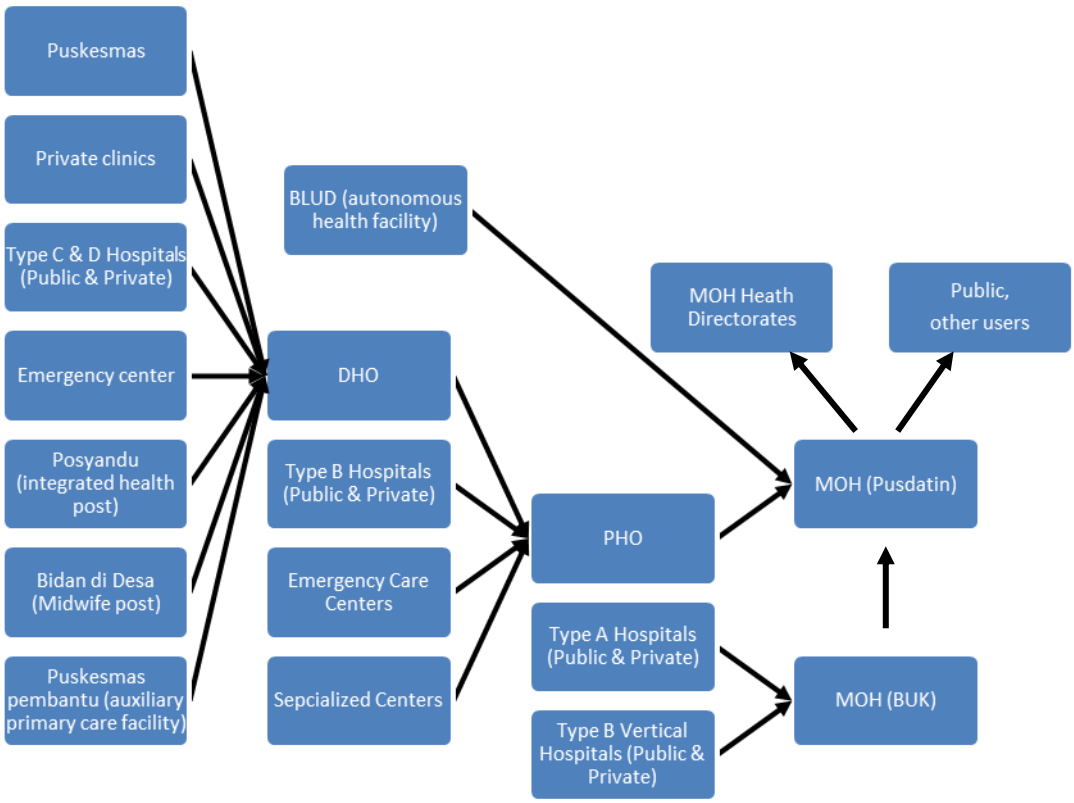
Donor support for HIS in Indonesia was significant in the past but has decreased in recent years. DFAT, GAVI, and other development partners are still engaged at varying levels to support the development of HIS, although most investment is reportedly coming from GOI funds. A current Global Fund grant supporting the strengthening of M&E systems for HIV and AIDS, TB, malaria, and other health conditions will end in 2015. Indonesia has submitted a new grant application to support the introduction of DHIS2, which will serve to integrate various systems at the national level.

9.2 Processes for Data Collection, Management, and Analysis

9.2.1 Routine Health Information System

Routine health sector data collection and reporting are conducted through a number of parallel reporting systems as noted above. Health facilities are mandated to use standardized MOH-approved forms and registers to collect, compile, and report data on a regular basis. Indicators compiled routinely include input indicators (such as inventory of health system personnel, medical facilities), medical services provided, and population health indicators. Figure 15 shows how data flow through the hierarchy of data reporting units for each of these parallel systems, according to both current legislation (Law 23/2014) and current practice. Summary results are not regularly sent back to lower levels. Note that this figure and the information and analysis below refer to the MOH collection and use of data, as the BPJS-K data streams collected through Pcare at the primary level and INA-CBG at the hospital levels are not integrated into the RHIS as of the writing of this report, and claims data are not considered part of the RHIS.

Figure 15: Routine Health Information Data Flows



Primary health care facilities and hospitals have separate reporting streams within the RHIS. For the former, puskesmas and other district-level facilities submit data to the DHOs, where the reports are checked for accuracy, reviewed, consolidated, and sent to the PHO. The PHO also checks for accuracy before submitting data to the MOH's Pusdatin at the national level. Pusdatin conducts further checking for accuracy, then consolidates and analyzes the data at the national level and forwards relevant program data to the specific heath program departments within the MOH. Reports are submitted weekly (for notifiable and infectious diseases), monthly (for 115 priority health program indicators), quarterly, and yearly (for Minimum Service Standard (MSS) indicators – see Service Delivery chapter). The epidemiological surveillance system is also integrated into this reporting stream, with weekly reporting of notifiable symptoms and infectious disease diagnoses.

For secondary and tertiary care, all public hospitals are required to submit health information and program reports to the Program and Information Unit of the BUK. This unit is mandated to provide this data to the MOH's Pusdatin for analysis and consolidation with national statistics and M&E systems.

Pusdatin's leaders and other stakeholders would like to integrate these separate reporting streams (among different health areas and between hospital and primary care reporting). The MOH is currently identifying IT and data management needs and will decide on a plan for data integration within the next year.

Routine reporting of health information by private health facilities to Pusdatin is mandatory, according to Regulation No. 46/2014 on Health Information. However, with some exceptions, few private sector health service providers report according to those requirements. There is little or no enforcement of obligatory private sector reporting. According to stakeholder interviews, private hospitals do not have a consistent understanding of the reporting requirements. Private providers may be more motivated to

report service delivery and other statistics to BPJS-K in order to receive payments, and thus this type of reporting (claims data) is more regular, according to stakeholder interviews.

Puskesmas produce numerous reports (those interviewed for this study generated at least 28 per month) for the different health programs they manage. Managers are charged with analyzing data and comparing their performance to goals set by the DHO, although they do so with inconsistent regularity and may lack adequate capacity to do so effectively. The DHO in turn is meant to review reports and hold periodic meetings with puskesmas managers to review progress against program goals. Under Law 23/2014 on decentralization, PHOs now also have an enhanced responsibility to review district performance against the MSS indicators and other goals set by the MOH.

9.2.2 Censuses and Population-based Surveys

As noted above, BPS is responsible for conducting population censuses and surveys, including health surveys. Before BPS implements large surveys, they invite various line ministries to propose questions, and then negotiate their inclusion. Data are centralized in one off-site back-up data warehouse.

The census was last conducted in 2010 and the next one is planned for 2020. Statistics from the census are available on the BPS website. The most recent DHS was conducted in 2012 by the National Population and Family Planning Agency (BKKBN) with support from BPS, and it is available online. BKKBN also administers the family registry, which collects some of the same information as the civil registry, such as births and deaths.

9.2.3 Civil Registration and Vital Statistics

MOHA manages the Population Administration Information System (SIAK) and issues identity cards (KTP) and unique identification numbers (NIK) to each Indonesian citizen as well as family card numbers to each family. The recording of events such as birth, death, stillbirth, marriage, divorce, child recognition, and adoption is carried out by local governments, and the data flow up to MOHA.

MOHA has collaborated in recent years with the MOH to improve CRVS and certification of causes of death. According to the World Development Indicators, only 66 percent of births are registered in Indonesia, and there are more serious challenges associated with registration and reporting of deaths. The GOI intends to improve vital statistics reporting with the use of verbal autopsy. The eHealth Road Map (2015-2019) states that there is a plan in place for increased cooperation across programs and sectors, in order to improve the quality of vital statistics (MOH 2014).

The Sample Registration Service (SRS) is a nationwide sample-based program for monitoring vital statistics including causes of death. The establishment of the SRS itself is an achievement, with the recording of events and cooperation between MOHA and health offices at the grassroots level dictated by a January 2010 Joint Decree of MOHA and the MOH on Reporting of Death and Cause of Death. The Indonesian SRS sites cover 128 sub-districts in 89 districts and 25 cities (within seven regions and 30 provinces) that represent Indonesia. About 4 percent of the population is meant to be covered by SRS, and they are stratified by development areas and urban versus rural populations (Kosen 2013). According to stakeholders interviewed, SRS has a 30 percent completion rate on information regarding deaths which impacts data quality.

9.3 Outputs of the HIS

Table 32 summarizes a variety of statistical and analytic reports produced by institutions that collect and analyze health sector data in Indonesia, as well as indicators from related development sectors. These include routine health statistics reports; health system analyses and research; surveys of households, individuals, health care providers, and health facilities; and the census (Kosen 2013).

Table 32: Health Information Products

Title	Frequency Conducted	Description
National Health Statistics	Annually	Regular reporting of puskesmas, hospitals, surveillance data, sentinel data. Compiled at the facility and DHO level monthly.
Sample Registration System	Ongoing	Covers 4% of the population stratified into development area and urban vs. rural. Pilot was conducted under a grant from the Global Fund.
Civil registration data	Annually	Population Administration Information System data are collected by MOHA. While it is meant to be conducted annually, this is not yet the practice as the CRVS system is not yet fully functional.
National Health Accounts	Bi-annually	Estimation of health spending by all sources. Conducted by the University of Indonesia in collaboration with the MOH's Center for Health Financing and Insurance (PPJK).
Census	Every 10 years	Population census last conducted in 2010 captured data from about 234 million individuals. Next census is planned for 2020. MMR estimated using indirect method. Identifies quintiles of socioeconomic status. Conducted by BPS.
Basic Health Survey (RisKesDas)	Every 5 years	Nationally representative health survey that collects basic morbidity and mortality data down to the district level. It covers health status (mortality, morbidity, and disability), environmental health (physical environment, biological, and social), health behaviors (hygienic behavior and lifestyle), and various aspects of health care (access, quality of care, health financing). Conducted by the MOH.[30]*
National Health Survey (Surkesnas)	Every 3 years	Covers a wide range of key health indicators at national and provincial levels by integrating all national-scope health surveys (National Household Health Survey (NHHS), National Socio-Economic Survey (NSES), and Demographic and Health Survey (DHS).[31]
National Household Health Survey (SKRT or NHHS)	Every 5-7 years	Household-based health survey of 5-10,000 households conducted by the MOH.
Data Collection for Social Protection Programs (PPLS)	Every 3 years	Village- and household-based survey to identify and gather data on the poorest 40% of the population (see Social Protection Chapter). 2011 survey contacted 90 million people; 2015 survey will be used to inform the FY2016 budget. Data is are provided to TNP2K and are used to populate the Unified Database, which is used to determine eligibility for various government subsidies. Conducted by BPS.
Intercensal Population	Every 10	Survey conducted between censuses. Data collection started May 1, 2015.

[30] http://www.ncbi.nlm.nih.gov/books/NBK201703/ (accessed September 2, 2015)
[31] www.who.org (accessed September 2, 2015) and http://www.litbang.depkes.go.id/surkesnas (accessed September 2, 2015)

Title	Frequency Conducted	Description
Survey (SUPAS)	years	BPS added more questions on health and FP than in years past. Sample around 600,000 households. SUPAS should capture deaths, MMR. Conducted by BPS.
Demographic and Health Survey (DHS)	Every 5 years	50,000 individuals surveyed, nationally representative sample. Current source of data for MMR. Conducted by BPS.
National Socio-Economic Survey (Susenas)	Annually	Household survey on basic socioeconomic characteristics of the population including income and consumption. Includes both cross-sectional and panel components. Results are online and researchers can purchase the raw data. Includes questions on unmet need for FP. Conducted by BPS.
Village Potential Statistics (PODES)	Every 3 years	Census of villages' capacity/needs. Head of the village is the respondent. Data on facilities, community violence, number of poor, disasters. Allocation of funds under the Village Law are informed by PODES results, which will be a source of information about resource needs and absorptive capacity. BPS regional offices collect the data from all villages.

*BPS provides help to MOH on sampling for basic health research and MOH conducts this research.

9.3.1 Data Quality and Availability

Indonesia's HIS was assessed in 2007 and 2012 using assessment tools from the Health Metrics Network (MOH 2014). The results showed that while functional, the HIS was not improved a great deal over those five years and is in need of improvement. The assessment in 2012 indicated that all six components of the implementation of HIS – resources, indicators, data sources, data management, data quality, and dissemination and use of data – were in need of improvement and that the data management component was the weakest area. A 2013 assessment of e-Health found that the country is far from achieving its goals in this area (MOH 2014).

According to stakeholders interviewed, data incompleteness and inaccuracy in routine health information reporting is a problem. This was also a finding of Aisyah and Cockcroft (2014) in their study of data quality in a typical health facility in rural Indonesia. Data quality problems are sometimes the result of lack of human resource capacity, including insufficient health worker training on data recording or compiling. In many cases, however, inaccurate or incomplete reporting is attributable not to lack of capacity, but rather to excessive reporting requirements and lack of incentives to report accurately and in a timely manner. Numerous reports are required at the facility level, and the multiple reporting systems are not interoperable. Data on some indicators are collected by more than one of the parallel reporting systems described above. In theory, coordination for cross-checking of indicators (data quality audits) should be happening on a regular basis between reporting units at all levels but it is unclear to what extent this process is working in practice to produce better quality data.

For survey data, BPS uses scanners to capture household data and uses double data entry to check accuracy. BPS uses SMS Gateway to track the progress of data collection. Social and cultural barriers, as well as resource constraints, make collection and reporting of data on poverty incidence and maternal mortality particularly challenging.

9.3.2 Use of Data for Decision-making

The use of data for policy making at the national level appears to vary by information type. Health statistics are clearly consulted for program monitoring and in MOH budget requests; special studies are

commissioned and international evidence-based best practices are sought to inform policy. According to some stakeholders, NHA findings are not yet being used for routine budgeting and planning, which still tends to be based on historical spending patterns, but NHA results have influenced health sector policy making in the past. Beyond the MOH, there is evidence that other government institutions such as BPJS, OJK, and the MOF use data regularly to inform decision making. Provincial-level analysis and use of data could be improved in support of the national government's understanding of health needs and resource needs.

However, consolidated data and results analysis are not communicated back down to sub-national and facility levels, and as such there are many lost opportunities to increase program efficiency and effectiveness. At the facility level, there is some evidence that some puskesmas managers use their own facility data for program monitoring and to inform budget requests. Some international development partners such as DFAT and current and past USAID governance and health programs (Health Systems 20/20, Kinerja, etc.), have worked with civil society organizations at the community level to use data for advocacy and accountability purposes, with some success. See the Governance chapter for more information.

9.3.3 Availability of Data to the Public

It is important that HIS outputs are available in an accessible, understandable, and user-friendly format – not only to policymakers, but also to the public. Data on key health indicators are available on the main MOH website and other government websites, but much of the country lacks access to the Internet. Better availability and transparency of data processing, including official acknowledgment of data quality issues and other limitations, is a key HIS area that needs improvement. Recent survey findings regarding important health indicators such as the MMR, and HIV and TB prevalence, should be shared more widely and officially acknowledged. Locally disaggregated health data at the provincial and district level are available to government health officials, but not available publicly; this could also be improved.

9.4 Strengths, Weaknesses, Opportunities, and Threats

Table 33: SWOT Analysis of Health Information Systems

Strengths and Opportunities
• Many basic components of the HIS are in place, including routine reporting systems managed by the MOH and an epidemiological surveillance system • Policies exist on regular data collection and reporting through the RHIS, and for the private sector to report health information • Most public sector health data and indicators from routine and non-routine sources are publicly available on an aggregate basis • BPJS-K is an emerging and potentially reliable source of timely and voluminous health information that could feed into the routine HIS and be used to inform resource allocation and policy decisions • Increasing awareness among key stakeholders (MOH, BPJS, etc.) of need for a common standard for data sharing/exchange • MOH and BPJS-K have strategic HIS plans and are taking steps to implement them • Various units within the MOH and other national health sector stakeholders regularly commission special studies to inform policy • BPS has strong capacity to regularly conduct surveys and analyze population-based data that are used for policy and planning. • According to the MOH, national HIS budgets are increasing • Development partners (such as the Global Fund, GAVI, and DFAT) are supporting the development of HIS innovations including the introduction of DHIS2
Weaknesses and Threats
• There are multiple reporting systems, and they are not interoperable. Duplication of data collection at facility level is burdensome. Fragmented and siloed software applications have limited common standards and interoperability • There are discrepancies in network availability, information technologies, and organizational management of HIS across the country; many facilities lack computer-based reporting systems • Human resources are needed to expand and strengthen information systems • The CRVS system is in place but it does not yet function well. Data collected through this system are often incomplete or inaccurate • Keeping up with data requirements to meet UHC by 2019 will be a tremendous challenge • Quality of data from the RHIS is unreliable and data quality assurance mechanisms are inconsistent • There are insufficient incentives for data submission, and inadequate capacity for data quality assurance and enforcing reporting compliance • Collection of data from private sector providers is limited • Data from BPJS, RHIS, NHA and other sources is underutilized in budgeting, planning, system performance monitoring, and policy decision making (for a number of reasons)

9.5 Opportunities

Indonesia's e-Health Road Map (2015-2019) provides a strategic path that contains all the elements of strengthening the HIS (MOH 2014). Given recent developments in Indonesia's decentralized governance structure (see the Governance chapter) and the strategic importance of information systems to support the country's progress toward UHC, Indonesia's leadership should review the 2012 Health Metrics Network HIS assessment to determine whether a new assessment is needed to inform the prioritization of investments.

The emergence of BPJS-K as a source of data is an opportunity for the government to improve its understanding of health care needs and system performance, and to inform decisions on resource allocation and policy. However, data sharing between BPJS-K and the MOH, as well as among units within the MOH, should be strengthened with stronger formalization and oversight of these required data exchanges.

Indonesia's geography, with over 13,000 islands and significant Internet network challenges, lends itself to the use of mHealth, social media, telemedicine, and other technology innovations for health surveillance and performance monitoring. The e-Health Road Map (MOH 2014) cites some aspirational plans for this, and these plans should be implemented, provided that adequate resources are available. Given that there are multiple HIS innovations housed in different institutions at various levels of the health system, supported by various donors and government initiatives, the GOI should consider creating a clearinghouse for sharing and adapting HIS innovations countrywide.

To address resource shortfalls at the sub-national level, BPJS-K and others could promote the use of capitation funds to improve information systems at the primary care level as a pressing priority, and also at the secondary and tertiary levels. The GOI and sub-national governments should also explore opportunities for public-private partnerships on IT infrastructure, including informatics and telecommunications.

International development partners and key government stakeholders (MOH's Pusdatin, BUK, Pharmacy unit, and BPJS) should support efforts to improve the interoperability of HIS software applications by promoting the development of common standards and increased data sharing. The regulatory framework that promotes data sharing among various stakeholders could be strengthened and more consistently enforced. As an initial step, these stakeholders should come together to develop a single, standardized health facility registry including private facilities.

The capacity of PHOs and DHOs to collect better, more focused data for quality measurement should be strengthened. The revision of the MSS and their increased importance in DHO and PHO functions per Law 23/2014 offers an opportunity to strengthen reporting related to performance. Reporting on the MSS could be linked to MOHA sanctions for poor performance, to improve reporting quality. The MOH could suggest incorporating an indicator measuring data quality into the accreditation process for puskesmas and hospitals. These efforts could be coordinated with BPJS-K in the credentialing process for facilities, which could have the effect of bringing more private providers into the reporting stream.

ANNEX A: LITERATURE REVIEWED FOR THIS ASSESSMENT

USAID's *Development Experience Clearinghouse* will eventually house comprehensive Literature Review matrix.

#	Indonesia Health System List of Literature Reviewed for the Rapid Analytical Review and Assessment
1	Achadi, Endang L. and Gavin Jones. Background Study on Maternal, Neonatal and Child Health. June 2014.
2	Achadi, Endang L., Anhari Achadi, Eko Pambudi, Puti Marzoeki). Health, Nutrition, and Population (HNP) Discussion Paper: A Study on the Implementation of Jampersal Policy in Indonesia. September 2014.
3	Anderson et al. The Production, Distribution, And Performance of Physicians, Nurses, and Midwives in Indonesia: An Update. September 2014.
4	Andreasta Meliala and Ian Anderson. Health Sector Review: Human Resources for Health in Indonesia: Final Report. Kementerian PPN/Bappenas, June 2014.
5	Anggriani Y, et al. Trends on pharmaceutical spending under JKN, TNP2K. 2015.
6	AIPHIV. Partnership Management Guidelines. 2014.
7	AusAID. Indonesia Health Systems Strengthening Program Annexes. 2011.
8	Bappenas. Health Sector Review: Supply Side Readiness Chapter. 2014.
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12	Brinkerhoff and Wetterberg. Performance-based public management reforms: experience and emerging lessons from service delivery improvement in Indonesia. 2013.
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15	Commission IX House of Representatives. Efforts to improve quality of MCH and Nutrition to achieve MDGs 2015. Nov 2014.
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17	Decentralization Support Facility (DSF), World Bank. Capacity Development of Minimum Service Standards (MSS) Costing and Implementation Draft Final Report. November 2011.
18	Dunlop, David. Policy Note on Jamkesdas. 2014.
19	EMAS. M&E and Program Learning. 2014.
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21	Gani, Ascobat. Improving Health Financing (in Indonesia). 2015.
22	GIZ, AusAID, Bappenas. Policy brief Expansion of Social Health Protection for Informal Workers in Indonesia - Main Challenges and Recommendations. 2013.
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24	Government of Indonesia. Indonesia's Doctors, Midwives and Nurses: Current Stock, Increasing Needs, Future Challenges and Options. January 2009.

25	Government of Indonesia. The Brief Edition, Summary of the GOI Roadmap toward the National Health Insurance 2012-2019. 2012.
26	Halimah, et al. Capitation Management Reform, TNP2K, 2014. 2015.
27	Harimurti et al. The Nuts & Bolts of Jamkesmas: Indonesia's Government-Financed Health Coverage Program. January 2013.
28	HEFPA. Policy Brief: Social Health Insurance and Financial Protection for the Poor in Indonesia. 2013.
29	Hidayat, Langenbrunner, and Muirhead. Health Financing and National Health Insurance (presentation). Date unavailable.
30	Hikmat, Harri Dr. Ir. Dynamic updating data kemiskinan (poverty data dynamic updating). 2015.
31	Hill, Suzanne and Budiono Santoso. Health Sector Review- Pharmaceutical Review and Medical Technology. Kementerian PPN/ Bappenas, July 2014.
32	Hui, Kelvin. Health Information System Strengthening in Indonesia. 2012.
33	Humaniora, Pusat; Kebijakan Kesehatan and Pemberdayaan Masyarakat. Kajian Kebijakan Penyaluran Dana Bantuan Operational Kesehatan dalam Pencapaian Kesehatan Ibu Dan Anak (MDG's 1,4,5) di Jawa Timur Indonesia (Policy assessment on BOK fund channeling to achieve MDGs 1,4,5). 2013.
34	Indriani, Dr. Dewi and Shaw, Dr. Charles. HSR chapter: Quality and Safety of Healthcare. July 2014.
35	International Labor Organization. Social Protection Assessment Based National Dialogue. 2012.
36	International Labor Organization News. Promoting universal social protection coverage in Indonesia [press release]. 06 December 2012.
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40	Kinerja Project. Immediate and Exclusive Breastfeeding Governance. 2015.
41	Kinerja Project. Minimum Service Standards in the Health Sector. Recommendations on MSS in health implementation 2015-2019 (lesson learned from USAID-KINERJA). 2015.
42	Kinerja Project. Safe Delivery Governance. Menuju Tata Kelola Program Perencanaan Persalinan dan Pencegahan Komplikasi. 2015.
43	Kosen, Soewarta. Current Status of Health Information System: Indonesia. National Institute of Health Research and Development. 2013.
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49	Langenbrunner, John, Budi Hudayat, Deborah Muirhead, and Dhanie Nugroho. Health Sector Review: Health Financing. Kementerian PPN/Bappenas, July 2014.
50	Lewis, Blane. Intergovernmental transfers, service delivery and the relationship between the two. 2015.
51	Marzoeki, et al. Universal Health Coverage for Inclusive and Sustainable Development: Country Summary Report for Indonesia. August 2104.
52	Marzoeki, Puti, Ajay Tandon, Xiaolu Bi and Eko Setya Pambudi. Universal health coverage for inclusive and

	sustainable development: country summary report for Indonesia. 2014.
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54	Minister of Health, Indonesia. Keynote speech at 2nd InaHEA congress: Role of healthcare financing in improving Indonesians' quality of life. 2015.
55	MOH. Indonesia Health Profile. 2013.
56	MOH (Bureau of Planning and Budgeting). Presentation at 2nd InaHEA congress. 2015.
57	MOH (Director of local revenue and investment, Directorate General on Local Financing). Presentation at 2nd InaHEA Congress on Puskesmas and local hospitals funding management (from local budget). 2015.
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61	Morgan, Lindsay. USAID/MCHIP. Scaling up and Sustaining Quality Improvement: Lessons from SBM-R in Malawi and Indonesia. May 2014.
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63	Nasution, CR. Peran RS Swasta dalam Implementasi JKN/Roles of private hospitals in JKN, MOH. 2014.
64	Olken, Benjamin A, Junko Onishi, Susan Wong. Indonesia's PNPM Generasi Program: Final Impact Evaluation Report. June 2011.
65	Ozaltin, Annette. Extending Coverage to the Informal Sector: JLN Countries Exchange Lessons and Challenges [JLN blog post]. October 2013.
66	Pambudi, ES. Dampak dan Peran Jaminan Kesehatan dalam Mengatasi Kesenjangan Pemanfaatan Persalinan di Fasilitas Kesehatan di Indonesia, tahun 2012/Impacts and Roles of Health Insurance in Overcoming Utility Gaps in Delivery in Healthcare Facilities in Indonesia, UI. 2015.
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69	Primadi, Oscar. Development of Indonesia's Health Care IT, Center for Data and Information, MOH. Date unavailable.
70	Purwaningrum et al. Health Governance in the Local Level: The Case of Decentralization, Planning and Accessibility in Gunungkidul, Indonesia. 2010.
71	Republik Indonesia. Roadmap toward National Health Insurance of Indonesia (INA Medicare) 2012-2019. 2012.
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91	USAID/KINERJA Project. National Standards Guide Health-Care Reform in Papua.
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108	World Bank. Supply-Side Readiness for UHC: Assessing the Depth of Coverage for Non-Communicable Diseases in Indonesia. June 2014.
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111	Yulaswati–Bappenas, Vivi. Social Protection to Reduce Poverty in Indonesia. 2015.
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ANNEX B: LIST OF KEY INFORMANTS INTERVIEWED

USAID

- USAID/Indonesia Health Office
- USAID/Indonesia Office of Democracy, Rights, and Governance

USAID-funded projects

- CEPAT
- Challenge TB
- DELIVER
- DERAP
- EMAS (Expanding Maternal and Newborn Survival)
- Kinerja
- Linkages

Other Development Partners and Projects

- DFAT: AIPHSS project
- DFAT: KOMPAK project
- GIZ
- WHO Indonesia
- World Bank

Central Government Agencies and Units

- Bappenas (National Planning Agency)
- BPJS-Kesehatan (National Social Security Agency, Health)
- BPS (Central Statistics Bureau)
- DJSN (National Social Security Council)
- OJK (Financial Services Authority)
- MOH, Bureau of Planning and Budgeting
- MOH, DG BUK (Health Services Directorate)
- MOH, DG BUK, Information Unit
- MOH, DG BUKD (Directorate of Primary Care)
- MOH, DG BUKR (Directorate of Referral Care)

- MOH, DG GIKIA (Directorate of Nutrition and MCH)
- MOH, National Institute for Health Research and Development
- MOH, Pusdatin (Center for Data and Information)
- National AIDS Commission
- Ministry of Finance, Fiscal Policy Office (BKF)
- Ministry of Home Affairs
- Ministry of Villages and Disadvantaged Areas
- TNP2K (National Team for the Acceleration of Poverty Reduction)

NGOs and Private Associations

- ADINKES (Association of District Health Offices)
- Aisyiyah
- Aliansi Pita Putih Indonesia (Indonesian White Ribbon Alliance)
- APINDO (Employers Association of Indonesia)
- Budi Kemuliaan Hospital
- IBI (Indonesian Midwives Association)
- KARS (Hospital Accreditation Commission)
- KKI (Indonesian Medical Council)
- PERDHAKI (Association of Voluntary Health Services of Indonesia)
- PERSI (Indonesian Hospital Association)

Academic Institutions

- University of Indonesia, Center for Health Economics and Policy
- University of Indonesia, Center for Hospital Administration Management and Policy

Sub-national level respondents (Kota Bandung, Kabupaten Bandung, and Kabupaten Indramayu)

- Al Islam Private Clinic, Bandung
- Bappeda Office, Bandung
- BPJS Branch Office, Bandung
- BPJS Branch Office, Indramayu
- District Health Office, Kabupaten Bandung
- District Health Office, Kabupaten Indramayu
- District Health Office, Kota Bandung
- IBI Office, Kabupaten Bandung

- IBI Office, Kabupaten Indramayu
- IDI Office, Kabupaten Indramayu
- Majalaya class B hospital, Bandung
- Monalisa private maternity hospital, Bandung
- Muhammadiyah hospital, Bandung
- Provincial Health Office, West Java Province
- Puskesmas Ibrahim Adjie, Bandung
- Rural Puskesmas in Indramayu
- Sentot District Hospital, Indramayu
- Ujungberung Hospital, Bandung
- Urban Puskesmas in Indramayu

ANNEX C: KEY LAWS, REGULATIONS, AND PLANS

Title	Description	Implications
	Laws	
Law 36/2009 on Health	Minimum budget for health sector is 5% of State Budget (APBN), 10% of Regional Government Budget (APBD), and 10% of District Budget	Legislates a funding level that the national, regional, and districts must allocate for health. These funds are generally spent on salaries, operating expenses, and infrastructure. In the decentralized context, less wealthy provinces and districts have less funding for health per capita.
Law 23/2014 Law on Local Government	Builds on previous law on Decentralization (2004) and provides more detail on the roles and responsibilities of district and provincial governments	District governments have clear responsibility for the minimum service standards (MSS) for public service including health. Provinces have an enhanced M&E role over district performance in MSS. Describes ownership and responsibility over hospitals – Class A belong to national government, Class B provinces, and Class C & D and puskesmas belong to district governments. The result is ownership should be changing hands of some hospitals, and reporting streams clarified.
Law 40/2004 on National Social Security System & Law 24/2011 on BPJS	These laws establish JKN and BPJS including the structure and principles. Government, Presidential, and Ministerial Regulations (2012-2014) flow down from these two laws and further define tariff setting, reporting, roles, and responsiblities	Integration of various social protection programs into JKN, which must be completed by 2019. BJPS as the implementing agency of universal health coverage program. BPJS reports directly to the President of Indonesia. OJK is the regulator of BPJS. MOF makes policy governing BPJS. MOH and DJSN inform policy governing BPJS.
Law 6/2014 Village Law	Defines a village and describes various institutions' roles, relationships, and responsibilities over the creating and governing of villages, including funding to be provided from the central government (Ministry of Villages) and regional government for village use	The amount of funding available is significant (Rp 104, 6 trillion) and could have an impact at the village level, even spread among over 80,000 villages. Eligibility and funding level per village will be determined using a variety of factors including quality of application, population, and need. The regulations on how these funds should be used are still being written. District governments have a role in administration, in that villages must propose a use for the funds, then districts give feedback, make sure fund use is in compliance, and recommend to MOV for funding. District governments have a monitoring role over spending these funds. MOV will provide facilitators to help villages develop their village development plan, proposals, and other administrative requirements related to Village Fund
Law No. 25/2009 on	Mandates bureaucratic	Governs the restructuring of the MOH in terms of scale,

Title	Description	Implications
Public Service	and administative reform	functions, etc.
PP No 38/2007	Distribution of responsibilities among different tiers of government	Describes the redistribution of health functions among tiers of government.
Regulations / Decrees		
Presidential Regulation No. 81/2010 on Bureaucratic Reform Grand Design 2010-2025	Mandates bureaucratic and administrative reform	Describes organizational structures of ministries, including MOH, in terms of scale and functions. MOH restructuring should be in accordance with this regulation.
MOH Regulation No 1144/2010	Follows from Presidential decree 81/2010 and describes the organizational structure of the MOH	Reorganized health institutions at national and sub-national levels to strengthen referrals, define stewardship roles at provincial and district levels, as well as facility structures (hospitals and puskesmas).
MOH Decree No 741/2008	Technical guidelines for Minimum Service Standards for the health sector in districts and municipalities	Describes the legislative foundation of the minimum service standards (MSS), and the roles and responsibilities of central government, provinces, districts, and municipalities related to MSS. 18 minimum essential services that each local government is obliged to provide are established, but the varying capacities of governments to provide them at the targed levels of coverage, quality, and equity is not acknowledged.
Presidential Decree No. 72/2012	National Health System (SKN)	A new national health system (SKN) has been developed that promotes primary health care as a building block of the Indonesia health care system.
Plans		
Medium-Term Strategic Plan (2015-2019)	National plan as developed by Bappenas. This is not a law, but it is a document national ministries and sub-national governments use as a guide to priority setting, and the government uses it to navigate at the national level	One of the six primary health priorities of the MTSP is increasing access to public services, particularly in the outlying islands and remote areas of Indonesia. This includes expanding health coverage for basic locally delivered services to all Indonesians.
Roadmap towards national universal health coverage (2012-2019)	Guide for the implementation of UHC, follows from Law 24/2011	Creation of BPJS; targets and milestones to be achieved.
MOH Strategic Plan	Strategic directions for health sector as	Policy directions of MOH:

Title	Description	Implications
(Renstra) 2015 – 2019	part of Long-Term Development Plan for Health Sector (RPJPK) 2005-2025	Strengthening primary health care Continuum of care Risk-based intervention 12 strategic targets in 3 groups: strategic targets in input (human resource, organizational, management); targets in institutional strengthening; and targets in strategic efforts.
E-health national strategy: Policy framework – strategy – grand design – road map (2015-2019)	Written by the data and information center (Pusdatin) of the MOH in 2014	Contains an e-health framework and strategy recommendations is expected to be used as a reference about the priorities, direction, goals, various roles and responsibilities for implementation and the planning stages of the development and implementation of eHealth in 2015-2019.
Human Resources for Health Development Plan (2011-2025)	Long-term national plan for health worker development and distribution	Plan to increase dramatically the total number of various cadres of health workers by 2025, including plans for training and qualifications, equitable distribution, and oversight. Requires increased government resources and coordination between MOH and MOE.

ANNEX D: INTERNATIONAL DEVELOPMENT PARTNERS ENGAGED IN HEALTH IN INDONESIA

Development Partner	Health-Related Projects and Programs in Indonesia
Asian Development Bank (ADB)	Supporting blueprint for integrated monitoring and evaluation
United States Centers for Disease Control and Prevention (CDC)	Currently supporting immunization, tobacco control, vector-borne disease control (emerging infectious diseases and laboratory strengthening), malaria (research, focus on endemic areas), and influenza (surveillance).
Australian Department of Foreign Affairs and Trade (DFAT)	DFAT is largest direct funder of health systems research and technical assistance in Indonesia, and is embedded within several GOI institutions (including MOH, Bappenas, TNP2K, and BPJS). Current and recent support: • Australia Indonesia Partnership for Health Systems Strengthening (2012-2017) aims to strengthen health financing and workforce systems and improve primary health care services • HCPI (HIV Cooperation Programme for Indonesia, part of the Australia Indonesia Partnership for HIV) (2008-2016) helps Indonesia plan and manage an effective and sustainable HIV response • Knowledge Sector Initiative 2013-2017 strengthens public policy research and research institutions • MAMPU (2013-2016) provides support to improve the lives of poor women in Indonesia, focusing on jobs, social protection, overseas labor migration conditions, maternal health, and gender-based violence. • NPCE (National Program for Community Empowerment, 2013-2018) provides assistance to Indonesia's National Program for Community Empowerment (PNPM) • The Poverty Reduction Support Facility supported the Secretariat of TNP2K
Global Fund to Fight AIDS, TB, and Malaria	The Global Fund provides grant funding to the GOI and numerous civil society organizations to support malaria control; HIV prevention, care and treatment (including outreach to MARPs); sexually transmitted infection (STI) prevention and treatment; and tuberculosis surveillance and treatment.
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)	GIZ does not currently implement health-specific projects, but rather supports broader social protection efforts via institutional capacity building with DJSN. GIZ supported development of the "Roadmap toward the National Health Insurance of Indonesia 2012–2019" in 2012 and "Indonesia - Universal health coverage for inclusive and sustainable development: country summary report" in 2014.
Japan International Cooperation Agency (JICA)	JICA has supported capacity building around social health insurance, human resources for health, and private-public partnership development. JICA is currently supporting the Project for Enhancement of Nursing Competency through In-Service Training (2012-2017).
Millennium Challenge Corporation (MCC)	The five-year, $600 million MCC compact with the Republic of Indonesia is designed to reduce poverty through economic growth. The compact's three projects are expected to increase household income in project areas through

	increased productivity, reduced energy costs, and improved provision of public sector growth-enhancing goods and services. The Community-based Health and Nutrition to Reduce Stunting project ($131.5 million) seeks to reduce and prevent low birth weight, childhood stunting, and malnourishment of children in project areas.
South Korea	South Korea is reportedly providing technical assistance to BPJS to strengthen its IT systems.
United States Agency for International Development (USAID)	USAID is committed to supporting the GOI to achieve UHC, end preventable child and maternal deaths (EPCMD), reduce the burden of tuberculosis, and achieve an AIDS-Free Generation. The Country Development and Cooperation Strategy 2014-2018 outlines priorities and commitments in greater depth. Some of the support includes: • BANTU (Health Technical Assistance Project 2015-2020) facilitates provision of short- and long-term technical assistance to support health programming • SUM I (Scaling Up for Most-at-Risk Populations I – Technical Support Project 2010-2015) supported scaling up integrated HIV interventions for MARPs • SUM II (Scaling Up for Most-at-Risk Populations II – Technical Support Project 2010-2015) supported targeted assistance for organizational development required to scale up effective integrated HIV interventions for MARPS • Strengthening the Indonesian Military Response to HIV 2011-2015 • EMAS (Expanding Maternal and Neonatal Survival 2011-2016) works to improve health outcomes for mothers and newborns and reduce maternal and newborn deaths. • Kinerja (Local Governance Service Improvement Program in Indonesia 2010-2015) aims to improve service delivery within Indonesia's local governments. • IUWASH (2011-2016) works to improve water supply and access to improved sanitation facilities.
World Bank	The World Bank's strategy in Indonesia is pro-growth, pro-jobs, pro-poor, and pro-green. Its lending portfolio consisted of 61 active projects as of September 2014, with a total commitment of worth $6.8 billion, and focused on community empowerment, government administration, infrastructure, energy, and rural development.

ANNEX E: BIBLIOGRAPHY

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