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The Republic of Indonesia Health System Review

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Preface

The Health Systems in Transition (HiT) profiles are country-based reports that provide a detailed description of a health system and of reform and policy initiatives in progress or under development in a specific country. Each profile is produced by country experts in collaboration with an international editor. To facilitate comparisons between countries, the profiles are based on a template, which is revised periodically. The template provides detailed guidelines and specific questions, definitions and examples needed to compile a profile.

A HiT seeks to provide relevant information to support policy-makers and analysis in the development of health systems. This can be used:

- to learn in detail about different approaches to the organization, financing and delivery of health services and the role of the main actors in health systems;
- to describe the institutional framework, process, content and implementation of health-care reform programmes;
- to highlight challenges and areas that require more in-depth analysis;
- to provide a tool for the dissemination of information on health systems and the exchange of experiences between policy-makers and analysts in different countries implementing reform strategies; and
- to assist other researchers in more in-depth comparative health policy analysis.

Compiling the profiles poses a number of methodological problems. In many countries, there is relatively little information available on the health system and the impact of reforms. Due to the lack of a uniform data source, quantitative data on health services is based on a number of different sources, including the World Health Organization (WHO), national statistical offices, the Organisation for Economic Co-operation and Development (OECD) health data, the International Monetary Fund (IMF), the World Bank, and any other sources considered useful by the

authors. Data collection methods and definitions sometimes vary, but typically are consistent within each separate series.

The HiT profiles can be used to inform policy-makers about the experiences in other countries that may be relevant to their own national situation. They can also be used to inform comparative analyses of health systems. This series is an ongoing initiative, and material will be updated at regular intervals.

Comments and suggestions for the further development and improvement of the HiT series are most welcome and can be sent to apobservatory@who.int. HiT profiles and HiT summaries for countries in Asia Pacific are available on the Observatory's website at http://www.wpro.who.int/asia_pacific_observatory/en/.

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List of abbreviations

ACT	Artemisinin combination therapy
AFAS	ASEAN Framework Agreement on Services
AI	Avian influenza
AJCCD	ASEAN Joint Coordinating Committee on Dentistry
AJCCM	ASEAN Joint Coordinating Committee on Medicine
AJCCN	ASEAN Joint Coordinating Committee on Nursing
ALOS	Average length of stay
AMDAL	*Analisis mengenai dampak lingkungan* (environmental impact assessment)
ANC	Antenatal care
APBD	*Anggaran dan pendapatan belanja daerah* (Local Revenue and Expenditure Budget)
APBN	*Anggaran Pendapatan dan Belanja Nasional* (national budget)
APEKSI	*Asosiasi Pemerintah Kota Seluruh Indonesia* (Association of Indonesian Municipal Governments)
APKASI	*Asosiasi Pemerintah Kabupaten Seluruh Indonesia* (Association of Indonesian District Governments)
ARSADA	*Asosiasi Rumah Sakit Daerah* (Local government hospitals association)
ARSANI	*Asosiasi Rumah Sakit Nirlaba Indonesia* (not-for-profit hospitals association)
ARSPI	*Asosiasi Rumah Sakit Pendidikan Indonesia* (teaching hospitals association)
ARSSI	*Asosiasi Rumah Sakit Swasta Indonesia* (private hospitals association)
ARSVI	*Asosiasi Rumah Sakit Vertikal Indonesia* (association of central government hospitals)
Asabri	*Asuransi Angkatan Bersenjata Republik Indonesia* (Armed Forces Social Insurance Company)
Askes	*Asuransi kesehatan* (health insurance)

Askeskin	*Asuransi Kesehatan Masyarakat Miskin* (a targeted social health insurance scheme for the poor)
ASPAKI	*Asosiasi Produsen Alat Kesehatan Indonesia* (Association of Health Equipment Manufacturers)
Astek	*Asuransi Tenaga Kerja* (worker insurance)
AusAID	Australian Agency for International Development
Balitbangkes	*Badan Penelitian dan Pengembangan Kesehatan* (National Institute for Health Research and Development)
BAN-PT	*Badan Akreditasi Nasional – Perguruan Tinggi* (Higher Education National Accreditation Bureau)
BAPEDAL	Environmental Impact Management Agency
Bappeda	*Badan Perencanaan Pembangunan Daerah* (local development planning agency)
Bappenas	*Badan Perencanaan Pembangunan Nasional* (Ministry of National Development Planning)
Bawasda	*Badan Pengawasan Daerah* (regional audit agency)
BD	*Bidan Delima* (Midwives Delima)
BKKBN	*Badan Kependudukan dan Keluarga Berencana Nasional* (National Population and Family Planning Board)
BKPM	*Badan Koordinasi Penanaman Modal* (Indonesian Investment Coordinating Board)
BLU	*Badan Layanan Umum* (Public Service Agency)
BLUD	*Badan Layanan Umum Daerah* (Local Public Service Agency)
BNN	*Badan Narkotika Nasional* (National Narcotics Agency)
BNPB	*Badan Nasional Penanggulangan Bencana* (Indonesian National Board for Disaster Management)
BNP2TKI	*Badan Nasional Penempatan dan Perlindungan Tenaga Kerja Indonesia* (National Agency for Safety and Placement of Indonesian Workforce)
BOPTN	*Bantuan Operasional Perguruan Tinggi Negeri*
BOS	Board of Supervisors
BOT	Board of Trustees
BPBD	*Badan Penanggulangan Bencana Daerah* (Regional Disaster Management Agency)
BPJS	*Badan Pelaksana Jaminan Sosial* (Social Security Agency)

BPJS-K	*Badan Pelaksana Jaminan Sosial Kesehatan* (Social Security Agency for Health)
BPK	*Badan Pemeriksa Keuangan* (Supreme Audit Agency)
BPKP	*Badan Pengawas Keuangan dan Pembangunan* (Financial and Development Audit Agency)
BPLHD	*Badan Pengelolaan Lingkungan Hidup Daerah* (Local environmental management body)
BPOM	*Badan Pengawasan Obat dan Makanan* (Drug and Food Control Agency)
BPRSI	*Badan Pengawas Rumah Sakit Indonesia* (Monitoring and Supervision Bureau for Hospitals)
BPRSP	*Badan Pengawas Rumah Sakit Provinsi* (Provincial Bureau for Supervision of Hospitals)
BPS	*Badan Pusat Statistik* (Central Bureau of Statistics)
BSM	*Bantuan Siswa Miskin* (Assistance for Poor Students)
BTKLPP	*Balai Besar Teknis Kesehatan Lingkungan Pemberantasan Penyakit* (Technical Environmental Health and Disease Eradication Body)
BUK	*Bina Upaya Kesehatan* (Directorate of Health Services)
BUMD	*Badan Usaha Milik Daerah* (local government-owned enterprises)
BUMN	*Badan Usaha Milik Negara* (state-owned enterprises)
CAM	Complementary and alternative medicine
CBO	Community-based organization
CBR	Community-based rehabilitation
CBT	Computer-based test
CDOB	*Cara distribusi obat yang baik* (good distribution practice)
CDR	Cause of death register
CFS	Certificate of Free Sales
CPNS	*Calon Pegawai Negeri Sipil* (civil servant candidates)
CPR	Contraceptive prevalence rate
CSOs	Civil society organizations
DAK	*Dana alokasi khusus* (special allocation funds)
DALYs	Disability adjusted life years
DAU	*Dana alokasi umum* (general allocation fund)
DHO	District health office

DJSN	*Dewan Jaminan Sosial Nasional* (National Social Security Board)
DNPI	*Dewan Nasional Perubahan Iklim* (Climate Change National Council)
DOTS	Directly observed treatment, short course
DOEN	*Daftar obat esensial nasional* (national essential drugs list)
DPD	*Dewan Perwakilan Daerah* (Regional Council)
DPR	*Dewan Perwakilan Rakyat* (House of Representatives)
DPRD	*Dewan Perwakilan Rakyat Daerah* (local parliament)
DSP	*Daftar susunan pegawai* (list of positions)
EAS	Emergency ambulance services
EMTs	Emergency medical technicians
ER	Emergency response
EWARS	Early warning alert and response system
FBO	Faith-based organization
FKPKMI	*Forum Kerjasama Pengembangan Kesehatan Masyarakat Indonesia* (Collaboration Forum for Indonesian Community Health Development)
FSCA	Field safety corrective action
Gakeslab	*Gabungan Perusahaan Alat Kesehatan dan Laboratorium* (Association of Laboratory and Health-care Businesses)
GATS	Global Adult Tobacco Survey
GBD	Global burden of disease
GDP	Gross domestic product
Germas	*Gerakan Masyarakat Hidup Sehat* (Community Healthy Life Movement)
GF	Global Fund
GIZ	Gesellschaft Für Internationale Zusammenarbeit
GMP	Good manufacturing practice
GPs	General physicians
HET	*Harga eceran tertinggi* (rationalization of the retail price)
HSSWG	Health-care Services Sectoral Working Group
HTA	Health technology assessment

IBI	*Ikatan Bidan Indonesia* (professional association for midwives)
IDAI	*Ikatan Dokter Anak Indonesia* (professional association for paediatricians)
IDB	Inter-American Development Bank
IDI	*Ikatan Dokter Indonesia* (professional association for doctors)
IFLS	Indonesian Family Life Survey
IMHA	Indonesian Hospital Management Award
IMRSSP	Indonesia Mortality Registration System Strengthening Project
IMTA	*Ijin Memperkerjakan Tenaga Asing* (a licence to hire a foreign workforce)
INA-CBGs	Indonesian case mix-based groups
INA-DRG	Indonesian diagnosis-related group
INAPROC	Indonesian procurement (national procurement portal)
INSW	Indonesian National Single Window
ISQUA	International Society for Quality in Health-care
Jamkesmas	*Jaminan kesehatan masyarakat* (National Health Insurance for the Poor and Near Poor)
Jamsostek	*Jaminan sosial tenaga kerja* (Workforce and Social Insurance)
JCI	Joint Commission International
JKN	*Jaminan kesehatan nasional* (national health insurance programme)
JPS	*Jaringan pengaman sosial* (social safety net programmes)
JPS-BK	*Jaringan pengaman* sosial-bidang *kesehatan* (social safety net in health)
KARS	*Komisi Akreditasi Rumah Sakit* (Hospital Accreditation Committee)
KBK	*Kurikulum berbasis kompetensi* (competence-based curriculum)
KFN	*Komite Farmasi Nasional* (National Pharmacist Committee)
KIDI	*Komite Internship Dokter Indonesia* (Internship Committee)

KITAP	*Kartu ijin tinggal tetap* (permanent residency permit card)
KITAS	*Kartu ijin tinggal terbatas* (temporary residency permit card)
KKI	*Konsil Kedokteran Indonesia* (Indonesian Medical Council)
KNRT	*Kementerian Negara Riset dan Teknologi* (State Ministry of Research and Technology)
Komnas FBPI	National Committee for Avian Influenza Control and Pandemic Influenza Preparedness
KOPEM	*Komando Pembasmian Malaria* (Malaria Eradication Command)
KSO	*Kerja sama operasi* (a collaboration framework with the private sector)
KTR	*Kawasan tanpa rokok* (no-smoking area)
KUHP	*Kitab undang undang hukum pidana* (criminal code)
KUHPer	*Kitab undang undang hukum perdata* (civil code)
KUR	*Kredit usaha rakyat* (micro credit)
LF	Lymphatic filariasis
LTD	*Lembaga Teknis Daerah* (local technical institution)
MCH	Maternal and child health
MDB	Medical Disciplinary Board
MDGs	Millennium Development Goals
MKDKI	*Majelis Kehormatan Disiplin Kedokteran Indonesia* (Indonesian Medical Disciplinary Board)
MoEC	Ministry of Education and Culture
MoH	Ministry of Health
MPR	*Majelis Permusyawaratan Rakyat* (House of Representatives)
MRA	Mutual recognition arrangements
MRI	Magnetic resonance imaging
MTCE	Ministry of Tourism and Creative Economy
MTKI	*Majelis Tenaga Kesehatan Indonesia* (Indonesian Health Personnel Assembly)
Musrenbang	*Musyawarah perencanaan pembangunan* (development planning forums)

NAC	National AIDS Commission
NCDs	Noncommunicable diseases
NFP	Not-for-profit
NGOs	Nongovernmental organizations
NIHRD	National Institute of Health Research and Development
NPISH	Non-profit institutions serving households
NTDs	Neglected tropical diseases
NTB	Nusa Tenggara Barat (West Nusa Tenggara)
NTT	Nusa Tenggara Timur (East Nusa Tenggara)
NU	*Nahdatul Ulama* (Islamic group)
OECD	Organisation for Economic Co-operation and Development
OOP	Out-of-pocket
OSCE	Objective structured clinical examination
OTC	Over-the-counter
PAD	*Pendapatan asli daerah* (locally-generated revenue)
PBI	*Penerima bantuan iuran*
PELKESI	*Persekutuan Pelayanan Kristen untuk Kesehatan di Indonesia* (Christian Congregation for Health in Indonesia),
PERDHAKI	*Persatuan Karya Dharma Indonesia* (Catholic group)
PERSI	*Perhimpunan Rumah Sakit seluruh Indonesia* (Hospital Association)
PHC	Primary health care
PHO	Provincial health office
PIC/S	The Pharmaceutical Inspection Convention and Pharmaceutical Inspection Cooperation Scheme
PIDI	*Programme Internship Dokter Indonesia* (doctors' internship programme)
PJB	Periodic larvae monitoring technician
PKH	*Programme Keluarga Harapan* (family hope programme)
PKRT	*Perbekalan kesehatan rumah tangga* (medical equipment and household health supplies)
PNPM Mandiri	*Programme nasional pemberdayaan masyarakat* (community empowerment programme)
PNS	*Pegawai negeri sipil* (civil servants)

PODES	*Potensi desa*
Polindes	*Pos bersalin desa* (village maternity clinic)
PONED	*Pelayanan obstetri neonatal emergensi dasar*
PONEK	*Pelayanan obstetri neonatal emergensi komprehensif*
Posbindu	*Pos binaan terpadu* (integrated village NCD prevention post)
Poskesdes	*Pos kesehatan desa* (village health post)
Posyandu	*Pos pelayanan terpadu* (integrated health service post)
PPDGS	*Programme pendidikan dokter gigi spesialis* (dentists' specialist education programme)
PPDS	*Programme pendidikan dokter spesialis* (specialist education programme)
PPLH	*Pejabat Pengawas Lingkungan Hidup* (supervisor for the environment)
PPNI	*Persatuan Perawat Nasional Indonesia* (professional association for nurses)
PPP	Purchasing power parity
PPSDM	*Pengembangan dan Pemberdayaan Sumber Daya Kesehatan* (health human resources development and empowerment)
PSC	Public safety care
PSN	*Pemberantasan Sarang Nyamuk* (eradication of mosquito nests)
PTT	*Pegawai Tidak Tetap* (non-permanent staff)
Puskesmas	*Pusat kesehatan masyarakat* (primary health care centre)
Pusling	*Puskesmas keliling* (mobile *puskesmas*)
Pustu	*Puskesmas pembantu* (auxiliary *puskesmas*)
PWS	*Pengawasan wilayah setempat* (area monitoring system)
RAN-PI	*Rencana Aksi Nasional Perubahan Iklim* (National Action Plan for Climate Change)
Raskin	*Beras untuk keluarga miskin* (rice for the poor)
RCC-UI	Research Centre for Climate Change Universitas Indonesia
RDU	Rational drug use
Renja	*Rencana kerja* (annual workplan)
Renstra	*Rencana strategis* (local government strategic plan)

Risfaskes	*Riset fasilitas kesehatan* (health facility survey)
Riskesdas	*Riset kesehatan dasar* (primary health care survey)
RKPD	*Rencana kerja pembangunan daerah* (local development planning)
RPJMD	*Rencana pembangunan jangka menengah daerah* (local mid-term development planning)
RPJMN	*Rancangan pembangunan jangka menengah nasional* (National Medium-term Development Plan)
RPJPD	*Rencana pembangunan jangka panjang daerah* (local long-term development planning)
RPTKA	*Rencana penggunaan tenaga kerja asing* (plan to hire foreign workforce)
SDKI	*Survei demografi kesehatan Indonesia* (Indonesian demographic health survey)
SEAR	WHO South-East Asia Region
SIKDA	*Sistem informasi kesehatan daerah* (district-level health information systems)
SIKNAS	*Sistem informasi kesehatan nasional* (national health information system)
SIMRS	Hospital-level management system
SIP	*Surat ijin praktek* (licence to practise)
SJSN	*Sistem jaminan sosial nasional* (national social security law)
SKP	*Satuan kredit poin* (professional credit units)
SKPD	*Satuan Kerja Perangkat Daerah* (local government technical agency)
SKRT	*Survei kesehatan rumah tangga* (household health survey)
SKTM	*Surat keterangan tidak mampu* (certificate of disadvantage)
SMS	Short messaging services
SNI	*Standar nasional Indonesia* (Indonesian national standard)
SPGDT	*Sistem penanggulangan gawat darurat terpadu* (integrated emergency management system)
SPM	*Standar pelayanan minimal* (minimum service standard)

SSO	Single sign-on
STGs	Standard treatment guidelines
STH	Soil-transmitted helminthes
STL	*Surat tanda lulus* (competence certificate)
STR	*Surat tanda registrasi* (a registration letter)
Surkesnas	*Survei kesehatan nasional* (national health survey)
Susenas	National Socioeconomic Survey
TB	Tuberculosis
TBA	Traditional birth attendant
TFR	Total fertility rate
TNP2K	*Tim Nasional Percepatan Penanggulangan Kemiskinan* (National Team on Poverty Reduction Acceleration)
TPC	Targeted performance-based contracts
UHC	Universal health-care
UKBM	Community-based health efforts
UKDI	*Ujian Kompetensi Dokter Indonesia* (a competency test for doctors)
UKGM	Community dental health enterprises
UKGS	School dental health services
UKS	*Usaha kesehatan sekolah* (health movement in schools)
UNESCO	United Nations Educational, Scientific and Cultural Organizations
UNICEF	United Nations Children's Fund
UPT	*Unit Pelaksana Teknis* (technical implementation unit)
USAID	United States Agency for International Development
WHO	World Health Organization
WSLIC	Water and sanitation for low income communities
YAKKUM	*Yayasan kesehatan kristen untuk umum* (Christian foundation for health)
YLDs	Years lived with disability
YLKI	*Yayasan lembaga konsumen Indonesia* (Indonesian consumer group)
YLLs	Years of life lost

Abstract

Indonesia is in the midst of a series of transitions, ranging from demographic and epidemiological, to social, economic and political. After decades of authoritarian and centralized government, Indonesia introduced reforms in 1998 to establish stable democratic government, with significant devolution of authority to provincial and district levels of government. Strong economic growth is leading the country towards middle-income status.

However, government investment in the health system has been limited, leading to insufficient facilities and workforce needed for public services, and encouraging the growth of private health facilities. Problems of maternal and child health, nutrition and communicable diseases persist, while noncommunicable and chronic diseases are emerging as new priorities. There are significant regional disparities in terms of health status and in the quality, availability and capacity of health services. Decentralization has affected the capacity of the central Ministry of Health to maintain integration and alignment across the different levels of the health system.

Government investment in health has increased since the economic downturn in 1997 with the increasing priority to create 'social safety nets' in the form of social health insurance programmes for the poor, culminating in the establishment of a universal social health insurance scheme (*Jaminan Kesehatan Nasional* or JKN) in 2014. The challenge for the government is to expand this scheme to achieve universal health coverage by 2019, while addressing regional disparities in service quality and accessibility, managing resources effectively, containing costs and minimizing fraud, engaging the private sector, and maintaining investment in health promotion and prevention programmes.

Executive summary

Indonesia is the largest archipelago in the world with an estimated total of 17 504 islands. The country is ranked fourth globally in terms of population, with a population of more than 240 million. This large population includes numerous ethnic, cultural and linguistic groups, speaking 724 distinct languages and dialects. The country is in the midst of a fundamental demographic shift as the working-age population increases relative to the rest of the population. Indonesia has also emerged as a middle-income economy, economically strong and politically stable. The political and social landscapes have also been evolving through transition from authoritarianism to democracy and decentralization reforms. These macro-transitions have concurrently influenced an epidemiologic transition in which noncommunicable diseases (NCDs) are increasingly important, while infectious diseases remain a significant part of the disease burden.

Indicators of overall health status in Indonesia have improved significantly over the last two and half decades, with life expectancy rising from 63 years in 1990 to 71 years in 2012, under-five mortality falling from 52 deaths per 1000 live births in 2000 to 31 deaths in 2012, and infant mortality falling from 41 deaths per 1000 live births in 2000, to 26 deaths in 2012. However, progress on maternal mortality and communicable diseases has been slower, with maternal mortality remaining high (210 deaths per 100 000 live births in 2010), and continuing high incidences of tuberculosis (TB) and malaria. At the same time, risk factors for NCDs, such as high blood pressure, high cholesterol, overweight and smoking, are increasing. Responding to this increasingly complex epidemiological pattern in the midst of multiple macro-transitions is one of the major challenges for the country's health system. Indonesia has stepped up its leadership in global health; for example, the Minister of Health became Chair of the Board of the Global Fund in 2013, and the President was named by the United Nations Secretary-General to co-chair the high-level 27-person panel to draft the Sustainable Development Goals (SDGs). However, Indonesia

remains the only country in Asia and one of 9 worldwide not to have signed the WHO Framework Convention on Tobacco Control.

The Indonesian health system has a mixture of public and private providers and financing. The public system is administered in line with the decentralized government system in Indonesia, with central, provincial and district government responsibilities. The central Ministry of Health is responsible for management of some tertiary and specialist hospitals, provision of strategic direction, setting of standards, regulation, and ensuring availability of financial and human resources. Provincial governments are responsible for management of provincial-level hospitals, provide technical oversight and monitoring of district health services, and coordinate cross-district health issues within the province. District/municipal governments are responsible for management of district/city hospitals and the district public health network of community health centres (*puskesmas*) and associated subdistrict facilities. There are a range of private providers, including networks of hospitals and clinics managed by not-for-profit and charitable organizations, for-profit providers, and individual doctors and midwives who engage in dual practice (i.e. have a private clinic as well as a public facility role).

Indonesia has a hierarchy of interrelated long-term, medium-term and annual plans, from central to provincial and district level. The planning process combines top-down direction, with bottom-up participation from communities and local agencies. While Indonesia has established a national information system (SIKNAS) that links to district-level health information systems (SIKDA), communication between the systems has been weakened by decentralization, and by multiple separate reporting systems. Vital registration is not complete, and is supplemented by regular national sample surveys.

The function of regulation is divided between central, provincial and district governments. Regulations are arranged in a hierarchy from laws to different levels of regulation at different levels of government. Regulation of providers includes requirements for individual providers to be registered and gain a licence to practise, while hospitals require a licence to operate and must participate in the hospital accreditation scheme. There is also a variety of regulations relating to the production of pharmaceutical products, their advertising, distribution and sale. However, there remains a high rate of illegal sale of pharmaceuticals by unlicensed drug vendors, and self-medication is common. Patient rights are guaranteed by several laws,

including the right to confidentiality, to information about treatment and costs, to give consent to any procedures, and not to be treated negligently.

Indonesia faces the challenge of increasing health expenditures, as nominal health spending has been steadily increasing in the last eight years, by 222% overall. Although there has been a substantial increase in health spending at national level, health spending as a proportion of gross domestic product (GDP) remains below average among the low-to-middle-income countries (3.1% of GDP in 2012). The government share of total health expenditure also remains low, at only 39%, whereas private, primarily out-of-pocket (OOP) expenditure, is 60%.

In response to the high levels of OOP expenditure and its impact on access to health services by the poor, the Government of Indonesia has introduced various social insurance programmes for health, such as the Social Safety Net for Health-care, Askeskin, Jamkesmas and the most recent national health insurance scheme, the *Jaminan Kesehatan Nasional* (JKN). This programme, which commenced in January 2014, pools contributions from members and the government under a single health insurance implementing agency (BPJS Kesehatan). Population coverage is planned to expand progressively and the aim is to reach universal coverage by 2019, with a comprehensive benefit package and minimal user fees or co-payments. Payments to primary care providers are through capitations, and to hospital providers through DRG episodes of service payments (INA-CBGs). Salaries for public staff continue to be covered through budgetary allocations.

However, the focus of increased spending on health through the JKN is on curative care services and health infrastructure that supports medical care. Thus, the allocation for public health and prevention is relatively low, and the allocation for curative services is high. Challenges remain in the continuing high levels of OOP expenditure, the complex system of payments, expanding population coverage to include informal sector workers, and ensuring improvements in the supply of services to enable equitable access to services across regions of Indonesia.

Indonesia has experienced an increase in health infrastructure, including primary and referral health facilities, in the last two decades. Inpatient beds in both public and private hospitals and primary health centres have also increased. *Puskesmas* or primary health centres are important, particularly in the context of Indonesia's Universal Health Coverage (UHC) or JKN programme, as the gatekeeper for medical cases as well as public

health efforts. However, the ratios of both hospital beds and *puskesmas* to population remain below WHO standards and lag behind other Asia-Pacific countries. In addition, there are varying conditions and quality of the facilities, resulting in geographical disparities between Indonesian regions.

Capital investment is financed by the government budget from various institutions and different levels of government. At the hospital level, a hospital with *Badan Layanan Umum* (BLU) status can finance its own capital investment. Other sources of funds include cooperation with private institutions. Foreign investments are welcomed, but limited to hospital-level investment only. There is wide use of mobile technology, with Indonesia currently the eighth-largest Internet user globally. The adoption and use of information technology in the health system is still limited and not well coordinated. This includes the limited growth in the use of electronic medical records.

Human resources for health have also grown in the last two decades, with increases in health worker to population ratios. However, the ratio of physician to population is still lower than the WHO-recommended figure, and ongoing geographical disparities exist. There is also a pronounced shortage of nurses and midwives at both hospital and *puskesmas* level, despite the increase in absolute numbers. Professional mobility of health workers has been modest, but with growing outmigration of nurses to the Middle East. Health training institutions have grown in number, with various changes in the curriculum aimed to improve the quality of the graduates; however, significant investment is needed to meet the population's needs.

The Ministry is also responsible for management of programmes addressing public health issues, such as programmes to combat communicable disease, including TB, HIV/AIDS, malaria, dengue and avian influenza. These programmes are led by the Ministry of Health at national level, but are delivered by the network of public facilities at district level (hospitals and district health offices), and at community level (*puskesmas* and their networks). There is also an active surveillance and outbreak response system, and regular national surveys to measure and monitor key aspects of population health.

The *puskesmas* and their networks manage and deliver the basic immunization programme, although the programme can also be accessed through private providers. The immunization programme still faces significant challenges from both the supply and demand sides

e.g. geographical disparity, topographical situation, limited availability of outreach activities and cold chain maintenance, due to the decentralization and availability of funding, negative perception of immunization side-effects, and suspicion of *haram* ingredients, despite awareness campaigns.

The Ministry of Health also organizes and directs health promotion activities, which again are delivered through the network of facilities at district and community levels. Preventive efforts also focus on NCDs, including health promotion to raise public awareness, and community-based health awareness groups, early screening and early detection. For example, the *Posbindu* is a community engagement programme that addresses almost all NCD risk factors, and is integrated into other settings within the community, such as schools, workplaces and residences. Although Indonesia is not yet a party to the WHO FCTC, several policies on tobacco control have been implemented such as higher excise taxes on cigarettes, stricter regulation of tobacco advertising and of the promotion and sponsorship of tobacco products, introduction of smoke-free public places, and specific packaging and labelling of tobacco products.

The patient pathway commences from the primary care facilities, *puskesmas* and their networks, which act as gatekeepers for JKN patients before referral to hospitals for further treatment. Without a referral letter, a JKN patient is not allowed to seek treatment directly at a hospital or specialist clinic, except in an emergency situation. The *puskesmas* provides both curative and public health services, with a focus on six essential service areas: health promotion, communicable disease control, ambulatory care, maternal and child health, and family planning, community nutrition and environmental health including water and sanitation. Information and education on family planning is provided by the National Population and Family Planning Board (BKKBN) and its subnational-level agencies, while clinical family planning services are provided by Ministry of Health facilities.

Inpatient facilities include public hospitals at national, province and district levels, and a growing number of private hospitals, particularly in the central islands of Java–Bali. While patients attending hospital should be referred from primary health care level, in fact many patients come directly to hospitals and pay OOP. As a result, patients accumulate at hospitals and face long queues. Emergency care is provided by all levels of services. Since 1970, pre-hospital care radically improved when the Indonesia

Surgeons' Association started to operate the 118 Emergency Ambulance Services in Jakarta with the support of the local government.

The provision of pharmaceuticals, and oversight of the quality of pharmaceutical production is managed by the Ministry of Health Food and Drug Supervisory Board. In ensuring access to pharmaceuticals, the MoH ensures the availability of 484 essential drugs for primary care as listed in the National List of Essential Medicines (the national health programme-related drugs and vaccines). The government also monitors production capacity in the country and regulates drug prices by imposing price ceilings for several essential drugs.

Indonesia has also introduced a number of reforms to different aspects of the health system, while the health system has also been affected by reforms of government and public administration that are multisectoral. Key multisectoral reforms include the delegation of authority for certain government functions from central to local governments, including responsibility for the management and provision of public health services; and the progressive introduction of greater autonomy in the management of public service organizations, which include hospitals. Reforms that focus specifically on the health sector include reforms to improve the quality of medical education; and the introduction of a national health insurance scheme, the national health insurance programme (JKN). Following its introduction, JKN has significantly influenced management and delivery of health services.

Potential future reforms are likely in the use of telemedicine to address issues of geographical coverage; more innovative ways of addressing the challenge of distribution of the health workforce, including contracting in by local governments; and dealing with the implications of removal of restrictions on free movement of the health workforce within the member countries of the Association of Southeast Asian Nations.

Health is clearly stated as one of the important objectives in the Indonesian constitution and is also well defined in the Ministry of Health National Strategic Plan. In terms of financial protection and equity in health financing, Indonesia is still struggling. Even though JKN coverage is steadily increasing, OOP expenditure is above average. Catastrophic spending remains at a high level with many workers in the informal sector not yet insured. Implementation of the single risk pooling mechanism (JKN) poses several risks to equity in health-care financing and service utilization. As all funds and risks are collected in a single pool, provinces

or districts with limited health infrastructure and supply-side readiness, and lower health-care utilization, might receive less government subsidy compared to well-developed areas.

Information on user experience is limited in both the public and private sectors. Requirements for informed consent are regulated but there is no national charter to describe the rights of patients in choice of provider, privacy or information. The ratio of health workers to population has improved over time, but disparities between provinces remain large.

Both total and public spending on health as a proportion of GDP have been low and increasing only slowly, including for public health measures. There is a need to evaluate the current UHC programme regulation on payment or claim cap at the hospital level.

The health system in Indonesia needs to re-orient towards the changing epidemiological landscape. The increasing burden of noncommunicable diseases highlights the need to develop capacity to deliver care for chronic conditions, which require continuous long-term interactions between health providers and patients. The central government also needs to take into consideration the growing interregional disparities in terms of resources, services and health outcomes, and develop a comprehensive strategy to address these issues. With a large, widespread area and population, and with the commencement of a universal health coverage system, the need for a reliable and integrated information system to support planning and decision-making is becoming even more urgent.

With the existing limitations of the public sector supply side, JKN provides an opportunity for further collaboration with private health-care providers. However, there is a risk of fraud, and currently there is no system of prevention and prosecution of fraud. An accountable JKN system is required, as people need to see measures in place to ensure public reporting on performance and avoid corruption. In any case, given the complexity of health challenges in Indonesia, health financing reform is not a panacea for its health system. Notwithstanding, JKN provides the momentum to move towards more coordinated policies and strategies to achieve national health system goals.

1 Introduction

Chapter summary

Indonesia is the largest archipelago in the world with an estimated total of 17 504 islands. The country is ranked fourth globally in term of population, with more than 240 million inhabitants. This large population includes numerous ethnic, cultural and linguistic groups, speaking 724 distinct languages and dialects. The country is in the midst of a fundamental demographic shift as the working-age population increases relative to the rest of the population. Indonesia has also emerged as a lower-middle-income economy, economically strong and politically stable. The political and social landscapes have also been evolving through transition from authoritarianism to democracy and decentralization reforms. These macro-transitions have concurrently influenced an epidemiologic transition in which noncommunicable diseases (NCDs) are increasingly important, while infectious diseases remain a significant part of the disease burden. Indonesia is still one of the countries with the highest tuberculosis (TB) disease burden in the world, yet it must also address the escalating risk factors for noncommunicable diseases, such as high blood pressure, high cholesterol and smoking. Responding to this increasingly complex disease epidemiological pattern in the midst of multiple macro-transitions is one of the main challenges for the country's health system. Indonesia has stepped up its leadership in global health; for example, the Minister of Health became chair of the Board of the Global Fund between 2013 and 2015 and the President was named by the United Nations Secretary-General as co-chair of a high-level, 27-person panel to draft the Sustainable Development Goals. However, Indonesia remains the only country in Asia and one of 9 worldwide that has not signed the WHO Framework Convention on Tobacco Control (WHO FCTC).

1.1 Geography and sociodemography

Indonesia is the largest archipelago in the world with an estimated 17 504 islands situated between two oceans, the Pacific and the Indian.

It bridges two continents, Asia and Australia. There are five main islands and four archipelagos. The five main islands are: Sumatra (446 687 square kilometres); Java/Madura (129 306 square kilometres); Kalimantan, which comprises two thirds of the island of Borneo (507 412 square kilometres); Sulawesi (193 847 square kilometres); and Papua (424 501 square kilometres). The archipelagos are: Riau, Bangka Belitung, Nusa Tenggara and Maluku. The country shares land borders with Papua New Guinea, East Timor and Malaysia. In 2013, the country was administratively comprised of 34 provinces, 98 municipalities and 410 districts. The nation's capital city is Jakarta. Indonesia's terrain is mainly coastal lowland with mountains on some of the larger islands. The climate is tropical with high humidity. The rainy season is from October to April.

The population includes numerous ethnic, cultural and linguistic groups, speaking 724 distinct languages and dialects. Since independence, Indonesian as the national language has been used in most written communication, education, government and business affairs. The 15 largest ethnic groups formed 84.89% of the total number citizens of Indonesia in 2010 (Ananta et al., 2013). In contrast, the remaining 15.11% consisted of 619 very small ethnic groups and subgroups. The largest ethnic group in Indonesia is the Javanese, who make up 40.0% of the total population. The Sundanese, Malay, Batak and Madurese are the next largest groups in the country. The many small groups particularly originate from Eastern Indonesia. In Papua, for example, there were 263 small ethnic groups. In the 2010 population census, 87.18% of Indonesians identified themselves as Muslim, 6.96% Protestant, 2.91% Catholic, 1.69% Hindu, 0.72% Buddhist, 0.05% Confucianist, 0.13% other, and 0.38% unstated or not asked (Central Bureau of Statistics, 2011a).

Indonesian family structure is influenced by the cultural affiliation among family's members and have increasingly been affected by urbanization. In general, birth order is important in determining levels of obligation, which reflects hierarchies of responsibility. There has been gradual transformation from an extended family with primary relationships and responsibilities to care for one's parents to having a nuclear family with spouse and children as the main responsibility.

Table 1.1 Trends in population/demographic indicators, selected years

	1990	1995	2000	2005	2010
Total population (million)	178.633	194.113	208.939	224.481	240.676
Population, female (% of total)	50.0	50.0	50.0	49.8	49.7
Population aged 0–14 (% of total)	36.4	33.6	30.7	30.0	29.8
Population aged 15–64 (% of total)	60	62	65	65	66
Population aged 65 and above (% of total)	3.8	4.2	4.7	4.9	5.0
Population growth (average annual growth rate)	1.898	1.662	1.472	1.435	1.393
Population density (people per sq km)	93.8	101.9	109.7	117.9	126.4
Fertility rate, total (births per woman)	3.4	2.9	2.55	2.48	2.5
Birth rate, crude (per 1000 people)	28.00	24.00	22.00	22.00	21.00
Death rate, crude (per 1000 people)	8	7	7	7	6
Age dependency ratio (population 0–14 and 65+: population 15–64 years)	67.3	60.8	54.6	53.5	53.5
Urban population (% of total)	30.6	35.6	42.0	45.9	49.9

Sources: United Nations, Department of Economic and Social Affairs, Population Division (2015); World Bank (2015c).

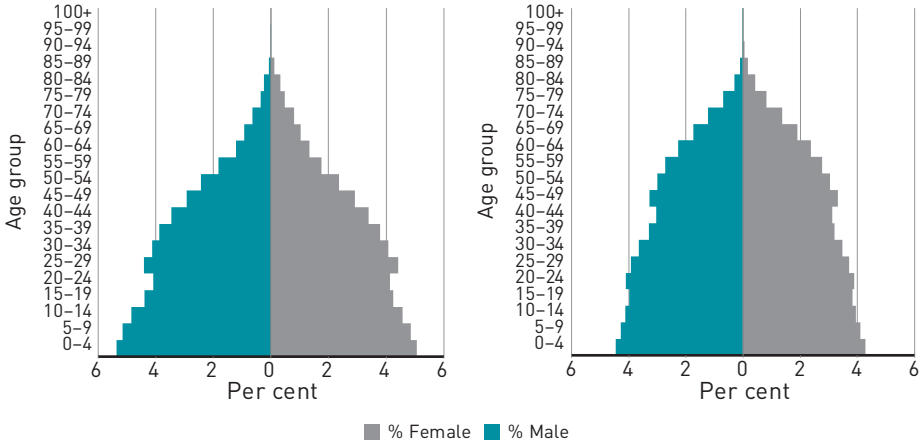
With more than 240 million people, Indonesia is the world's fourth most populous country. One of the characteristics of the Indonesian population is its uneven growth between islands and provinces. The majority of the population lives on the islands of Java (58%) and Sumatra (22%), even though the area of Java is less than 7% of the total of Indonesian land area. However, the population living on Java Island is gradually decreasing from about 59.1% in 2000 to a predicted 55.5% in 2025 (Ministry of National Development Planning, Central Bureau of Statistics and United Nations Population Fund, 2010). In 2010, approximately 49.9% of the population was living in urban areas while the remainder was living in rural areas (WHO, 2010). The population density was 126.4 people per square kilometre. The fertility rate was reported at 2.5 births per woman in 2010. Average Indonesian population growth decreased from 1.47% in 2000 to 1.39 % in 2010.

Indonesia's population is relatively young. The median age in Indonesia is 27 years (Central Bureau of Statistics, 2010a), which is the third youngest in East Asia and around 10 years younger than in most major advanced countries. In 2010, about 65.2% of the population was aged 15–64 years. The dependency ratio – the number of children and elderly people relative to the working-age population – is 53.5 (UN Population Division, 2013).

The working-age population has been rising. The educational attainment of Indonesia's population has also risen markedly over recent decades. The proportion of primary school-aged children enrolled at school was 91.45% in 2010 (Central Bureau of Statistics, 2010a), up from 70 % in 1975, while more than two thirds of secondary school-aged children were enrolled in school (up from less than 20% 35 years earlier). Indonesia is thus in the midst of a fundamental demographic shift.

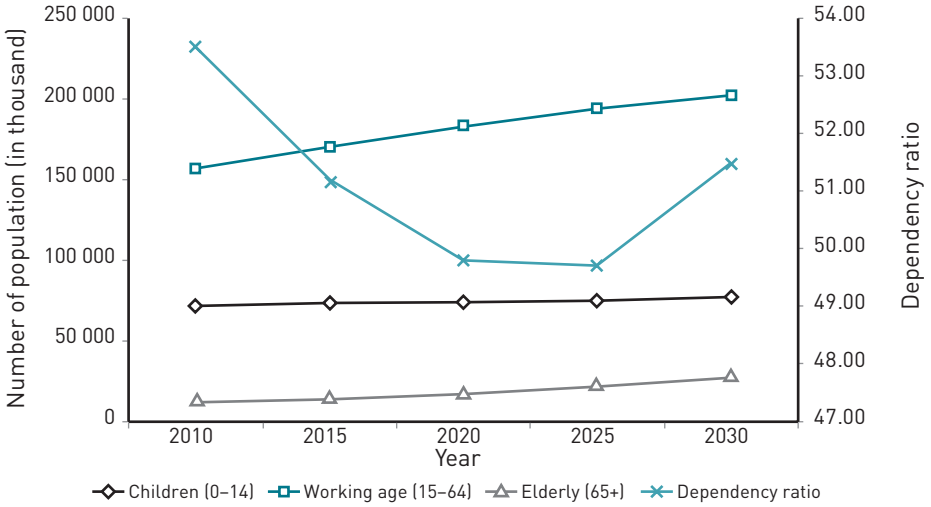
Population projections for 2030 predicts that the demographic shift will continue: an increasingly aged population is expected, with a smaller fraction of reproductive-age population in the next two decades (Figure 1.1). With declining fertility rates and with the fraction of elderly people set to rise sharply, Indonesia will continue to enjoy a 'demographic dividend' in the next decade as the working-age population increases relative to the rest of the population (Figure 1.2).

Figure 1.1 Population of Indonesia, 2010 (left) and projected for 2030 (right)



Source: United Nations, Department of Economic and Social Affairs, Population Division (2015).

Figure 1.2 Indonesia's demographic dividend



Source: United Nations, Department of Economic and Social Affairs, Population Division (2015).

1.2 Economic context

Indonesia has emerged as a lower-middle-income economy, economically strong and politically stable. This was unexpected a decade ago when Indonesia experienced a severe economic crisis. The country has now returned to macroeconomic stability and 'fiscal space' is growing, thanks to prudent fiscal management, declining debt service, as well as increased tax and export revenues during the past decade. Table 1.2 shows macroeconomic indicators for Indonesia for selected years over the past two decades.

The Government of Indonesia has pursued a prudent fiscal policy while still promoting economic growth (Hendar, 2012), and the economy has expanded strongly over recent decades. Gross national income per capita has steadily risen from $ 2120 in the year 2000, to $ 4500 in 2011 (World Bank, 2012a). It is now the fourth largest economy in East Asia – after China, Japan and the Republic of Korea – and the 15th largest economy in the world on a purchasing power parity (PPP) basis. Inflation has been brought down from more than 12.55% in 2001 to 3.79% in 2011 (Bank Indonesia, 2012). The Government of Indonesia has a relatively low debt burden. At 24.4% of GDP in 2011, the government's debt position is well below the levels of both the major advanced economies and other East Asian economies.

Table 1.2 Macroeconomic indicators, selected years

	1990	1995	2000	2005	2010	2011	2012	2013
GDP (in million, current US$)	114 426	202 132	165 021	285 868	709 190	846 341	878 043	868 345
GDP, PPP (in million, current international $)	496 399	817 587	919 458	1 301 115	1 892 779	2 057 133	2 225 318	2 388 996
GDP per capita (current US$)	640.6	1041.3	789.8	1160.6	2946.7	3469.8	3551.4	3475.3
GDP per capita, PPP (current international $)	2778.9	4211.9	4400.6	5796.1	7864.4	8437.7	9014.3	9561.1
GDP average annual growth rate (%)	9.0	8.4	4.9	5.7	6.2	6.5	6.3	5.8
Public expenditure (% of GDP)	8.8	7.8	6.5	8.1	9.1	9.0	8.9	9.1
Cash surplus/deficit (% of GDP)		1.7		-0.1				
Tax revenue (% of GDP)		14.0		12.5		-		
Government debt (% of GDP)		30.1		47.3				
Value added in industry (% of GDP)	20.7	24.1	27.7	27.4	24.8	24.3	24.0	23.7
Value added in agriculture (% of GDP)	19.4	17.1	15.6	13.1	15.3	14.7	14.5	14.4
Value added in services (% of GDP)	41.5	41.1	38.5	40.3	37.7	38.2	38.7	39.9
Labour force (total) in millions	74.4	86.3	97.6	106.4	114.5	116.4	118.4	120.3
Unemployment, total (% of labour force)			6.1	11.2	7.1	6.6	6.1	
Poverty rate				16.0	13.3	12.5	12.0	11.4
Gini coefficient	29.2			34.0	35.6	38.1		
Real interest rate	12.2	8.3	-1.7	-0.2	4.6	4.0	7.1	7.0
Official exchange rate	1842.8	2248,6	8421.8	9704.7	9090.4	8770.4	9386.6	10 461.2

Sources: http://databank.worldbank.org/; Central Bureau of Statistics; IMF (http://www.imf.org/external/pubs/ft/weo/2013/01/weodata/index.aspx).

The country's sovereign credit rating has recently been raised to investment grade by two of the three largest international rating agencies, boosting the attractiveness of Indonesia as an investment destination. Notably, economic growth in Indonesia slowed only moderately during the 2008–2009 global economic crisis. Indonesia's economy relies much less on international trade than the economies of other countries in the Region, and was thus protected from the 2009 global economic downturn.

The Government of Indonesia has announced a range of infrastructure development targets to be reached by 2019. These included the laying of 10 000 kilometres of roads and railways, constructing an integrated transport infrastructure network and increasing annual electricity generation capacity by 86 000 megawatts (Ministry of National Development Planning, 2015a). Further plans to improve Indonesia's infrastructure were announced in 2011, envisaging infrastructure investment worth 1786 trillion Indonesian Rupiahs (IDR) (around US$ 250 billion) over 2011–2025 to be completed by the government, state-owned enterprises, the private sector and public-private partnerships (Coordinating Ministry for Economic Affairs, 2011). Further improvements are expected with the gradual implementation of the Masterplan for the Acceleration and Expansion of Indonesia's Economic Development. However, the current economy is still far from reaching the sustainable growth rate of 7–9% per year that would be needed to achieve the government's objective of becoming one of the 10 largest economies in the world by 2025 (OECD, 2012b).

The rates of poverty have been declining steadily in rural and urban areas, coupled with gradual improvements in social indicators. Notwithstanding, data showed approximately 31 million people still live below the poverty line (2011) and 40% of total households live just above the national poverty line of US$21 per month. As a result, they are vulnerable to falling into poverty. The number of urban poor in cities is evidently on the rise, largely because of rapid urbanization. The number of people living in cities has been projected to rise to 67% by 2025. Urban poverty has thus been projected to surpass rural poverty by 2020. Notably, the Gini coefficient has also risen from 34.0 (2005) to 38.1 (2011).

Indonesia's unemployment rate has been pushed into a steady downward trend for more than a decade by the macroeconomic growth, from 9.5% in 2003 to 6.3% in 2013 (World Bank, 2015c). However,

government will face a prominent challenge in creating job as there are approximately two million Indonesian job applicants entering the labour force annually. Furthermore, applicants with higher educational backgrounds, including university fresh graduates, vocational school and secondary school graduates have difficulties in finding jobs. On the other hand, half of Indonesia total workers were only primary school graduates. Compared to developed countries and regional peers, Indonesia's vulnerable employment (unpaid and own-account workers) is quite high at around 60% for both total male and female workforce groups during the last decade. Most of these vulnerable workers work in the informal sector.

With regard to implications for health, it has been systematically documented that for the poor and the informal sector in Indonesia, ill-health events have a negative impact on income from wage labour (Sparrow et al., 2014). Thus, most of the income risk seems to come from the informal sector, which contains large labour force from the poorest half of the Indonesian population. The formal sector, on the other hand, provides financial protection from illness through both providing social health insurance and also by reducing income risk. There is some scope to expand social health insurance coverage to the informal sector, particularly by reducing the economic risk of illness among rural poor population with the aim to reduce barriers in health care seeking. However, expanding employment in the formal sector may serve as key instrument to provide both financial protection from illness and also reduce income risk. This suggests that Indonesia's economic needs to have the transformation towards more formal sector-driven structure (Sparrow et al., 2014).

1.3 Political context

Indonesia is a republic with a constitution, and executive, judicial and legislative branches of government. The country is headed by elected executive President and Vice President through popular vote for a five-year term and assisted by appointed cabinet. The national legislative structure consists of three bodies; firstly is the House of Representatives (*Dewan Perwakilan Rakyat or DPR*) consisting of 560 elected members from parties in multiseat districts and has the key role in passing laws; secondly is the Regional Representative Council (DPD) consisting of 132 elected members by a direct election; and thirdly is the People's Consultative Assembly (MPR). The MPR's structure consists of the

members of the DPR and DPD. This body has a responsibility for constitutional amendments and presidential impeachment.

In 2014, Indonesia held its fourth parliamentary election held since the country's transition from the former President Suharto's New Order era. The 2014 parliamentary elections followed elections held in 1999, 2004 and 2009 marking further consolidation of Indonesian democracy. The main opposition party, the Indonesian Democratic Party of Struggle (PDI-P), won the 2014 parliamentary with 18.95% of the vote, followed by Golkar or the Party of Functional Groups with 14.75% and the Gerindra or the Great Indonesia Movement Party (Gerindra) with 11.81%. Out of 12 participating parties, two did not meet the electoral threshold of a minimum 3.5% vote to win a seat in the DPR, i.e. the Indonesian Justice and Unity Party (PKPI) and the Crescent Star Party (PBB).

The Indonesian President is directly elected in a separate presidential election that is held after the parliamentary elections. Indonesian election law requires parties to attain 20% of the seats in the 560 seat DPR or 25% of the national vote to be able to nominate a presidential candidate. Under Indonesian law, the President and his or her Vice President run for election together. If one candidate receives over 50% of the vote in the first round, they become President. If no single candidate receives over 50% then a subsequent run-off round is held between the two leading candidates. In July 2014, Joko Widodo (Jokowi) of the PDI-P won the Presidential election in the first round, running on an agenda promising increased investment in health and education. He took office on 20 October 2014.

At the national level, there are two sets of major policy processes: (i) regular development planning and budgeting and (ii) the development of more ad hoc laws and regulations (Datta A et al., 2011). While laws, which provide high level principles, require parliamentary approval, regulations, which provide detailed guidance to implement particular laws, do not. Importantly, the annual budget also requires parliamentary approval. Public consultation is a key element of Indonesia's regulatory framework under Law 12/2011 on the Development of Laws and Regulations. This is complemented by commitments to transparency and engagement in regard to citizens Indonesia's Laws on Public Service (Law 25/2009), Transparency in Public Information (Law 14/2008) and State Development Planning System (Law 25/2004).

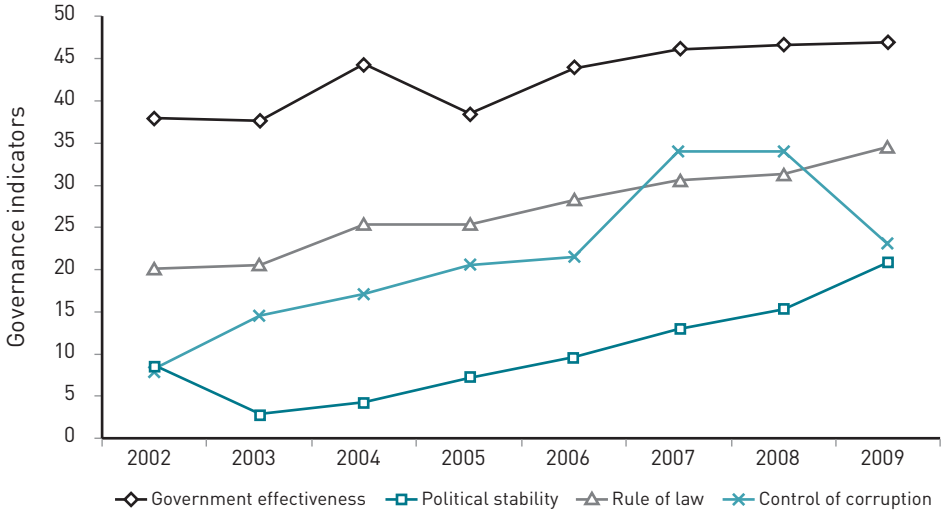
The President, directly elected, is seen as the country's most influential policy-maker (Datta A et al., 2011). Despite most legislation being drafted by executive agencies, the DPR is drafting increasing amounts, especially on social issues. The DPR is increasingly active in overseeing legislation and becoming more prominent in reviewing the annual budget. Power in the DPR is centred in its legislative commissions rather than in the party-controlled caucuses. Decision-making in the DPR is generally through deliberation and consensus-building, and all parties are expected to make concessions before agreement can be reached.

The country has also undergone a process of decentralization since 1999, which has seen control of large amounts of public expenditure and service delivery transferred from the central government to provincial and local governments. Subdistrict and district leaders and provincial governors win office through direct elections. Voters are also able to select provincial and district-level parliamentarians. Enactment of the law on local autonomy in 1999 marked the beginning of the decentralization system in Indonesia. Since 2005, heads of local government (governors, regents and mayors) have been directly elected by popular election.

The transition from authoritarianism to democracy and decentralization reforms have also facilitated further growth of civil society organizations (CSOs) and embedded them in the political and social landscape (Cheema GS, 2011). Following the fall of previous authoritarian regime, Indonesia has been more democratized and there have been increasing discourses on good governance, accountability and transparency of the public institutions. Furthermore, the progression in freedom of expression has resulted in rapid growth of civil society sector. The CSOs are still on the learning stage on how to properly function as watchdogs and to be part of the process to create checks and balances, and not as political agenda or movement. Moreover, the public watchdog role is no longer dominated by CSOs but also shared with other sectors, mainly the media and academia. Notably, CSOs have taken the advantage of the increased opportunities created by decentralization to influence the role and functions of local administrations in Indonesia (MacLaren L et al., 2011). They are increasingly able to influence local policy outcomes, thus enabling them to form partnerships with development programmes to identify and mobilize coalitions for reform.

In the past decade, various dimensions of governance have been improved as measured by the World Bank Worldwide Governance Indicators (Figure 1.3).

Figure 1.3 Selected governance indicators for Indonesia, percentile rank (1–100)



Source: World Bank (2015b).

At the national level, health development efforts have been at the top of political priorities second only to the national education program. The current government has also continued placing health sector as one of the national interests through its Nawacita or the nine pillars of national development agenda (President of Indonesia, 2015) in which the National Health Insurance program was included as one of the visions set by the president Joko Widodo. Such political commitment on health was manifested through the new cabinet's 2015-2019 mid-term planning on health sector which include the Healthy Indonesia Program that aims to improve health status through financial protection and equitable health service provision (Ministry of Health, 2015a) as well as promotive and preventive-focused initiatives such as the Community Healthy Life Movement (Germas).

The year 2013 marks Indonesia's arrival on the global health diplomacy stage (Hiebert, 2013). At the Global Fund's board meeting in Colombo, Sri Lanka, in mid-June 2013, the Indonesian Health Minister became the chair of the Global Fund Board, which was established in 2002 to provide

medicines and other health services to treat three of the world's deadliest diseases: AIDS, tuberculosis and malaria. In 2012, the United Nations Secretary-General named the Indonesian President as co-chair of a high-level, 27-person panel to draft a global development agenda beyond 2015, the target date for the Millennium Development Goals (MDGs). The draft report, which outlines a programme to fight poverty and promote sustainable development, was presented to the Secretary-General in 2013 and became the Sustainable Development Goals (SDGs). The panel, co-chaired with the President of Liberia and the Prime Minister of the United Kingdom, developed its draft agenda through consultations over the previous year with civil society, business leaders, academics and research institutions around the world. The Government of Indonesia thus has stepped up its leadership in global health in recent years, holding influential positions. However, Indonesia remains the only country in Asia and one of 9 worldwide not to sign the WHO Framework Convention on Tobacco Control (WHO FCTC), which calls for stronger regulation of the production, sale, distribution, advertisement and taxation of tobacco products.

1.4 Health status

Indonesia has made significant advances over recent decades in key population health indicators such as life expectancy and infant mortality, as well as considerable improvements in the general health status of the population (Table 1.3).

Table 1.3 Mortality and health indicators, selected years

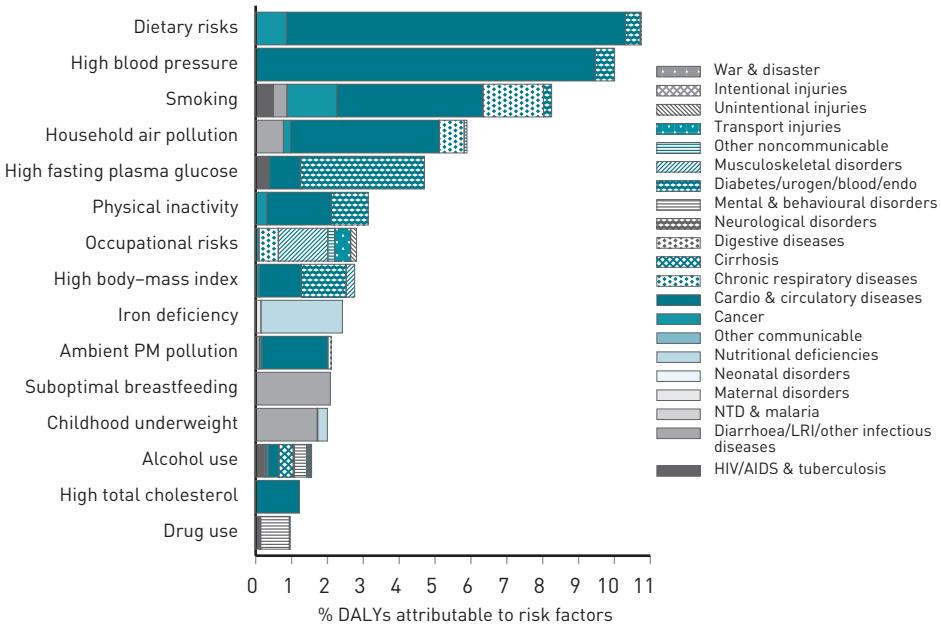
	1990	1995	2000	2005	2010	2011	2012
Life expectancy at birth, total	63	66	67	69	70	70	71
Life expectancy at birth, male	62	64	65	67	68	68	69
Life expectancy at birth, female	66	68	69	71	72	72	73
Total mortality rate, adult, male	261	238	216	197	181	179	176
Total mortality rate, adult, female	200	178	158	141	126	124	121

Source: World Bank (2015b).

The Global Burden of Disease Study 2010 (GBD, 2010) quantified levels and trends of health loss due to diseases, injuries and risk factors in Indonesia. Stroke is the leading cause of death among Indonesians, causing 19.5% of all deaths in 2010. Common risk factors include hypertension, smoking and hypercholesterolemia (Kusuma et al., 2009).

Cancer ranked second as cause of death in Indonesia. The most common causes of cancer deaths were lung cancer, liver cancer and colorectal cancer (Kimman et al., 2012). Tuberculosis is the third main cause of mortality, claiming 69 000 lives in 2012 (WHO, 2013). Indonesia has one of the highest TB disease burdens in the world, due to a combination of a large population and a high prevalence rate (Collins et al., 2013). The incidence rate of TB in Indonesia has been falling slowly but has been almost completely offset by the increase in population.

Figure 1.4 Burden of disease attributable to 15 leading risk factors in 2010, expressed as a percentage of Indonesian DALYs



Source: Institute for Health Metrics and Evaluation. GBD Profile: Indonesia (http://www.healthdata.org/sites/default/files/files/country_profiles/GBD/ihme_gbd_country_report_indonesia.pdf, accessed 20 July 2015).

Table 1.4 Main causes of Death (%)

	1990	1995	2000	2005	2010
Communicable diseases	29.1	23.6	20.7	19.4	16.4
Tuberculosis	11.3	10.3	10.4	11.0	9.5
Lower respiratory infections	12.0	9.4	6.1	4.6	4.1
Diarrhoea	5.8	3.9	4.2	3.8	2.8
Noncommunicable diseases	35.9	42.4	47.8	51.8	55.6
Cancer	7.5	9.1	9.9	10.4	11.3
Liver cancer	0.6	0.7	0.8	0.8	0.9
Colon cancer	0.5	0.6	0.7	0.8	0.9
Cancer of the trachea, bronchus and lung	1.2	1.6	1.8	1.9	2.1
Breast cancer	0.6	0.7	0.8	0.9	1.0
Cervical cancer	0.6	0.7	0.7	0.7	0.7
Diabetes	3.7	4.6	5.2	5.7	6.0
Ischaemic heart diseases	4.9	5.9	6.6	7.3	8.1
Stroke	12.4	14.0	16.5	18.4	19.5
Chronic respiratory diseases	3.9	4.5	4.8	4.9	5.1
External cause	3.3	4.3	4.5	4.0	4.2
Road injury	3.3	4.3	4.5	4.0	4.2

Source: http://vizhub.healthdata.org/gbd-compare/ (Institute for Health Metrics and Evaluation, 2013).

In 2010, the main causes of premature death as measured in terms of the number of years of life lost (YLLs), were cerebrovascular disease, tuberculosis, and road injury. Meanwhile, the five highest-ranking diseases as the causes of years lived with disability (YLDs) were low back pain, major depressive disorder, iron-deficiency anaemia, chronic obstructive pulmonary disease and neck pain. The top three causes of disability adjusted life years (DALYs) lost were cerebrovascular disease, tuberculosis, and road injury. The causes of DALYs lost that were included in 2010 ten leading causes and not in 1990 were ischaemic heart disease, diabetes mellitus, and low back pain. Overall, dietary risks, high blood pressure and tobacco smoking are the top three risk factors contributing to the most of Indonesian disease burden. Childhood underweight and occupational risks are the leading risk factors for children under five years of age and adults aged 15-49 years, respectively.

In reference to MDG 4 (Reduce child mortality), Indonesia has made significant strides. The under-five mortality rate decreased from 52 per 1000 live births in 2000 to 31 per 1000 live births in 2012; the infant mortality rate decreased from 41 per 1000 live births in 2000 to 26 per

Table 1.5 Major causes of DALYs lost

	% of total DALYs lost attributable to causes				
	1990	1995	2000	2005	2010
Communicable diseases					
Tuberculosis	7.5	7.1	7.6	8.4	7.6
Lower respiratory infections	13.7	10.4	5.9	3.8	3.0
Diarrhoea	6.8	4.6	5.6	5.4	4.0
Noncommunicable diseases					
Lung cancer	0.5	0.7	0.8	0.9	1.0
Diabetes	1.7	2.2	2.6	3.0	3.4
Ischaemic heart diseases	1.9	2.4	2.8	3.3	3.8
Stroke	4.3	5.0	6.2	7.3	8.0
Chronic obstructive pulmonary diseases	1.6	1.9	2.2	2.3	2.6
Low back pain	2.0	2.4	2.7	2.9	3.1
Major depressive disorder	2.3	2.7	2.9	3.0	3.2
External cause					
Road injury	3.2	4.2	4.6	4.4	4.6

Source: http://viz.healthmetricsandevaluation.org/gbd-compare/ (Institute for Health Metrics and Evaluation, 2013).

Table 1.6 Morbidity of selected diseases, 2007–2011

	2007	2008	2009	2010	2011
Incidence of tuberculosis, per 100 000 population	195	193	191	189	187
Incidence of dengue, per 100 000 population	68	66	66	65	24
Number of lab confirmed malaria cases, per 100 000 population	69	108	80	91	98
Number of reported new HIV cases, per 100 000 population	3	4	4	9	9
Number of people living with diabetes, per 100 000 population	1242	-	-	2903	3009

Sources: World Bank (2015b); WHO (2012a); WHO (2013); International Diabetes Federation (2015); http://www.searo.who.int/entity/vector_borne_tropical_diseases.

Table 1.7 Major risk factors affecting health status (DALYs), selected years

	% of total DALYs loss attributable to risk factors				
	1990	1995	2000	2005	2010
Dietary risks	5.23	8.30	10.17	9.57	10.73
High blood pressure	4.83	5.98	7.41	8.92	10.00
Smoking	6.33	6.32	6.02	6.24	8.26
Household air pollution	9.66	8.18	6.41	5.92	5.89
High fasting plasma glucose	2.80	3.34	3.87	4.39	4.70

Source: Institute for Health Metrics and Evaluation (2013).

1000 in 2012. In line with the decreasing of infant mortality rate, life expectancy has increased from 67 years in 2000 to 71 years in 2012. The steady rise in life expectancy is similar to that found in other lower-middle-income countries but is greater than that found in the

East Asia–Pacific area. However, there has been less progress on other important health indicators such as maternal mortality (MDG 5). In 2010, maternal mortality ratio estimates ranged from 210 (Central Bureau of Statistics et al., 2013), to 165 (joint UN estimates) deaths per 100 000 live births while the government has set a target of 102 maternal mortality deaths per 100 000 live births in 2015. Indonesia has had mixed results in meeting MDG 6 (Combat HIV/AIDS, malaria and other diseases). Little progress has been made towards reducing the spread of HIV/AIDS, but Indonesia has significantly reduced the incidence of malaria, and reduced the death rate from tuberculosis by more than half since 1990.

Table 1.8 Maternal, child and adolescent health indicators, selected years

	1990	1995	2000	2005	2010	2013	2014	2015
Adolescent birth rate	67	54	50	52	50	51	50	-
Neonatal mortality rate	30	27	22	19	16	15	14	14
Post neonatal mortality rate	32	24	19	14	12	9	10	9
Infant mortality rate	62	51	41	33	28	24	24	23
Under-five mortality rate	84	67	52	41	34	29	28	27
Maternal mortality ratio	446	326	265	212	165	140	133	126
Measles immunization	58	63	76	77	78	84	77	-
Stunting (%)	-	-	42	28.6*	39	36	-	-
Underweight (%)	31**	27.4	25	24.4	19	10	-	-

* Data for 2004. ** Data for 1989.

Note: Table 1.8 uses United Nations joint estimates for maternal mortality ratio, and child mortality rates. The methodology combines multiple data sources and references and results comparable for comparison between countries. However, some figures are different to those obtained from national data sources (WHO et al., 2015).

Source: World Bank (2015a)

The 2007 Basic Health Survey (Riskesdas) conducted by the Ministry of Health showed that 89% of children under the age of 12 had tooth decay, 43.4% of people older than 12 years old had tooth decay that had yet to be addressed, while a total of 67.2% of all Indonesians experienced tooth decay. There is a high rate of teeth and mouth diseases in Indonesia, indicating a low quality of oral hygiene in the society.

The enactment of decentralization of the health sector have impacted immunization coverage level at the sub-national level, leading to gaps between regions in Indonesia. Decentralization of the health sector and the transferring fiscal allocation and responsibilities to local government have actually a lack of association with immunization status in children, partly because of the limited capacity and capability of the local government in managing the health sector (Maharani & Tampubolon, 2014). Findings

from the 2007 Indonesian Baseline Health Research show low complete immunization rates in many regions such as in West Sulawesi (17.3%) compared with better-off region of Bali (73.9%) and the national average of 46.2%. There was a higher national average in the more recent 2010 survey with national average at 53.8%. However, sub-national inequality remains high where Papua region immunization coverage was only at 28.1% as opposed to Yogyakarta province at 91.1% (Kosen, 2013).

On average, life expectancy in Indonesia has been growing at a relatively high rate of 1.05% per year, higher than the rates of growth of life expectancy in Sri Lanka and Thailand (Rokx et al., 2009). However, Indonesia's life expectancy is currently still lower than that of Thailand and Sri Lanka (Dhillon et al., 2012). The country's neonatal mortality rate, infant mortality rate and under-five mortality rate is currently below the average in the South-East Asia Region (SEAR), but Thailand and Sri Lanka are still performing better in these indicators. Indonesia's maternal mortality ratio is equivalent to the SEAR average, which is again much higher than the figures from Thailand and Sri Lanka. Indonesia is also not doing so well on maternal mortality and stunting in international comparisons among countries with the same income level (Rokx et al., 2009). Furthermore, there is considerable variation between districts and regions in Indonesia across key health status indicators. It should be noted also that some estimates at national level vary by source and can be highly controversial, as is the case for estimates of the maternal mortality ratio.

Evidently, disease epidemiology patterns in the country have become increasingly complex in recent decades. Indonesian epidemiological transition shows the increase of NCDs, while infectious diseases remain being an important part of the disease burden. Indonesia ranks among the 10 countries in the world, who has the highest burden of diabetes and also among the 10 countries in the world with the highest TB burden (WHO, 2013). In addition, the effect of neglected tropical diseases (NTDs) is considered as the main trap for Indonesia's 111 million people from escaping poverty and may threat its economic potential (Tan et al., 2014). Indonesian's bottoms 111 million suffer from an extreme level of NTDs, mainly due to widespread helminthes infections such as soil-transmitted helminthes (STH) infections and lymphatic filariasis (LF), as well as other neglected bacterial infections including yaws and leptospirosis. Among other SEAR countries, Indonesia is the only country with endemic schistosomiasis. Responding to this increasingly complex epidemiological pattern is a major challenge for the country's health system.

2 Organization and governance

Chapter summary

The Indonesian health system has a mixture of public and private providers, and public and private financing. The public system is administered in line with the decentralized government system in Indonesia, with central, provincial and district government responsibilities. The central Ministry of Health is responsible for management of some tertiary and specialist hospitals, provision of strategic direction, setting of standards, regulation, and ensuring the availability of financial and human resources. Provincial governments are responsible for management of provincial level hospitals, provide technical oversight and monitoring of district health services, and coordinate cross-district health issues within the province. District/municipality governments are responsible for management of district/city hospitals, and the district public health network of community health centres (*puskesmas*) and associated subdistrict facilities. There are a range of private providers, including networks of hospitals and clinics managed by not-for-profit and charitable organizations, for-profit providers, and individual doctors and midwives who engage in dual practice (i.e. have a private clinic as well as a public facility role).

Indonesia has a hierarchy of interrelated long-term, medium-term and annual plans, from central to provincial and district level. The planning process combines top-down direction, with bottom-up participation from communities and local agencies.

While Indonesia has established a national information system (SIKNAS) that links to district-level health information systems (SIKDA), communication between the systems has been weakened by decentralization, and by multiple separate reporting systems. Vital registration is not complete, and is supplemented by regular national sample surveys.

The function of regulation is divided between central, provincial and district governments. Regulations are arranged in a hierarchy from

laws to different levels of regulation at different levels of government. Regulation of providers includes requirements for individual providers to be registered and gain a licence to practise, while hospitals require a licence to operate and must participate in the hospital accreditation scheme. There is also a variety of regulations relating to the production of pharmaceutical products, their advertising, distribution and sale. However, there remains a high rate of illegal sale of pharmaceuticals by unlicensed drug vendors, and self-medication is common.

Patient rights are guaranteed by several laws, including the right to confidentiality, to information about treatment and costs, to give consent to any procedures, and not to be treated negligently.

2.1 Overview of the health system

Following decentralization reform in 1999, health services were decentralized to provincial and district governments which are under the Ministry of Home Affairs. This change resulted in decentralization of responsibility for planning, and managing service delivery from the Ministry of Health to local governments. The central Ministry of Health (MoH) retained and continued to operate some tertiary and specialist hospitals, but has shifted much of its function to regulation, ensuring the availability of resources, including personnel, and to taking an increasingly lead role in the supervision of social insurance schemes. There are also several other central government ministries and agencies involved in the health sector; for instance, the Ministry of Home Affairs, the Social Security Managing Agency, and National Board of Population and Family Planning.

The health service at the local level is divided between provincial level and district/municipality level. Provincial governments own the provincial hospitals and organize the health services through the provincial health offices (PHOs). The PHOs play a coordinating role for health issues within the provincial/region and across districts. The district/municipality governments own district/municipality hospitals and organize health services through district/municipality health offices (DHOs). DHOs also operate health services provided through the primary health centres (*puskesmas*) and their networks. However, the relationship between MoH, PHO and DHO is not a hierarchical one. The district/municipality government is not "under" the provincial government. Each level has its own mandates and areas of authority. Within the decentralized health

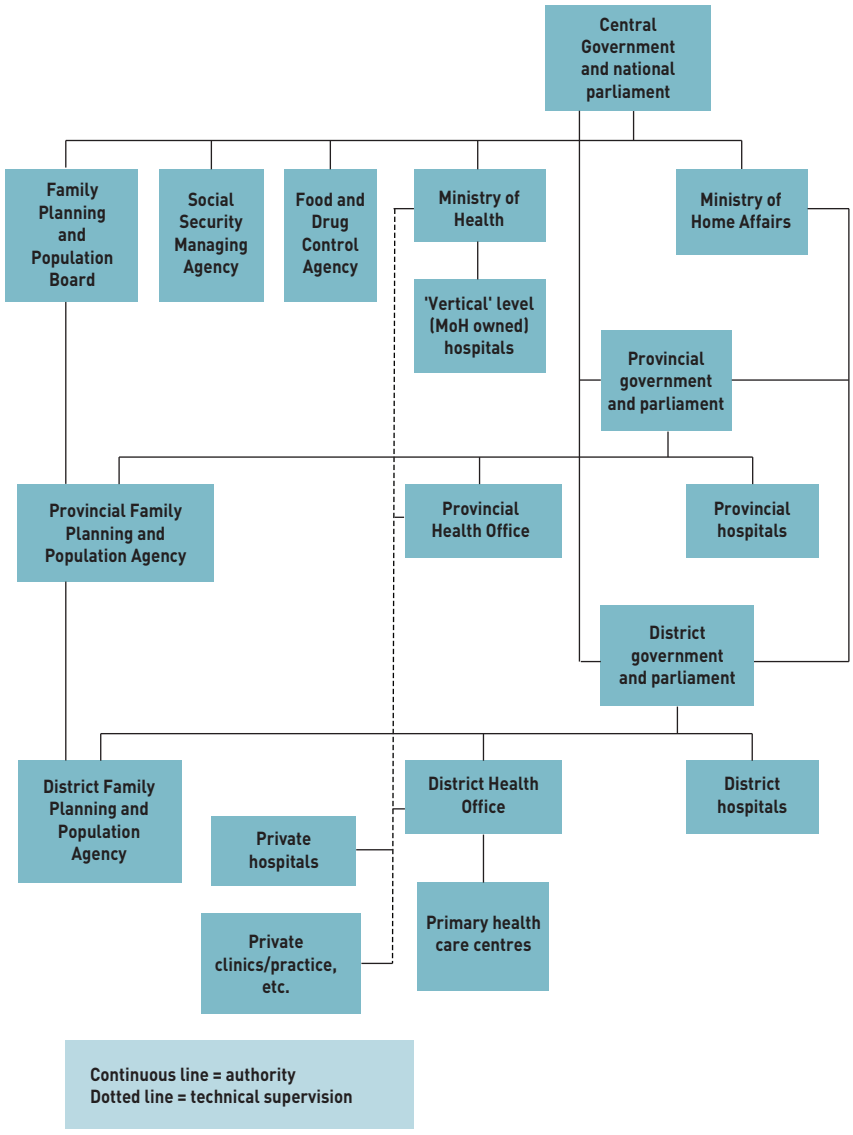
system, the hospital is not subordinate to the health office, and the DHO does not answer to the PHO. Likewise, the PHO is not responsible to the MoH, but to the provincial governor. MoH has a few "vertical" programs that directly function at Provincial and District level, e.g. immunization.

There are several nonministerial/departmental bodies that relate to health and play a role at central level.

- The first is the National Population and Family Planning Board (*Badan Kependudukan dan Keluarga Berencana Nasional*/BKKBN).
- Then there is the Social Security Agency (*Badan Pelaksana Jaminan Sosial*/BPJS). Badan Pelaksana Jaminan Sosial Kesehatan (BPJS-K) is the Social Security Agency for Health that administers the national health insurance programme (*Jaminan Kesehatan Nasional*/JKN) including managing membership, collecting premiums, administering contracts with providers and paying providers. BPJS-K is appointed by (and therefore answers to) the President (President of Indonesia, 2013a). BPJS-K is supervised by *Dewan Jaminan Sosial Nasional* (DJSN), the National Social Security Board. DJSN members are also appointed by the President (President of Indonesia, 2008a). DJSN members are a combination of government officials and community members, as well as representatives of employee associations and employer associations.
- Finally, there is the Food and Drug Control Agency (*Badan Pengawasan Obat dan Makanan*/BPOM). BPOM was previously a directorate general in the MoH. As the role and need for food and drug monitoring has increased, the government separated it from the MoH and established BPOM as a nonministerial independent board under the President (President of Indonesia, 2001) while still coordinating with the Minister of Health (President of Indonesia, 2013a).

As the economy continues to grow, so the demand for health services is also increasing and the government has opened the health sector for investment, resulting in a growing number of for-profit private providers. The private health services are largely self-funded and purchased through OOP payment. Most of the public sector health professionals also work in the private sector. The private sector consists of hospitals as well as physician-run clinics/group practices, private practices, midwifery clinics, clinical laboratories and pharmacies. They are regulated by the government (central and local) through accreditation, licensing and registration.

Figure 2.1 Organization of health system in Indonesia, 2014



Source: Government organization, decentralization and health system (Government of Indonesia, 2007; House of Representatives, 2004g; House of Representatives, 2008; House of Representatives, 2014b; President of Indonesia, 2011a; President of Indonesia, 2011b).

2.2 Historical background

The health sector in Indonesia originated in the not-for-profit private sector. The first modern health services in Indonesia were established during the colonial period when the Dutch East India Company founded

a hospital in Batavia in 1626 (Schoute, 1937). Its interest was only in maintaining the health of the army, civil servants and workers in large colonial-owned companies (Boomgaard, 1993). In the absence of state activity, the Dutch zending movement (Christian hospitals with missionary objectives) established hospitals to serve the poor from the late 1800s (Trisnantoro et al., 2012). This was followed by various Catholic Orders in the early 1900s, Muhammadiyah (an Islamic group) in 1923, as well as Jang Seng (an early Indonesian Chinese group of doctors) in 1925 (Trisnantoro et al., 2012). The colonial government extended subsidies to many of these private hospitals, which treated poor patients on a charitable basis. As a result of the economic crisis in 1930, private hospitals offered their services to self-paid patients but only a small percentage of hospital income came from self-paid patients (Trisnantoro et al., 2012).

Following independence in 1945, the Government of Indonesia began to build a public service sector mostly by 'nationalizing' some of the private hospitals. Thus, the system shifted from an entirely private-based sector towards a public-based sector. But in the immediate post-independence years, the government could only provide limited subsidies for health (Trisnantoro et al., 2012). As a result, public hospitals and health services suffered from a severe shortage of resources.

After the New Order came to power in 1965, the new administration put its emphasis on development through market-oriented economic growth (Trisnantoro et al., 2012). The strategy widened social and economic inequalities, and the State focused on improving social welfare only for its civil servants, the military and the workers in the formal sector, who were considered critical to the development of the economy (Trisnantoro et al., 2012). The social security scheme for civil servants was expanded in 1968 with the addition of a contributory health insurance component (*Asuransi Kesehatan*/Askes) (Fahmi, 2002), and a similar scheme for the military was created in 1971 (*Asuransi Angkatan Bersenjata Republik Indonesia*/Asabri) (Purwoko, 1996). In 1977, the previously voluntary social security fund for labour evolved into an income-based social insurance scheme for formal workers (*Asuransi Tenaga Kerja*/ASTEK) which later in 1992 was further expanded with the addition of health insurance and re-introduced as Jamsostek (Jaminan Sosial Tenaga Kerja) (Fahmi, 2002).

In 1968, the primary health centre (*puskesmas*) was born and since the 1970s, *puskesmas* have been established in every subdistrict (*kecamatan*) or any area with a population of 30 000–50 000. The government had

an initial commitment to supply every *puskesmas* with medical doctors (President of Indonesia, 1974; President of Indonesia, 1975). In 1979, the *puskesmas* network was established by adding auxiliary *puskesmas* (*puskesmas pembantu/pustu*) at the village level.

From the 1960s to the 1990s, curative care for the rest of the population was left largely to the market, with minimal government funding support (Trisnantoro et al., 2012). Higher-income Indonesians in bigger cities demanded a more luxurious service from hospitals, and were able to pay for private services. The government then allowed the establishment of hospitals in the form of for-profit limited corporations in 1986. The market-based health system became prominent in curative services, but in preventive services, shortages of funds remained. Insurance for health remained restricted to civil servants (through Askes), military personnel (through *Asabri*), and formal labour (*Jamsostek*) or private financing using a small number of private insurance providers. The out-of-pocket payment became one of the most significant portions of total health expenditure.

In 1997, the Asian financial crisis severely hit Indonesia, halting economic growth, causing considerable economic dislocation, unemployment and poverty, and triggering a political transformation from the New Order regime to a more open, democratic and decentralized system. The economic and political crises engendered a shift in policy concern to the difficulties of the poor, who suffered disproportionately during the crisis. To reduce their burden, the government launched a series of social safety net programmes (*Jaringan Pengaman Sosial*/JPS), including a Social Safety Net in Health (JPS-BK) for the poor, the first nationwide programme for social health insurance covering those outside the formal sector (Hill et al., 2012).

Meanwhile, the health system was reorganized following the decentralization of government in 1999. This resulted in fragmentation of the health system with disconnection of authority lines between the MoH and the local health offices, and between PHOs and DHOs. Government Regulation No. 38 of 2007 established a clear distinction between the task and authority in the health sector for the PHO (as the coordinator within the province) and the DHO (as the manager in the district/municipality), but there is no direct authority line between the MoH, PHO and DHO.

The initial financial protection initiatives survived, and in 2005, partly to mitigate the impending impact of a cut in fuel subsidies, were expanded

to include a targeted social health insurance scheme for the poor called Askeskin (*Asuransi Kesehatan Masyarakat Miskin*) (Sparrow et al., 2010), which was later transformed in 2008 into Jamkesmas (*Jaminan Kesehatan Masyarakat*) (Harimurti et al., 2013). Some local governments also developed their own schemes either in the form of local health-care cost subsidy for those using a certificate of disadvantage (*Surat Keterangan Tidak Mampu*) or poverty-targeted social health insurance (*Jaminan Kesehatan Daerah*) (Dwicaksono A, Nurman A, Prasetya PY, 2012). Later, a comprehensive social security framework was initiated by the National Social Security Law (*Sistem Jaminan Sosial Nasional*/SJSN) in 2004, which includes a plan for universal health coverage. This represents the major financing reform of health services, following decentralization and the direct election of president, governors, regents and mayors (effective since 2004). These recent developments also reflect how social welfare issues and the demand for assistance for the poor and all citizens are gradually gaining importance as the drivers of policy in the health sector.

2.3 Organization

The key actors in the organization of the health service are the MoH and the Ministry of Home Affairs. In the public sector, there are three levels of government that have responsibilities over the organization of the health system. Their tasks and responsibilities are shared on a concurrent basis between central, provincial, and district/municipality levels of government. According to Government Regulation No. 38 of 2007, at least three functions are delineated: legislation and regulation, financing, and service delivery. The relations between the central, provincial and district/municipality governments are described in Section 2.4.

Health services are delivered by the public and the private sectors. Provision of public health is mostly undertaken through the public sector, as described in Section 5.1. In the private sector, hospitals and primary care clinics are owned by religious affiliated organizations, companies and individuals/group of individuals.

There are other public agencies at the national level (usually assisted by their regional level counterparts) that in one or the other way have interest with the health sector. The National Team on Poverty Reduction Acceleration (*Tim Nasional Percepatan Penanggulangan Kemiskinan*/TNP2K) deals with strategy and efforts to identify and reduce inequalities and protecting the poor. The national family planning programme is planned and implemented by the National Population and

Family Planning Board (*Badan Kependudukan dan Keluarga Berencana Nasional*/BKKBN). Drug and food inspection is under the Food and Drug Control Agency (*Badan Pengawasan Obat dan Makanan*/BPOM). Disaster and emergency management is under the Indonesian National Board for Disaster Management (BNPB – *Badan Nasional Penanggulangan Bencana*), while issues regarding climate change are the responsibility of the Climate Change National Council (*Dewan Nasional Perubahan Iklim*/DNPI). Some public health activities are under other ministries such as housing, clean water provision, school health, etc.

Provincial level: PHOs and provincial hospitals

While the PHO is mandated to formulate technical policies related to health development, health services and health human resources development as well as carry out the coordinating, monitoring and supervision function. The PHO also plays a role in registration, licensing, accreditation and certification at provincial level, as well as any assisting task (*Tugas Perbantuan*) in health. However, there is no clear statement establishing that the DHO must report to or be accountable to the PHO.

District level: DHOs and district hospitals

According to Government Regulation No. 38 of 2007, the DHOs are mandated to organize and implement various health services including epidemiology surveillance, communicable and noncommunicable disease treatment, disaster management, environmental health, nutrition, primary and secondary health services, promotion and preventive measures, registration, licensing, accreditation and certification, social health insurance, human resources for health, health surveys and health information systems as well as monitoring and evaluation.

As Figure 2.1 shows, the MoH still owns some tertiary hospitals and a few specialist hospitals, while public hospitals are owned by provincial and district governments. The local health offices supervise both the public sector and the private sector. This has resulted in a fragmentation of the health system. As Figure 2.1 shows, the district hospital does not report to the DHO but directly to the head of the local government. Likewise, the DHO is not accountable to PHO but to the MoH (related to centralized health programmes) and to the local government. The impact of decentralization in the health sector will be further discussed in Section 6.1.1.

Professional and institutional organizations

There are several institutional organizations, each with a different membership. There is a national Hospital Association (*Perhimpunan Rumah Sakit seluruh Indonesia*/PERSI) as well as associations more specifically for central government hospitals (*Asosiasi Rumah Sakit Vertikal Indonesia*/ARSVI), local government hospitals (*Asosiasi Rumah Sakit Daerah*/ARSADA), private hospitals (*Asosiasi Rumah Sakit Swasta Indonesia*/ARSSI), teaching hospitals (*Asosiasi Rumah Sakit Pendidikan Indonesia*/ARSPI), not-for-profit hospitals (*Asosiasi Rumah Sakit Nirlaba Indonesia*/ARSANI), and various associations of hospitals with religious affiliations. Although they do not have any regulatory function, they provide a platform for interaction with the government representing their members. On the other hand, the government also uses them to disseminate policy and information.

Local governments have their own associations, i.e. *Asosiasi Pemerintah Kota seluruh Indonesia*/APEKSI (the Association of Indonesian Municipal Governments) and *Asosiasi Pemerintah Kabupaten seluruh Indonesia*/APKASI (the Association of Indonesian District Governments).

Professional associations exist for every health profession as membership-based organizations, such as for doctors (*Ikatan Dokter Indonesia*/IDI), paediatricians (*Ikatan DokterAnak Indonesia*/IDAI), dentists (*Persatuan Dokter Gigi Indonesia*/PDGI), nurses (*Persatuan Perawat Nasional Indonesia*/PPNI), midwives (*Ikatan Bidan Indonesia*/IBI), etc. They have roles in self-regulation of their respective professions. For instance, IDI, PPNI and IBI have established competence standards for their respective professions and can also sanction their members for professional misconduct.

Nongovernmental organizations

Civil society participates actively in the health sector. For example, as Section 2.6 describes, the *posyandu* is a community initiative to engage in health promotion and preventive activities. The backbone of *posyandu* are the health cadres, community volunteers who are trained by village midwives and/or other *puskesmas* staff to provide assistance in promoting healthy living behaviour, mother and child health, and nutrition to the community.

Various nongovernmental organizations (NGOs) engage in health-related issues in Indonesia, and play an important role in promoting awareness, preventive measures, fund-raising, policy advocacy and working in

partnership with the government on monitoring and evaluation. Some of the largest foundations are *Yayasan Kanker Indonesia* (Indonesian Cancer Foundation), *Yayasan AIDS Indonesia* (Indonesian AIDS Foundation), *Asosiasi Ibu Menyusui Indonesia* (Indonesian Association for Breastfeeding Mothers), *Yayasan Jantung* (Indonesia Heart Foundation), *Yayasan HOPE Indonesia* (working on community-based disaster preparedness and some other health issues), *Wahana Visi Indonesia* (World Vision Indonesia, working on health, child health and disaster management), and so on. Smaller but nonetheless important NGOs include Rifka Anissa (working specifically on violence against women), the Indonesia AIDS Coalition, *Yayasan Pendidikan Kesehatan Perempuan* (Women's Health Education Foundation), Spirita (HIV/AIDS), etc. There are also several community organizations with religious affiliations that play significant roles in the health sector, including Muhammadiyah (Islam), Nahdatul Ulama (Islam), *Persatuan Karya Dharma Kesehatan Indonesia*/PERDHAKI (United Devotion for Indonesia Health, a Catholic organization), *Persekutuan Pelayanan Kristen untuk Kesehatan di Indonesia*/PELKESI (Christian Congregation for Health in Indonesia), *Yayasan Kesehatan Kristen untuk Umum*/YAKKUM (Christian Foundation for Health), *Walubi* (Buddhist), *Parisada Hindu Dharma* (Hindu). Together they also create a platform for cooperation in the form of the Collaboration Forum for Indonesia Community Health Development (*Forum Kerjasama Pengembangan Kesehatan Masyarakat Indonesia*/FKPKMI). Community organization in Indonesia is regulated by law (House of Representatives, 2013b).

There are also other organizations that are related to the health sector. The largest consumer group is the Indonesian Consumer Group (*Yayasan Lembaga Konsumen Indonesia*/YLKI), which voices concerns over consumer protection with regard to food and drug safety or the quality of health-care services. Research institutions and advocacy groups also flourish in response to various health issues. The MoH maintains a network of collaboration and communication with these institutions and advocacy groups.

Development partners

Other important and relevant organizations include development partner agencies and organizations under the United Nations, or even private donor agencies. These organizations include AusAID, USAID, GIZ, IDB, ADB, the World Bank, the Global Fund, WHO and UNICEF. Aside from WHO, the main core interest of these organizations is not necessarily the health sector, but many have been working with the government on improving various aspects of the health sector. They also work with local

governments and universities or other private sector organizations in various health systems strengthening and community empowerment programmes.

2.4 Decentralization and centralization

Health decentralization has been carried out in Indonesia since 1986 and redefined again in early 2001 (Trisnantoro, 2009). This policy is a consequence of political decentralization, which has become the core of Law (UU) No. 22/1999.

Initial euphoria at subnational levels of government was replaced by disappointment largely because the amount of health fund allocated in the General Allocation Fund (DAU) and the Local Revenue and Expenditure Budget (APBD) was not enough to pay for health services. The public health sector experienced a fund shortage, and the system became disrupted and suffered from a loss of coordination. This led to a "re-centralization" phenomenon (Trisnantoro, 2009). This phenomenon was supported by the amendment of Law No. 22/1999 in Law No. 32/2004 that emphasized the new role of the central and provincial governments.

According to Law No. 32/2004, decentralization is defined as a transfer of power by the central government to the autonomous regional governments to regulate and manage the responsibilities of government. The separation of tasks is further elaborated in Government Regulation No. 38/2007 on Task Distribution and Government Regulation No. 41/2007 on Local Government Organization. Decentralization consists of de-concentration tasks and assisting tasks. De-concentration is defined as the transfer of authority of the central government to the governor as the representative of the central government and/or the vertical institutions in a particular area of responsibility. Assisting tasks (*Tugas Perbantuan*) are assigned from the provincial to the district/municipality, and then to the subdistrict government and further to the village.

In terms of the health sector, the local government is responsible for the provision of both physical and social health services for the community and the availability of health resources (Articles 15 and 16 of Law No. 36 on Health). Budgets for public hospitals and public primary health care come from central government and also from local government (see Figure 2.1). The local government budget is allocated through the local planning process, which requires approval of the elected local parliament

(*Dewan Perwakilan Rakyat Daerah*/DPRD). The planning process involves the role of the National Development Planning Board (*Bappenas*) and the technical ministry at the central level, while at the local level it involves the role of local governments, the local development planning board (*Bappeda*) and community participation (further details are provided in Section 2.5).

However, the distribution of roles and functions in the health sector is deemed unclear, as sometimes there is no clear distinction of the responsibilities of central government, provincial government and district/municipality governments (UNDP, 2011). It may be that Government Regulation No. 38/2007 needs a redefinition of tasks and responsibilities as well as further elaboration, while taking into account the competences at each level of government (Centre for Health Policy and Health Service Management/UGM, 2011) (see Section 6.1.1).

The local governments have the responsibility to provide basic health care (Government of Indonesia, 2005e), and they set fees for public health services, usually as revenue for local government. The central government does not require local governments to justify spending based on pre-defined indicators (Kristiansen and Santoso, 2006). Instead, local governments are accountable to the elected local House of Representatives (*Dewan Perwakilan Rakyat Daerah*/DPRD).

It is arguable that Indonesia's health decentralization is still partial as the system also keeps some strategic centralized features. For instance, the central government still governs employment conditions for civil servants (PNS), even those paid by local governments. It also finances and runs a health insurance programme for the poor (then *Askeskin,* later *Jamkesmas,* and now *Jaminan Kesehatan Nasional*/JKN). There are still some vertical programmes such as communicable disease control and maternal and child health. This is reflected in an almost equal division between spending at the central/provincial level and spending at the district/municipality level in total health spending (World Bank, 2008b).

Recent revisions under Law No. 23/2014 focus local government responsibility on the delivery of defined basic services (which include health, education, social assistance etc.), while the central government has the responsibility to define the expected standards for provision of services.

Furthermore, to define central, provincial, and district/municipality responsibilities towards basic health services, a Minister of Health Regulation was recently launched. The Minister of Health Regulation No. 43/2016 consists of minimum standard of services in health sector.

2.5 Planning

2.5.1 Current planning

The planning process in Indonesia takes place in both directions: top-down and bottom-up (House of Representatives, 2003c; House of Representatives, 2004d). At the central level the top-down path is through the National Long-term Development Plan 2005–2025 (*Rancangan Pembangunan Nasional Jangka Panjang*/RPJPN) (House of Representatives, 2007a) that is translated into the five-yearly National Medium-term Development Plan (*Rancangan Pembangunan Jangka Menengah Nasional*/RPJMN) (Government of Indonesia, 2010). At the local level, the top-down path is through the technocratic process of elaboration and derivation of local long-term development planning (*Rencana Pembangunan Jangka Panjang Daerah*/RPJPD), local mid-term development planning (*Rencana Pembangunan Jangka Menengah Daerah*/RPJMD) and local development planning (*Rencana Kerja Pembangunan Daerah*/RKPD), all of which are enacted by local regulations. For sectoral development, each local government technical agency (*satuan kerja perangkat daerah*/SKPD) is guided by a strategic plan (Renstra-SKPD) and an annual workplan (Renja-SKPD). While the RPJMD is enacted as a local government regulation, the RKPD for each technical agency is enacted as head of local government decree.

According to Law No. 25/2004 regarding The System for National Development Planning, the mechanism of plan formulation is the responsibility of the National Development Planning Board (*Badan Perencanaan Pembangunan Nasional*/Bappenas), while the technical ministry (i.e. MoH) should coordinate with the Bappenas and be responsible for providing the material for planning in its area of activity. Accordingly, the top-down planning for the health sector involves various steps:

a. The formulation of the Health Long-Term Development Plan

   The process of formulating this development plan starts from the design formulation as input in the initial design formulation of the National Long-Term Development Plan. The National Long-Term

Development Plan is stipulated by government regulation, while the Health Long-Term Development Plan is stipulated by decree of the Health Minister.

b. The Strategic Plan of the MoH

   The Strategic Plan of the MoH is the translation of the objectives set out in the National Medium-Term Development Plan into the activities to be conducted directly by the MoH with some community participation. The National Medium-Term Development Plan is stipulated by Presidential regulation, whereas the Strategic Plan of the MoH is stipulated by decree of the Health Minister (Minister of Health, 2013b).

c. The Annual Workplan of the MoH

   The Annual Workplan is derived from the Strategic Plan. The process of formulating the Annual Workplan of the MoH for the upcoming year (t+1) starts with initial inputs in the middle of the ongoing year (t0). This ministerial workplan (*Renja Kementrian*) is then discussed in the annual national *musrenbang*.

These plans, along with plans from other ministries, are then coordinated by the Bappenas.

The bottom-up path is a combination of technical planning and public participation planning. The technical planning is in the form of technical planning documents from each SKPD, while the public participation planning is accommodated in *musrenbang* (*musyawarah perencanaan pembangunan*/development planning forums) (National Planning and Development Coordination Bureau, 2016). This is a public participation mechanism starting at village level stipulated by a regulation (Ministry of Home Affairs, 2007b). Each *musrenbang* is also evaluated to assess the level of public participation throughout the planning process and to monitor the implementation of *musrenbang* results (Ministry of Home Affairs, 2007a). Each *musrenbang* at the village or neighbourhood level (*musrenbang desa*) aims to identify projects the village/neighbourhood would like to see implemented. The village head then presents project ideas at subdistrict *musrenbang* (*musrenbang kecamatan*).

The *musrenbang kecamatan* (subdistrict) discusses various proposals from *musrenbang* villages. The various proposals from the subdistrict *musrenbang* are compiled and coordinated by the local development planning body (*Badan Perencanaan Pembangunan Daerah*/Bappeda) and

adjusted in line with the workplan (Renja-SKPD) in the SKPD forum. This is where community-based assessment meets technocratic planning. The intersectoral Renja-SKPD is discussed at district/munipality *musrenbang* (*musrenbang kabupaten/kota*). The *musrenbang kabupaten/kota* is attended by members of the local parliament, respected community leaders, academics and sometimes local NGOs. The product of this *musrenbang* is the RKPD, which is budgeted in local budgeting (district/municipality APBD).

Subsequently, the RKPDs from various district/municipalities are compiled and coordinated by the provincial Bappeda and discussed in the provincial SKPD forums and provincial *musrenbang*, along with the provincial Renja-SKPD. The final product of this *musrenbang* is the RKPD-Province, which forms part of local budgeting (provincial APBD). Various RKPD-Province are discussed at the national *musrenbang* along with planning of the technical ministry/institution (*Rencana Kerja Kementrian/Lembaga* or *Renja* K/L). The final product of the national *musrenbang* is the Government Workplan (*Rencana Kerja Pemerintah*/RKP, enacted as Presidential decree and budgeted in the National Budget (APBN). Recently, the Bappenas developed a web-based *musrenbang* to support the synergy of local and central planning (Ministry of National Development Planning, 2010).

The bottom-up process is intended to ensure that planning at different levels of the health system is based on local needs and priorities, and that there is some kind of coordination in the region regarding planning for human resources and capital investment. In practice, this coordination is difficult to attain, as Sections 2.8.3 and 2.8.6 will describe.

By the time the planning document is translated into implementation, there is a mechanism for monitoring at internal and external levels (ADB and the Asia Foundation, 2006). The internal monitoring and evaluation of general planning and budgeting is conducted first and foremost in each technical department. The planning department from each institution then collects and analyses the monitoring and evaluation results. Internal audit is conducted by the regional audit agency (*Badan Pengawasan Daerah*/Bawasda) and by the Financial and Development Audit Agency (*Badan Pengawas Keuangan dan Pembangunan*/BPKP). And finally, an external audit is conducted by the supreme audit agency (*Badan Pemeriksa Keuangan*/BPK).

Disaster planning

In the National Strategic Planning document for 2010–2014 (RPJMN 2010–2014) and the MoH Strategic Plan for 2010–2014, there is already a plan for disaster preparedness. Accordingly, the MoH develops an integrated emergency management system (*Sistem Penanggulangan Gawat Darurat Terpadu*/SPGDT) that provides a guideline for integrating services from pre-health facility all the way to referral hospital. The concept utilizes a quick response and multisector approach, called Public Safety Care (PSC). PSC connects an integrated approach of emergency ambulance, the police and emergency health-care pre-hospital and in hospital. Further, the MoH in collaboration with the national Hospital Association (*Perhimpunan Rumahsakit Seluruh Indonesia*/PERSI) and professional associations conducts hospital preparedness for emergency and disaster training in which 802 hospitals have participated (Directorate of Health Services, 2014c). After the training, the hospital should be able to develop its hospital disaster plan document and standard operating procedures.

2.5.2 Role of development partners

Development partners are important counterparts to the government in planning. In the health sector, there are several development partners, such as the World Bank, AusAID and GIZ. The official partner in the government is the Bappenas, although the leading executing agency can be another ministry. The planning, coordination and monitoring for the collaboration with development partners takes place within a national steering committee, usually consisting of the development partner, the Bappenas and the executing ministry or ministries.

WHO has traditionally been a close partner in health development in Indonesia and has been involved in various health development programmes. Most of WHO's visions or themes have been formally adopted in Indonesia country programmes and priorities. As Indonesia has moved up the development ladder in becoming a middle-income country, the proportion and scope of development partners' work and involvement in Indonesia have been decreasing over time. Some of the development partners have phased out their involvement. Some of the remaining development partners are now focusing on only a handful of issues, or taking a different role. GIZ, which has been working with the Government of Indonesia since 1975, is now focusing on a school health programme, health system capacity, communicable diseases, a

social protection programme and a tsunami early warning system (GIZ, 2014). AusAID is another solid development partner for Indonesia, and is now focusing on maternal and child health, health human resources, health system strengthening, HIV/AIDS, disaster management, as well as initiating a debt-to-health swap, in which there is an option of cancellation of debt to Australia by investing in health programmes (DFAT, 2014). USAID has a strong interest in maternal and child health, infectious disease, clean water and sanitation, as well as disaster management (USAID, 2014a). UNICEF has maintained its focus on maternal and child survival (UNICEF, 2014b), HIV/AIDS (UNICEF, 2014a), and clean water and sanitation (UNICEF, 2014b). The World Bank continues to conduct and publish assessments and studies regarding health issues in Indonesia, in particular on health financing and the health workforce, although recently Indonesia has limited taking on further loan-funded health projects (World Bank, 2014a).

2.6 Intersectorality

In Indonesia, the mechanisms for intersectoral or cross-sectoral planning and implementation are conducted by the Bappenas at national level and Bappeda at local level, based on Law No. 25 of 2004 on the planning process (see Section 2.5).

At the central level, intersectoral planning and budgeting are coordinated at the State Ministry of Development Planning/National Board of Development Planning (*Menteri Negara Perencanaan Pembangunan/Badan Perencanaan Pembangunan Nasional/Bappenas*). Any health-related activities conducted by ministries (including the MoH) are under the coordination of the Coordinating Ministry of Social Welfare. At the local level, the coordination function is carried out by local development planning bodies (*Badan Perencanaan Pembangunan Daerah*/Bappeda). Despite this mechanism, cross-sectoral coordination and policy integration is still a challenge. Most of the regulations that are made outside the health sector do not put health goals as their primary goals.

However, health-related activities are not only conducted through the MoH. There are other activities and regulations that are related to health, some of which are described below.

Poverty reduction

One of the main examples of an intersectoral policy is poverty reduction. Many government institutions are involved in poverty reduction through developing pro-poor programmes under the coordinating ministries. The current effort is being undertaken by the National Team on Poverty Reduction Acceleration (*Tim Nasional Percepatan Penanggulangan Kemiskinan*/TP2K) to reduce poverty by 10% in 2014 (President of Indonesia, 2010). TNP2K consists of the Bappenas, the Coordinating Ministry for Social Welfare and Coordinating Ministry for Economic Affairs, and is directly headed by the Vice President. TNP2K has a mandate to address some issues as priorities in the short- and medium-term to alleviate poverty (TNP2K, 2014). The framework of strategies has been elaborated in the poverty reduction acceleration strategy (TNP2K, 2011). The strategies are:

1. Community-based social assistance, e.g. the family hope programme (*Programme Keluarga Harapan*/PKH), rice for the poor (*beras untuk keluarga miskin/Raskin*), social assistance for health (*Jaminan Kesehatan Masyarakat/Jamkesmas*) and assistance for poor students (*Bantuan Siswa Miskin*/BSM).
2. Community empowerment programme, e.g. Programme *Nasional Pemberdayaan Masyarakat*/PNPM Mandiri.
3. Micro- and small-scale economy, e.g. micro credit (*Kredit Usaha Rakyat*/KUR).
4. Other pro-poor programmes.

At the local level, there is also the Coordinating Team for Poverty Reduction (*Tim Koordinasi Penanggulangan Kemiskinan*/TKPK) at province and district/municipality levels (Ministry of Home Affairs, 2010) consisting of all relevant local government units and led by their respective heads of local government.

The PKH has close links with health services. It targets very poor households (*rumah tangga sangat miskin*) with pregnant or breastfeeding mothers, newborns, toddlers or school-age children (Hutagalung et al., 2009). The pilot was launched in 2007 by the Ministry of Social Affairs (*Kementerian Sosial*) and by 2011 the PKH was running in 25 (out of 33) provinces, 118 (out of 497) districts and covering 800 000 households (World Bank, 2012d). The programme provides cash transfers of between 600 000 rupiah (IDR) and IDR 2.2 million per household per annum, which is only disbursed when the mother/pregnant mother

verifies her attendance at prenatal and postnatal care services, undertakes delivery with a skilled birth attendant, and when newborns and toddlers are recorded as undertaking regular weighing, health checks and complete immunization, and when school-aged children have good records at their school (MoH, 2001). It should be noted that the PKH recipients are eligible for free-of-charge services at primary care level.

Integrated disaster and emergency management

The government enacted and launched the Indonesian National Board for Disaster Management (BNPB; *Badan Nasional Penanggulangan Bencana*) in 2008 (President of Indonesia, 2008b; House of Representatives, 2007b) to replace the National Disaster Management Coordinating Board that was established in 1979 (President of Indonesia, 1979). The President directly appoints the BNPB chairman, and thus the BNPB is directly accountable to the President. The BNPB is responsible for formulating and establishing disaster management policy and refugee mitigation, and is required to act quickly, appropriately, effectively and efficiently. It also coordinates the implementation of disaster management activities in a planned, integrated and comprehensive manner. In carrying out its duties and functions, the BNPB cooperates with various institutions, ministries and universities domestically and internationally (House of Representatives, 2007b; Government of Indonesia, 2008b; Government of Indonesia, 2008a). The BNPB developed the National Action Plan for Disaster Management (*Rencana Nasional Penanggulangan Bencana/Renas* PB) 2010–2014 as mandated by parliament (House of Representatives, 2007b). This document contains policies, strategies, programmes and priorities with regards to emergency and disaster management. In addition, the BNPB is responsible for developing rehabilitation and reconstruction action plans for each disaster event in Indonesia, for example in Aceh, West Papua, West Sumatra, Nias, Bengkulu, Yogyakarta, and Central Java (Ministry of National Development Planning, 2012a). The BNPB also educates people about disaster preparedness through information dissemination on its website and publications (National Agency for Disaster Management, 2014). The BNPB is assisted at the local level by provincial boards for disaster management (*Badan Penanggulangan Bencana Daerah Propinsi*) and district/municipality boards for disaster management (*Badan Penanggulangan Bencana Daerah Kabupaten/Kota*).

Road traffic accidents

Human error and the increasing number of vehicles are the major factors of traffic accidents. Data from the National Police in 2012 recorded 117 949 road accidents, resulting in the deaths of as many as 29 554 people (Central Bureau of Statistics, 2014b). In 2013, the number decreased to 93 578 traffic accidents with 23 385 deaths (Sutiawan, 2013). Road traffic accidents mostly happen during the Id Mubarak holiday when many people are travelling to their hometowns to celebrate. As mandated by Law No. 22/2009 on Road Traffic and Road Transportation, the government has been developing the National Road Safety Plan (RUNK) 2010–2035 and also implements activities in line with the global Decade of Action for Road Safety 2011–2020 in order to minimize the rate of road accidents. Using 2010 as the base year, the government is targeting a reduction of up to 50% in fatalities from road traffic accidents by 2020 and an 80% reduction from 31 234 (in 2010) to 6247 in 2035. The RUNK identifies five pillars: road safety management, improvement of quality of the road network, improvement of the quality of vehicle safety, road user behaviour, and treatment after accidents. To realize the plan, coordination is required among the actors involved, such as the following: Ministry of National Development Planning, Ministry of Public Works, Ministry of Transportation, Ministry of Research and Technology, Ministry of Industry, Ministry of Finance, MoH, Ministry of Education, and National Police. However, the involvement of other stakeholders, such as NGOs, private companies, the mass media, road users, and communities, are very important in support of the implementation of the National Road Safety Plan and the Decade of Action for Road Safety.

2.7 Health information management

2.7.1 Information systems

MoH decree No. 511/Menkes/SK/V/2002 mandated the development of the national health information system (*Sistem Informasi KesehatanNasional*/SIKNAS). The SIKNAS is intended to incorporate the provincial health information systems and the district/municipality health information system (*Sistem Informasi Kesehatan Daerah*/SIKDA). The SIKDA was stipulated in the MoH decree No. 932/2002. The responsible agency is the Centre for Data and Information (*Pusat Data dan Informasi*/Pusdatin) in the MoH. The SIKNAS design has six subsystems: health services, health financing, health workforce, drugs and medical devices, community empowerment and health management. The software was designed to build a databank consisting of a set of 'generic

menus' that refers to minimum service standards (*Standar Pelayanan Minimum*/SPM) indicators and three main subsystems (financing, human resources, and drugs and medical devices).

The SIKNAS is built on bottom-up reporting (MoH, 2007). The auxiliary health centres (*pustu*), mobile health centres (*pusling*), integrated health service posts (*posyandu*), village maternity homes (*Polindes*) and village midwives submit data to *puskesmas* regarding delivery assistance, mortality, immunization, etc. Meanwhile, *puskesmas* and public and private hospitals within districts submit monthly reports to the DHO, including mortality and morbidity rates. The DHO compiles the data and then sends compiled reports to the PHO, which in turn compiles the data from across districts and sends compiled reports to *Pusdatin* in the MoH.

However, as a result of decentralization, each hospital, district/municipality and province tends to build its own SIKDA, resulting in various formats, software and datasets even within the same district/municipality (Gunung Kidul DHO, 2014). This not only creates redundancy and duplication but also makes it very hard to recapitulate at the province and central levels, which each also have their own format and software (MoH, 2012b). In addition, integration of information is inadequate; although data are collected, there is a lot of overlap and duplication (Rokx et al., 2009). This situation was exacerbated by the notion in some districts that reporting is voluntary (instead of compulsory) post-decentralization (Rokx et al., 2009). There is rarely a designated person either in *puskesmas* or hospital for the health information system. Moreover, some of them do not own a computer and thus data are kept manually (MoH, 2007).

Reporting from the private sector is also problematic. A rapid assessment in three provinces reveals that the response rate is very low, and most private health facilities do not even send reports. In fact, all health staff in these provinces confirmed that data from private hospitals and private practices are not available (MoH, 2007). Some hospitals and private practices that receive medicines and supplies from vertical programmes, such as TB medicines, vaccines and malaria medication, provide reports to the health office, but only related to those programmes for which they have received free medicines (Chee et al., 2009d).

In 2012, the MoH revitalized the effort to achieve an integrated health information system by developing a roadmap to strengthen the SIKNAS

(Minister of Health, 2012d) as the health information system had been disrupted post-decentralization. Meanwhile, the effort to integrate SIKDA at district/municipality level continues (Anna, 2014).

Multiple independent datasets are also found at the central level. For example, within the same directorate (the Directorate General of Health Services), the primary health services are under the Directorate of Primary Health Services (*Bina Upaya Kesehatan Dasar*) while hospitals are under the Directorate of Referral Services (*Bina Upaya Kesehatan Rujukan*) but there is little evidence that their data are integrated or linked (Directorate of Health Services, 2016). The Directorate General of Communicable Disease Control and Environmental Health collects its own data for surveillance of infectious diseases, and the Directorate General of Community Health collects data for maternal and child health (MCH) as well as nutritional status, independent of data collected by *Pusdatin* (MoH, 2007). Therefore, it is not uncommon to find discrepancies in data for the same indicator across several directorates.

The Directorate General of Communicable Disease Control and Environmental Health initiated early warning alert and response system (EWARS) reporting in 2007, using short messaging services (SMS) technology between the field personnel (midwife/paramedics at auxiliary *puskemas*) to *puskesmas* and then onto the surveillance personnel at the DHO (Directorate of Health Services, 2011).

Vital registration

The vital registration system in Indonesia is not the responsibility of the MoH, but rather of the Ministry of Home Affairs (MoH, 2007). It is deemed inadequate. An assessment study in 2007 found that only 11–19 % of records included the cause of mortality and that verbal autopsy was never validated (MoH, 2007). Underreporting of up to 40% is suspected for reporting of death with the estimated death rate from the cause of death register (CDR) only 4.5 per 1000 population (Kosen S, 2014).

People usually report any death in the family to the civil registry office (at the district/municipality level) when they need to acquire a death certificate. The death certificate is processed on the basis of a death certificate from the doctor/nurse/midwife/primary health-care facility/hospital (that usually also states the cause of death) and a death certificate from the head of their hamlet/village/subdistrict (Ministry of Home Affairs, 2005). Therefore, the civil registry office should have

data on the number of deaths and causes of death in its area (as well as the DHO and the central government, since morbidity and mortality in hospitals are reported in the hospital information system SIRS rev. 6).

Although reporting a death in the family is mandatory by Law (House of Representatives, 2006; President of Indonesia, 2008c), in practice not all are reported, which might be due to a lack of a requirement to acquire death certificate.[1] The MoH and the Ministry of Home Affairs have produced a joint decree that requires death to be reported to the civil registry office and that cause of death is to be reported to the local health office (Minister of Home Affairs and Minister of Health, 2010). All health service providers are now required to report death and cause of death to the DHO, and in turn the DHO has to report them to PHO with cc to MoH.

In line with the above, in 2013 the National Institute of Health Research and Development (NIHRD), in collaboration with the Ministry of Home Affairs and Statistics Indonesia (*Biro PusatStatistik*/BPS) and the Directorate General of Communicable Disease Control and Environmental Health, implemented the Indonesia Mortality Registration System Strengthening Project (IMRSSP). This project aimed to generate reliable estimates of national and subnational outcome indicators (crude birth rate, total fertility rate, crude death rate, infant mortality rate, maternal mortality rate, etc.) based on representative samples (NIHRD, 2013b). The pilot was conducted in DKI Jakarta (NIHRD, 2013b), Central Java, Lampung, West Kalimantan, Gorontalo, Papua, Bali and East Nusa Tenggara, covering about 4.6 million people (2% of the total current population of 231.1 million) (NIHRD, 2013b). The protocol of IMRSSP (NIHRD, 2013b) explains that the system collects information in the event of any death taking place at home, based on information obtained by the *puskesmas* through hamlet/village administrators and health cadres. The trained health centre personnel then visit the house of the deceased to carry out a verbal autopsy. Then, the health centre physician will assign the cause of death and the trained coders will provide the 10th revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10) codes. For deaths occurring in health facilities (especially hospitals), the attending physician is responsible for providing a completed medical certificate.

1 A death certificate is usually one of the documents required in legal situations involving insurance claims, inheritance or marriage (when applicable).

To complement incomplete vital registration and reporting through the SIKNAS, the NIHRD organizes a range of national health surveys, which include the previous Household Health Survey (*Survei Kesehatan Rumah Tangga*/SKRT), National Health Survey (*Survei Kesehatan Nasional/Surkesnas*), Primary Health Survey (*Riset Kesehatan Dasar/Riskesdas*) and Health Facility Survey (*Riset Fasilitas Kesehatan/Risfaskes*) (MoH, 2014d). The *Badan Pusat Statistik* (Statistics Indonesia) also provides further estimates of health indicators through regular rounds of the Demographic Health Survey (*Survei Demografi Kesehatan Indonesia*/SDKI) (Central Bureau of Statistics, 2014a). The health information system study also found that epidemiology reporting is unsatisfactory (MoH, 2007).

2.7.2 Health technology assessment

Previously, health technology assessment (HTA) was served by an ad hoc committee under the MoH. The team was supposed to build a network with local institutions undertaking HTA (in hospitals, universities, professional associations) and regional institutions (Minister of Health, 2002c). Since 2014 an HTA committee under the Ministry of Health has been formalized. Recently, it is being reaffirmed through a Minister of Health Decree No. HK.02.02/Menkes/422/2016. The HTA committee working period is for two years. This committee has a mandate to analyze health technologies that have or have not been covered under the JKN scheme, whether it is beneficial and/or cost effective. This includes: medicines, health equipment, procedures, and diagnostics. As Indonesia moves towards universal health coverage, efforts to undertake HTA systematically have been formalized by assigning the Centre for Technology and Science in the Health and Epidemiology Clinic within the Institute of Research and Development in the MoH to collaborate with the HTA committee (Minister of Health, 2010g). The Centre is to help prepare the model and roadmap of HTA, as it becomes even more important as one of the cost containment and efficiency gain strategies in the national health insurance system.

The HTA committee is responsible to give recommendation to the Minister of Health at least once a year. Two evaluations have been produced by the committee, these are: Cost Utility Analysis (CUA) and Budget Impact Analysis (BIA) of continuous ambulatory peritoneal dialysis on end stage renal disease in Indonesia; and economic analysis of Sildenafil therapy on pulmonary artery hypertension in Indonesia. The HTA committee is also building their capacity through international networking. It cooperates

with Health Intervention and Technology Assessment Program (HITAP) of Thailand and The National Institute for Health and Care Excellence (NICE) of the United Kingdom (MoH, 2017).

2.8 Regulation

The system for creating laws is complex and distributed across three levels of government. Law No. 12/2011 established the current framework for formulating laws and regulations in Indonesia, in accordance with the 1945 Constitution (*Undang Dasar Negara Republik Indonesia Tahun 1945*). It provides for a number of different legislative and regulatory instruments set out in a formal hierarchy order (OECD, 2012a) (see Box 2.1). All of these regulatory instruments play a role in regulating the health sector.

Box 2.1 Formal hierarchy of regulation

Central level regulations:

- 1945 Constitution.
- People's Assembly Decisions (*Ketetapan Majelis Permusyawaratan Rakyat*) are national laws passed by the DPR and approved by the President.
- Acts (*Undang Undang*) are formulated by House of Representatives with the agreement of the President.
- Government Regulations (*Peraturan Pemerintah*) are issued by the President to implement specific pieces of legislation.
- Government Regulations in Lieu of Law (*Peraturan Pemerintah Pengganti Undang-Undang*) can be issued by the President in an emergency and have immediate effect, but must be subsequently ratified as laws by the DPR.
- Presidential Regulations (*Peraturan Presiden*) are issued by the President to implement legislation and to guide the functioning of the executive branch of government.

Local government-level regulations:

- Provincial Regulations (*Peraturan Daerah Provinsi*) are formulated by provincial houses of representatives with the agreement of the governor.
- Regency/City Regulations (*Peraturan Daerah* Kabupaten/Kota*)* are formulated by regency/city house of representatives with the agreement of the regent/mayor.

The regulation function is divided between the central government, provincial and local government district/city authority according to Government Regulation No. 38/2007. Some regulatory function is also exercised by professional bodies/associations. Regulation and legislation in Indonesia is extensive and detailed but lacks a common vision and supervised implementation and enforcement.

There are also other regulatory tools that are not considered to be formal, for instance 'decrees' and 'instructions' and other regulations that are not mentioned in Box 2.1. 'Decrees' and 'Instructions' are considered to guide the activities of officials or a group of officials within a particular government institution. They are issued to determine or define specific policy that is needed, and are only binding in their respective sectors as an administrative decision. 'Decrees', 'instructions' and 'letters' may be issued by the President, ministers and directorates general or heads of departments. For example, the MoH could produce a regulation through a Minister of Health regulation (*Peraturan Menteri Kesehatan* or Permenkes), Minister of Health decree (*Keputusan Menteri Kesehatan* or Kepmenkes) and Minister of Health instruction (*Instruksi Menteri Kesehatan* or Irmenkes). Several technical ministries can also produce a Joint Ministerial Letter (*Surat Keputusan Bersama*) on cross-ministerial issues. Within the technical ministries, more technical guidelines are established and distributed through regulation of the Director General (*Peraturan Direktur Jenderal*) and decree of the Director General (*Keputusan Direktur Jenderal*). Higher acts/laws/government regulations are usually followed by lower regulations at ministerial level, and even lower, before they are implemented.

Health service activities are conducted by local governments through the local health offices. The PHO has the responsibility for technical guidelines for the DHO, as the representative of the MoH in provinces, and also for direct intervention on cross-district health problems. Professional associations also exercise some self-regulation functions at the local level.

2.8.1 Regulation and governance of third party payers

With the commencement of the JKN, the social security managing agency (*Badan Pengelola Jaminan Sosial untuk Kesehatan*/BPJS-K) has taken on the function of a third party payer. The BPJS-K is monitored closely by the National Social Security Council (*Dewan Jaminan Sosial Nasional* – DJSN) (House of Representatives, 2004h). Both these institutions are responsible to the President. The BPJS-K is required by law to perform book keeping in line with accounting standards in the administration of social security (House of Representatives, 2011). BPJS-K has authority for the payment of health facilities (President of Indonesia, 2013b), based on the standard tariffs set by the government (MoH, 2013a), or to enter into or cease contracts with health facilities as well as to establish collaboration with other parties in the framework of social security programmes (House of

Representatives, 2011). In case there is no agreement on the amount of payment between the BPJS-K and the health facility providers, the MoH is mandated to make the final decision (President of Indonesia, 2013b). In cases where emergency services are provided by health facility providers that have not entered a cooperation agreement with the BPJS-K, the provider can still claim the cost to BPJS-K and be reimbursed according to the local tariff (President of Indonesia, 2013b). Further explanation of the payment mechanism by the BPJS-K is described in Chapter 3.

Private insurance is under the supervision of the Ministry of Finance (House of Representatives, 1992) and the payment mechanism is arranged through contract with health facility providers. BPJS-K has established coordination of benefits (President of Indonesia, 2013c) with some of the leading private health insurance providers to provide a top-up option for middle- and high-income members of the JKN (Health-care and Social Security Agency, 2014).

2.8.2 Regulation and governance of providers

Health-care providers are required to be registered (Minister of Health, 2013c). Doctors and dentists are registered by the Indonesian Medical Council (*Konsil Kedokteran Indonesia*/KKI) (Minister of Health, 2007), pharmacists are registered by the National Pharmacist Committee (*Komite Farmasi Nasional*/KFN) (Minister of Health, 2011j), while other health professions are registered by the Indonesian Health Personnel Assembly (*Majelis Tenaga Kesehatan Indonesia*/MTKI) (Minister of Health, 2013c; Minister of Health, 2011h).

The governance of health-care facilities, particularly hospitals, is set out in the Hospital Act, which provides for the application of good governance and clinical governance principles. In the public sector, public hospital governance is also regulated through public administration regulations should the hospital obtain the status of a Public Service Agency (*Badan Layanan Umum*/BLU).[2] Both public and private hospitals are subject to supervision by the Monitoring and Supervision Bureau for Hospitals (*Badan Pengawas Rumah Sakit Indonesia*/BPRSI). At the local level, there are supposedly provincial bodies for supervision of hospitals (*Badan Pengawas Rumah Sakit Propinsi*/BPRSP). However, establishing BPRSPs in every province is quite a challenge since there appears to be difficulty in recruiting local hospital experts in some of the provinces.

2 See more on Section 6.1.2. *Reforms outside the health sector: public management reform*

Practice standards

Professional organizations are responsible for the development of practice standards for the medical profession, which contain the minimum set of competences (knowledge, skills and professional attitude) that must be mastered by a health professional prior to providing services. The Indonesian Medical Council (*Konsil Kedokteran Indonesia*/KKI) sets out the competence standards for doctors and dentists (Indonesian Medical Council, 2013a), while the Indonesian Nursing Association (*Persatuan Perawat Nasional Indonesia*/PPNI) sets out the standards for nursing practice (PPNI, 2013), and the Indonesian Midwives Association (*Ikatan Bidan Indonesia*/IBI) sets out the standards for midwifery (IBI, 2013). Based on professional standards, each health-care facility also develops standard operational procedures, which are a set of standardized instruction/steps for certain routine working activities.

Task delegation and substitution of personnel

There is a clear separation between the roles of doctors and nurses, and nurses are not allowed to provide treatments that are part of a doctor's tasks (House of Representatives, 2004b; House of Representatives, 2009c). However, a doctor can delegate a medical action to the nurse, midwife or other health practitioners in accordance with their skills and competences, conducted in accordance with the regulation, as long as the delegation is stated in written form (Minister of Health, 2001). The doctor or dentist that is unable to conduct medical practice or has appointed a substitute doctor is obliged to publicly notify this change at an easily visible location and to inform this change to patients.

Enforcement of regulations

Enforcement in regard to professional practice of medical doctors and dentists is undertaken by the MoH through the Indonesian Medical Disciplinary Board (*Majelis Kehormatan Disiplin Kedokteran Indonesia*/MKDKI). In addition, the Indonesian Medical Council (KKI), local health offices and the professional organizations contribute in accordance with their respective functions, tasks and authorities (House of Representatives, 2004b). The MKDKI is authorized to recommend an administrative sanction and/or disciplinary act for any violation of the regulation.

In practice, monitoring and enforcement are extremely difficult in a decentralized Indonesia without an integrated information system. For

example, licensing occurs at the local health office but this information is not shared across districts/municipalities or with central level. Thus, it is difficult to enforce the law that limits physicians to operating in no more than three practices (including private practice), as doctors are able to set up additional practices in neighbouring districts/municipalities without being detected.

Certificate of competence

The MoH is responsible for establishing a qualification framework for health human resources (President of Indonesia, 2012a) and appoints the Indonesian Health Personnel Assembly (*Majelis Tenaga Kesehatan Indonesia*/MTKI) to develop standards of competence for human resources in health, to conduct competence tests for health personnel, to issue certificates of competence and registration letters, and provide guidance, supervision, monitoring and evaluation of the competence testing system (Pustanserdik, 2012). In carrying out its duties, the MTKI is assisted by the Provincial Health Personnel Assembly (*Majelis Tenaga Kesehatan Propinsi*/MTKP) and is responsible to the Minister of Health. The MTKI issues a certificate of competence and a registration letter for all health personnel who pass a competence test in accordance with their field of study to ensure safety of practice and improve the quality of care. The MTKI/MTKP was established to conduct certification of all health professions through a competency testing process, with exception for doctors, dentists and pharmacists.[3]

Regulation of quality of hospital service

Hospitals in Indonesia must be accredited every three years (House of Representatives, 2009a). Hospital accreditation has been conducted by the Hospital Accreditation Committee (KARS) since 1995 (KARS, 2012). Accreditation commenced with five types of health-care services in 1995, increased to 12 types of health-care services in 1998 and expanded to 16 types of health-care services in 2002. Hospitals may choose to follow the accreditation system in a stepwise manner, commencing with five and later expanding to 16 types of services.

3 Currently, the committee for medical competency testing (*Panitia Uji Kompetensi Dokter Indonesia*/PUKDI) and the local committee for dentistry competency testing (*Panitia Lokal Uji Kompetensi Dokter Gigi Indonesia* (UKDGI)) are the bodies responsible for conducting competence-based test for medical doctors and dentists, respectively, while for pharmacists there is the *Sertifikasi Kompetensi Profesi Apoteker* (SKPA).

A new accreditation system (Minister of Health, 2012c) has been established as a follow-up to the new hospital accreditation standard (MoH, 2011). The new standard is based on the standards of the Joint Commission International (JCI), the International Principles of Health-care Standards from the International Society for Quality in Health-care (ISQUA), and the previous KARS standard (2007 version), together with relevant standards issued by the MoH, as well as local content from national priority programmes, e.g. PONEK, HIV/AIDS and TB-DOTS. The MoH issues the accredited status for a hospital following a recommendation from the KARS, after a hospital is deemed to meet the accreditation standards.

The Indonesian Hospital Association (*Perhimpunan Rumah Sakit Seluruh Indonesia*/PERSI) has established the Indonesian Hospital Management Award (IMHA) that recognizes and honours hospitals in Indonesia that are committed to quality improvement in eight improvement areas, i.e. patient safety, hospital family planning, quality medical care, customer service, marketing and public relations, internal service technical service improvement, social responsibility and human resources development (Directorate of Health Services, 2012).

Medical negligence

Medical negligence and litigation related to medical practice conducted by a doctor or a dentist are assessed by the Indonesian Medical Disciplinary Board (*Majelis Kehormatan Disiplin Kedokteran Indonesia*/MKDKI) (Indonesian Medical Council, 2013a). The MKDKI is a competent authority under the Indonesian Medical Council (KKI), which determines the presence or absence of negligence or mistakes or ethical issues in medical practice and ensures that the sanctions imposed are appropriate and proportional. However, mediation and negotiation should be the first choice in resolving conflicts related to medical practice (House of Representatives, 2009c).

2.8.3 Registration, licensing and planning of human resource

Registration

Prior to practising, doctors and dentists must meet several requirements by obtaining: (1) a competence certificate (*surat tanda lulus*/STL) by passing the competence-based test conducted by their collegium; (2) a registration letter (*surat tanda registrasi*/STR) issued by the KKI; (3) a licence to practise (*surat ijin praktek*/SIP) issued by

the district/municipality/PHO; and (4) in the public sector, to assist better planning of human resource, an instruction letter issued by the health office to practise at certain health-care facilities (House of Representatives, 2004b; Minister of Health, 2007). The registration letter (STR) is valid for five years and subject to renewal (House of Representatives, 2004b).

Licence to practise

A licence to practise (*surat ijin praktek*/SIP) is issued by the local health office and is valid as long as the registration letter is valid and the practice location is the same as in the licence (House of Representatives, 2004b). The regulation on the licence to practise is quite detailed (Minister of Health, 2007). Doctors or dentists are only allowed to practise in three locations at most, either in government health facilities or private institutions located in one district/municipality or in another district/municipality either in the same or a different province. For educational purposes, a doctor or dentist participating in a specialist education programme (*Programme Pendidikan Dokter Spesialis*/PPDS) or dentist specialist education programme (*Programme Pendidikan Dokter Gigi Spesialis*/PPDGS) automatically obtains a licence to practise (SIP) issued by the head of the health office of the district/municipality[4] where the teaching hospital is located, which can be used in the health service facility where the education programme takes place and its networks and also in the appointed health service facilities. Provision of medical services by participating doctors or dentists is conducted under supervision and responsibility of a supervisor.

The regulation further explains that the licence to practise for a doctor or a dentist who conducts medical practice in a government health service facility, including health-care facilities for the army and police, can also be used in another government health facility in the same region. A specific license to practise is not required for doctors or dentists who already have a licence to provide health services on the following occasions: when requested by a health service facility to providing specific, temporary, and unscheduled medical services; in social work; when conducting a State assignment; in a natural disaster or other emergency situation; and in providing medical services to family,

4 Relevant to the regulation, the health offices only issue three SIPs for each applicant; each SIP applies to one practice site.

neighbours, friends, and during home visits and when providing services to poor families that are conducted incidentally.

The regulation describes the mechanism used to obtain a licence to practise. The doctor or dentist has to apply for it to the Head of the Health Office of the district/municipality where the doctor proposes to practise with a copy of a valid doctor's registration letter and dentist's registration letter issued and legalized by the Indonesian Medical Council (*Konsil Kedokteran Indonesia*/KKI), a pronouncement of where the practice takes place, or a recommendation from health service facilities as to the practice location, and a recommendation from a professional organization (IDI and PPDGI, respectively). In theory, this mechanism would allow the government to 'open' or 'close' certain regions for new licence applications in cases where the region already has a sufficient number of practitioners; however, it is difficult to see evidence of this in practice.

An overseas doctor or dentist can obtain a practice license once he/she fulfils the above requirements; has undergone evaluation in a higher education institution in Indonesia based on a written request from the KKI; possesses a work permit and visa in accordance with the regulation; and is capable of speaking the Indonesian language as proved by an official language certificate from the Centre of Indonesian Language. An overseas doctor or dentist who will conduct education and training in terms of transfer of knowledge and technology for a certain period of time has to obtain approval from the KKI, and inform the head of health office of the district/municipality.

According to the regulation, the head of health office of the district/municipality has to consider the balance of the number of doctors and dentists with the health service demands. The head of health office of the district/municipality is obliged to keep a record of every licence to practise that has been issued. The record should be sent at least once every three months to the MoH and the Indonesian Medical Council, with a copy to the Head of the PHO and professional organization. The head of the health service facility is obliged to make a list of the doctors and dentists who practise in their facility in an easily visible location. A doctor or dentist who owns a licence to practise and conducts an individual practice is also required to install a name plate at the location of the medical practice that states the registration number found on the licence to practise.

Similarly, nurses and midwives are required to obtain their licence to practise from the local health office (Minister of Health, 2010i; Minister of Health, 2010j). Although nurses and midwives are not required to register themselves with their professional associations (PPNI and IBI, respectively), they need to do so to get a recommendation letter as part of the requirements to get their licence to practise.

To be able to extend a licence to practise, a health worker must collect a minimum amount of professional credit units (*Satuan Kredit Poin*/SKP) from various scientific and continuing medical education activities, such as attending seminars, training, or research publications (IDI, 2010). In order to obtain SKP, a scientific activity or continuing medical education activity conducted by a professional organization, educational institutions or health facilities must be registered with the Indonesian Medical Association (*Ikatan Dokter Indonesia*/IDI) for doctors, to the Indonesian Dentistry Association (*Persatuan Dokter Gigi Indonesia*/PDGI) for dentists, to the Indonesian Nurses Association (PPNI) for nurses and the Indonesian Midwives Association (IBI) for midwives. The number of points of professional credit units assigned to each activity varies and is determined by the responsible professional organization. The minimum amount of SKP for re-registration purposes is also set by the professional organizations.

Workforce planning

Planning of the health workforce is done at the central level and the local level. Since decentralization, the district/municipality is allowed to assess its own human resource needs. At the local level, human resource planning is done by the institutions (*puskesmas* and hospitals) using various methods, for instance, the list of positions (*daftar susunan pegawai*/DSP) and/or workload indicator of staffing needs, and is also done by the local health offices to meet local demands, including for disaster preparedness (Minister of Health, 2004a). However, there is little evidence that the districts/municipalities actually act upon the assessments, as local governments are not allowed to hire and fire staff (World Bank, 2009a). The local level still needs to request new permanent staff to the MoH through the province, and deployment is mostly based on national staffing standard (*formasi*) rather than actual need (Rokx, 2010).

At the central level, the Health Human Resources Development and Empowerment Agency (*Badan Pengembangan dan Pemberdayaan Sumber Daya Manusia Kesehatan*/BPPSDMK) is mandated to conduct human

resource planning in order to match the demand with redistribution, recruitment and production of the health workforce. The MoH continues to recruit, deploy and regulate nonpermanent staff (*Pegawai Tidak Tetap*/PTT) and civil servants (*Pegawai Negeri Sipil*/PNS). PTT are recruited to fill the demand for health workers mostly in remote and very remote areas that cannot be fulfilled by existing PNS.

2.8.4 Regulation and governance of pharmaceuticals

Food and drug supervision in Indonesia is conducted through the National Agency for Food and Drug Control (*Badan Pengawasan Obat dan Makanan*/BPOM) (President of Indonesia, 2001). For monitoring at the local level, BPOM forms a technical implementation unit (*Unit Pelaksana Teknis*/UPT) POM. The UPT POMs are authorized to conduct testing, investigations, research and dissemination of food and drugs in their respective provinces (National Agency of Drug and Food Control, 2001).

Pharmacovigilance and quality of medicines

Although a large number of essential drugs are produced locally, 95% of the basic/active ingredients are still imported (International Trade Centre, 2005a). To ensure quality and pharmacovigilance, pharmaceutical companies must meet the requirements of good manufacturing practice (GMP) (Minister of Health, 2008c). The first GMP on drug manufacturing (*cara pembuatan obat yang baik*/CPOB) in Indonesia was published in 1989 (Minister of Health, 1988; National Agency of Drug and Food Control, 1989) and then revised in 2001, 2005 and 2012 (National Agency of Drug and Food Control, 2012b).

The BPOM is a member of the Pharmaceuticals Inspection Convention Scheme (PIC/S) and in order to comply with the PIC/S standard, the BPOM has issued guidelines on bioequivalence and bioavailability testing for generic drugs to ensure that they are high-quality substitutes for original brands (National Agency of Drug and Food Control, 2012a). The enforcement of good distribution practice (GDP) or *cara distribusi obat yang baik* (CDOB) by wholesalers and distributors is not yet as comprehensive, but the BPOM makes an effort to disseminate and provide training on CDOB (National Agency of Drug and Food Control, 2013b).

With the availability of GMP, the government guarantees that drugs produced in Indonesia meet the requirements consistently. The GMP includes 10 elements (National Agency of Drug and Food Control, 2012b), namely: quality management, personnel, buildings and

facilities, equipment, sanitation and hygiene, production, quality control, self-inspection, handling of complaints, as well as documentation of medication. There are both publicly-owned and privately-owned manufacturers. However, the MoH still primarily uses generics produced and distributed by the State to supply the public sector (World Bank, 2009b). The main sources of medicines for the private sector are the national pharmaceutical distributors, and over 60% of the products are generics (Chee et al., 2009d).

Classification of pharmaceuticals

The classification of pharmaceuticals consists of free drugs (green circle label), limited free drugs (blue circle label, W-listed), hard drugs (red circle label, G-listed), and psychotropic drugs and narcotics (O-listed) (Minister of Health, 2000). Green circle and blue circle labelled drugs can be obtained without the use of prescription in pharmacies (over the counter) (Minister of Health, 1993). The MoH monitors the distribution and utilization of O-listed drugs using SIPNAP (*sistem informasi pelaporan narkotika dan psikotropika*) (MoH, 2014b).

Patent rights, including for drugs, are given for 20 years (nonrenewable) (House of Representatives, 2001). Counterfeit drugs – defined as drugs that are produced unauthorized or with product-labelling that mimics the identity of other drugs that do have a distribution license – are prohibited (Minister of Health, 2008c). However, there are indications that counterfeit drugs exist and are marketed (Chee et al., 2009a).

Market authorization and advertising

Indonesia has long adopted the separation of prescription and dispensing of medicines. Drugs are sold only in licensed places (Minister of Health, 2002a) to protect the public from the risk of distribution and use of drugs that are not appropriate due to excessive, improper and misleading drug promotion/advertising. The local health office is responsible for licensing pharmacies (*apotik*) and drug sellers (*toko obat*). The government also requires marketing authorization of all Pharmaceutical Industry and Pharmaceutical Wholesalers (National Agency of Drug and Food Control, 2009).

The advertising of medicines is regulated (Minister of Health, 2010i). The regulations state that drugs should not be advertised using health workers as product endorsers, and drug advertising must have authorization and meet quality and safety standards issued by the

Minister through the BPOM. Not all drugs can be advertised – addictive substances and formulae, hard drugs, psychotropic substances and narcotics cannot be advertised except in medical magazines or scientific forums. Testimonials are also not allowed in the advertising of drugs. There are guidelines that outline some restrictions on advertising of drugs in print media, electronic media and outdoor media. The scope of the guidelines includes all categories of drugs, all promotional activities (above and below the line marketing) including sponsorship in scientific meetings, quizzes/lucky draws and product launches. Any breach could be punishable by administrative sanction, or cessation of activity, revocation of licence or court action.

A specific challenge in Indonesia is the allegedly high rate of illegal sales of prescription drugs by unlicensed drugstores (the estimated number is 5000), informal outlets (the estimated number is 90 000 small stores and hawkers), and even by doctors and other health workers (World Bank, 2009b). In Indonesia, it is common that a group of doctors' practice clinic is set in the same building or next to a private pharmacy, usually owned by one of the doctors. Even though BPOM is the main regulatory body, monitoring and enforcement require actions by local government against the unlicensed drugstores, other stores, peddlers and doctors who sell substandard medicines and/or counterfeit drugs. It is even more important for this 'grey market' to be regulated as most Indonesians opt for self-treatment by purchasing over-the-counter medicines (Rokx et al., 2009). Private patients (paying OOP) prefer to buy the drugs from a pharmacy as they have a choice to hop from shop to shop in an open market for the best price.

Regulation of the sale of certain types of drugs outside pharmacies has been stipulated in the Decree of the Minister of Health (No. 1331/Menkes/SK/X/2002) on Drug Retail Merchants. According to this policy, each drug retailer is obliged to have a licence from the DHO. Issuance of the licence must be forwarded to the Minister of Health, PHO and the province level BPOM. The retail merchants/licensed drug stores are only allowed to sell over-the-counter (OTC) drugs and limited free medicines, which require cautionary labelling, whereas pharmacies, pharmacy units in hospitals and pharmaceutical wholesalers (PBFs) are allowed to provide the whole range of the available drugs classified as OTC drugs, limited free drugs, prescription drugs, or narcotic drugs (Minister of Health, 2002a).

Generic drugs

In Indonesia, the price of generic drugs, be it ex-factory/manufacturer price, wholesaler (profit) margin or pharmacy margin (or profit) and any applicable taxes are regulated (Minister of Health, 2012a, Minister of Health, 2012b). To ensure the affordability, availability and distribution of the drug to meet the needs of health care, there is rationalization of the retail price (*harga eceran tertinggi/*HET) for generic drugs (Minister of Health, 2011c). The HET is valid throughout generic pharmacies, hospitals and pharmaceutical facilities in Indonesia. In other words, any sale of generic drugs can only be made at a maximum price equal to the HET.

In general, 'patent drugs' ('branded generic' drugs or OGBs) are priced at around three times the price of generic drugs. The selling price from the drug manufacturer or pharmaceutical wholesaler to the pharmacy (*harga netto apotik/*HNA) is subject to VAT. The final retail price, what the consumer pays, is also subject to VAT, but there is regulation of the ceiling price of these final retail prices (HET). In general, the retail price of drugs in Indonesia is higher than in other countries due to the heavy tax burden. It is estimated that in Indonesia, innovator brand names are priced around 20 times the international indicator price, while generic medicines cost nearly 75% more than the international price indicator guide (Chee et al., 2009a). Additionally, the Indonesian consumer is vulnerable to unnecessary medicine. People who buy drugs without a prescription usually pay out-of-pocket at private pharmacies, and any prescription by a private sector provider is usually also paid out-of-pocket. Thus, patients are not concerned about whether or not the drug is in the official formulary, and are not necessarily informed about the substitutability of unbranded generics with the branded generics and originator products (World Bank, 2009b). There is no policy of generic substitution at the point of sales.

The government has decreed since 2006 that the generic name of each product should appear on the product label along with the trade name. In accordance with Ministerial Decree No. 068/Menkes/SK/II/2006, the font size of the generic name should be at least 80 % of the trade name. This policy aims to familiarize providers and consumers with the generic names. Additionally, since 2010, the government has been encouraging the prescription of medicines by their generic names in all public facilities, and pharmacists are allowed to choose the generic substitution for the prescribed nongeneric medicines (Ministerial Decree No. PMK No. HK.02.02–068, of 2010). The Directorate General of

Pharmaceutical Services is responsible for supervising and monitoring of the implementation of generic prescribing in public facilities.

National essential drug list

The national list of essential drugs is regulated to ensure more equal access to medicines for the public (Minister of Health, 2011a). The concept of essential medicines in Indonesia was introduced with the release of the national essential drugs list (*Daftar Obat Esensial Nasional*/DOEN) in 1980, and with the publication of the National Drug Policy in 1983. The DOEN is revised every two years (House of Representatives, 2009c). With the DOEN, the availability of essential medicines and essential drugs will be improved because it will correlate with treatment guidelines and formularies in hospitals. The drugs listed in the DOEN are paid for by the government, so that people can easily obtain them. Essential drugs and vaccines are free of charge at *puskesmas* for the poor and near-poor (World Bank, 2009b).

Rational drug use

Rational drug use is regulated in the National Drug Policy (Minister of Health, 2006a), but there is little evidence that it is being implemented in systematic ways among providers. The status of rational drug use is highly variable among different health-care providers. In fact, there is an indication of widespread irrational use of medicines, including overuse of antibiotics (World Bank, 2009b).

2.8.5 Regulation of medical devices and equipment

Medical 'devices' potentially includes everything from a syringe to a PET scanner. For the purposes of this review, the definition of 'medical device' in Indonesian regulations is an 'instrument, apparatus, machine and/or implant, which does not contain medicines and is used for disease prevention, diagnosis, cure or alleviation, care of the sick, health rehabilitation, and/or formation of structure and improving body function'.

Indonesia still imports 97% of medical devices (MoH, 2014a). There are several regulations concerning procurement of medical devices and health-care equipment, covering matters such as a compulsory distribution permit for medical devices and health supplies (House of Representatives, 2009c), measures to ensure availability of medical devices and drugs (Government of Indonesia, 1998), monitoring and supervision of procurement and distribution of drug materials (President

of Indonesia, 2007b), specific drugs and medical devices, as well as formal distribution channels for medical devices (Minister of Health, 2010h).

The Directorate of Production and Distribution of Medical Devices, under the Directorate General of Pharmaceutical Services and Medical Devices, in the MoH, regulates medical devices. Ministerial regulations require that the production (Permenkes 1189/VIII/2010) and distribution (Permenkes 1190/VIII/2010) must be registered, and that the distribution can only be undertaken by licensed distributors (Permenkes 1191/VIII/2010). Medical devices must meet national standards set by the MoH (Ministry of National Development Planning, 2014e).

At the central level, the MoH has complemented efforts to reform the supply of medical devices through the use of information and communication technology. The Ministry launched the e-Regalkes and single sign-on (SSO) in 2012 (MoH, 2013a). SSO is specifically designed to establish the Indonesia National Single Window (INSW) to simplify and unify the whole system. E-Regalkes is an online registration system for applying for permits and licenses of medical devices and health supplies.[5] The e-Regalkes service covers distributor permits, production licenses, and granting of Certificates of Free Sales (CFS). The MoH expects to reduce the number of illegal medical devices and health supplies in circulation by making the procedure to obtain these permits easier. Most producers of medical devices and equipment suppliers are private.

There are several innovations in the management of medical devices in the MoH. First, a similar e-catalogue system has been introduced for medical equipment procurement (Directorate of Health Services, 2013). The private sector is largely left to determine its own means of procuring medical devices and equipment, but the public sector purchases medical equipment using this system. Second, the Ministry has also developed the e-Infoalkes, which provides information regarding licensing for medical equipment and household health supplies (*perbekalan kesehatan rumah tangga/*PKRT), along with the profiles of manufacturers (Directorate General of Pharmaceutical and Medical Devices, 2014). Third, the Ministry has also developed the e-Watch. This is an alert system that provides information on adverse events from medical devices or complaints regarding medical device manufacturers and distributors, as well as Field

5 Previously, this process had to be done in person at the Integrated Service Unit in the Ministry of Health office in Jakarta.

Safety Corrective Action (FSCA) (Directorate General of Pharmaceutical and Medical Devices, 2014a). Fourth, the Ministry developed an e-report that provides information on production/importation and distribution of medical devices (Directorate General of Pharmaceutical and Medical Devices, 2014).

Meanwhile, the government aims to increase the use of domestic medical devices. The State Ministry of Research and Technology (*Kementerian Negara Riset dan Teknologi*/KNRT) published a white paper containing the roadmap to disease control and environmental health, and the securing of drug supplies and medical devices in order to achieve self-reliance (Ministry of Research and Technology, 2006). The KNRT facilitates a communication forum consisting of representatives from business, academia, regulators and users to seek ways to build the necessary technology to increase the competitiveness and self-reliance of the Indonesian medical device industry. The members include: the Association of Health Equipment Manufacturers (*Asosiasi Produsen Alat Kesehatan Indonesia*/ASPAKI), Association of Laboratory and Health-care Businesses (*Gabungan Perusahaan Alat Kesehatan dan Laboratorium/Gakeslab*), the MoH, the Ministry of Trade, the Ministry of Industry, the Ministry of Finance, the KNRT, the Hospital Association (P*erhimpunan Rumah Sakit Seluruh Indonesia*/PERSI) and Association of Regional Hospitals (*Asosiasi Rumah Sakit Daerah*/ARSADA) (Ministry of Research and Technology, 2013). In line with this effort, the MoH has produced 122 product standards according to the SNI or *Standar Nasional Indonesia* (Indonesian National Standard) for medical device production (MoH, 2013a).

2.8.6 Regulation of capital investment

All investment, either domestic or foreign, is supervised by the Indonesian Investment Coordinating Board (*Badan Koordinasi Penanaman Modal*/BKPM), a government institution that coordinates all necessary steps related to investment in all sectors. The BKPM has the right to approve any investment plan. In the case of some types of hospitals, the MoH also has the authority to issue the licence for hospital operation.

Health services and the health-care industry are open for domestic investment. There are two kinds of domestic investment: State investment and private investment. State investment for health services is mandated

by the Constitution[6] and Acts (House of Representatives, 2009c). For health services, 'State investment' refers either to central government investment or local government investment (House of Representatives, 2004g). As Figure 2.1 shows, hospitals may be owned (and, usually, established) by central government or by local governments. Aside from the MoH, some other ministries and state institutions or State-owned enterprises also own hospitals and clinics; for example, the Police, the army, the State Plantations and so on. State investment is also allowed for various parts of the health-care industry. For instance, the government also owns some drug companies in Indonesia. The health insurance implementing agency (BPJS) is allowed to manage its fund of contributions in the form of various types of investment, provided that they comply with the regulations (Government of Indonesia, 2013). State investment is also allowed in the form of equity investments and establishment of a State-owned enterprise. State-owned enterprises (*Badan Usaha Milik Negara*/BUMN) are regulated by a different Act (House of Representatives, 2003a) and supervised by the Ministry of State-Owned Enterprises. The BUMN may own health facilities. Local government is allowed to have equity investments in State-owned enterprises or private enterprises (House of Representatives, 2004b). Local governments are also allowed to have their own local government-owned enterprises (*Badan Usaha Milik Daerah*/BUMD) (House of Representatives, 2004g). The BUMD are regulated either by the Local Government Enterprises Act (House of Representatives, 1962) or Limited Corporation Act, depending on their legal entity.

In terms of private investment, any domestic investment is allowed for health services and the health-care industry. For health services, the Act (House of Representatives, 2009a) requires domestic investment to take the form of a legal entity, either as a corporation or a not-for-profit foundation. As a corporation, the domestic investment is regulated by Act No. 40 of 2007 on Limited Liability; while, as a not-for-profit foundation, the investment is regulated by Act No. 16 of 2001 on Foundations.

Domestic investment in health services can provide services such as outpatient clinics (*klinik pratama* for those providing general medical and dentistry services, or *klinik utama* for those also providing specialized services) (Minister of Health, 2011i) or hospitals providing

6 The Indonesian Constitution of 1945, Article 34, asserts that the State is obligated to provide health service facilities.

general services and/or specialized services (such as a subspecialized hospital/clinic or maternity hospital/clinic). All health-care facilities are regulated by Act No. 36 of 2009 on Health, Act No. 44 of 2009 on Hospitals, and other MoH regulations related to hospitals or the respective health services regarding requirements, standards and accreditation, as well as by the local government, particularly in relation to registration and licensing. For instance, any clinic and hospital type C or D is required to be registered and licensed by the district/municipality local governments; hospital type B is required to be registered and licensed by the provincial local government; while hospitals type A and teaching hospitals are required to be registered and licensed by the MoH (see Table 4.1 for description of hospital types). These are the mechanisms that are intended to ensure equitable geographical distribution of capital and investment across different levels of care.

For other parts of the health-care industry, domestic investment is allowed to be either through a legal entity or a commercial entity. The legal entity in the health-care industry is usually a corporation, while the most common commercial entity is called a *Commanditaire Vennootschap* (CV). Corporations are most commonly used for large to mid-scale manufacturing, e.g. drug companies, and are also common for large- to mid-scale services (e.g. clinical laboratories) and commercial enterprises (e.g. importers and distributors of medical equipment). CVs are more common for small- to medium-scale trading and are regulated by *Wetboek van Koophandel voor Indonesie* (Commercial Code) of 1847, Articles 19–21.

Hospital investments are available to foreign investors. The investment plan requires formal approval from the MoH. The approval usually involves consideration of the geographical setting of the facility. Foreign investment is only allowed in big hospitals (at least 200 beds) including specialty or subspecialty hospitals, thus, prohibiting foreign investment in small- to medium-scale health facilities (Minister of Health, 2010e). Foreign investors may build a new hospital or operate an existing hospital as a joint-venture with a local investor (Minister of Health, 2010e). The BKPM has the right to approve foreign investment proposals. Prior to operation, all hospitals must obtain several different licences, including environmental clearance.

2.9 Patient empowerment

2.9.1 Patient information

In general, people have little information regarding the quality of health services available to them in either the public or the private sector. At the moment there is no publication of medical errors. Cases that are discussed by the medical disciplinary board are closed to the public, although the decision is read to the public. An indication of the 'quality' of a hospital, for instance, is only available in the form of the accreditation status that the hospital has. Many cases that are reported in the local newspapers[7] indicate that the public has no clear sense of the benefits to which they are entitled and how to get them. The BPJS-K has made efforts to avoid miscommunication and disinformation by providing information about the JKN and BPJS-K on their website (www.bpjs-kesehatan.go.id) as well as putting up posters regarding the necessary procedures to access the JKN in health facility providers. The BPJS-K has also opened a call centre reached through a hotline (number 500400) at their local branch (Social Security Agency of Health, 2014).

Once a patient enters the medical services system, their rights to information are guaranteed by law.

2.9.2 Patient choice

As mentioned before, Indonesia has a dual system, and people are free to choose either the public or private system. There is no effective gatekeeping mechanism; patients are free to choose their physicians including specialists.[8] Access to the private sector is only limited by ability and willingness to pay, except in a few provinces where the local government requires private hospitals to accept patients under local government insurance schemes. People are free to choose any private insurance according to their own need and willingness to pay. In addition, privately purchased medicine supplied through private pharmacies and drug sellers is very common in Indonesia (World Bank, 2009b). As mentioned earlier, people often rely on self-treatment using over-the-counter medicines. Drug advertisements and sponsorship

7 The cases that are reported in local newspapers usually expose how poor people experience difficulties in accessing health care. Section 6.1.4 suggests that this might be due to weak information dissemination of the social health insurance programme.

8 One of the aims of the national health insurance system (*Jaminan Kesehatan Nasional*/JKN) is to enforce the gatekeeping system. See further in Section 3.7.1 "Paying for health services".

are very extensive in all media. People can also opt out of the medical services system and choose alternative/traditional treatment.

2.9.3 Patient rights

First and foremost, health is recognized as a human right and an element of well-being to be realized to achieve self-reliant healthy people within a just health-care system (House of Representatives, 2009c). Patient rights are defined, endorsed and protected by law (House of Representatives, 1999a; House of Representatives, 2004b; House of Representatives, 2009a). Consumers have the right to choose services, to be treated without prejudice and discrimination, to information regarding the services, to be heard and complain, and to obtain advocacy, protection and dispute settlement services (House of Representatives, 1999b).

The Health Act, the Hospital Act and the Medical Practice Act mandate that the patient has the right to information and to give informed consent (Minister of Health, 2005). Patients have the right to comprehensive information regarding medical procedures/treatment that they will receive, to ask for second opinion, to receive proper treatment according to their medical needs, as well as to refuse any medical treatment/procedure (House of Representatives, 2004e). The information should be given whether the patient asks for it or not, and the information regarding the illness, treatment, prognosis and alternative treatment has to be provided without using complex or difficult medical terminology; the patient also has the right to be informed about the estimated cost (Director General of Medical Sevice, 1997). Doctors may face disciplinary sanctions if they do not provide adequate information to patients and/or their families (Indonesian Medical Council, 2006). Patients also have the right to obtain a copy of their medical record summary (Minister of Health, 2008b).

Therefore, in terms of legislation, patient rights are clearly and comprehensively defined and protected. The enforcement of such rights varies. Some hospitals put up the list of patient rights on the information board near the registration counter, or on a standing banner, though not all hospitals do this.

To guarantee the rights of disabled people, there are regulations on accessibility to enable physical access to health facilities for disabled people that apply to any building owned by the government and private/nongovernment buildings, other than private houses, which

are open to the public. This includes hospitals and other health service facilities (Government of Indonesia, 1997; Ministry of Public Works, 1998). The regulation provides detailed guidelines (including illustrations of the measures to be implemented) of accessibility requirements for disabled people that include pathways, parking spaces, doors, ramps, toilets, stairs and elevators. Nonetheless, these guidelines are not implemented fully in hospitals and health centres/clinics. No sanctions have ever been enforced.

2.9.4 Complaints procedures (mediation, claims)

Complaints procedures and mediation are usually arranged by each provider individually. There is usually a customer relations office available in hospitals where patients can communicate their dissatisfaction. At a minimum, there is usually a complaint box available, of which the contents are reviewed each month. Issues submitted through the complaint box are taken to management/director meetings to be resolved or clarified.

The first procedure for any grievance is submitting a complaint to the hospital management. The Medical Committee will look into the case and decide whether any misconduct or neglect has occurred. If the patient is not satisfied with the Medical Committee/hospital decision, the patient has two choices, i.e. to bring the matter to court, or to appeal to the Indonesian medical disciplinary board (MKDKI) (House of Representatives, 2004e). The MKDKI is an autonomous body of the Indonesian Medical Council, which enforces good conduct among medical doctors and dentists in order to avoid medical negligence (House of Representatives, 2004b). The MKDKI website provides a form for reporting suspicion of misconduct (Indonesian Medical Council, 2013b). Once a case is submitted, MKDKI will look into it and decide whether or not any misconduct or neglect has occurred. If misconduct or neglect has occurred, the doctor may be deemed to have breached the code of ethics (also known as 'ethical malpractice'), and a disciplinary and/or administrative sanction could be issued.

Should the patient not be satisfied with a merely administrative sanction, the patient has the right to appeal to the court and report the case to the police (House of Representatives, 1999a); 'neglect' and 'misconduct' resulting in injury, death or disability is punishable by law according to the *Kitab Undang Hukum Pidana* (KUHP/criminal code). However, being a civil law country, the court submits to the "lex specialis derogate generali"

principle, which means that doctors are judged by the Medical Practice Act, Hospital Act and Health Act. It is difficult to charge a doctor with misconduct/neglect because the Medical Practice Act, Hospital Act and Health Act do not stipulate anything regarding malpractice. Therefore, doctors usually are protected from 'criminal malpractice' charges based on the criminal code.

Another path is to use *Kitab Undang Hukum Perdata* (KUHPer/civil code) and Consumer Protection Law. Patients can bring the doctor and/or the hospital to court based on a breach of the civil code (Dagi, 1976) and be compensated financially for improper services (House of Representatives, 1999b; House of Representatives, 2009c). Therefore, although neglect and misconduct are usually not punishable by a criminal court, they are still punishable by disciplinary sanction (by MKDKI) or by the civil court.

2.9.5 Public participation

As mentioned in Section 2.5, public participation is facilitated in the planning process through the *musrenbang* mechanism. A representative of the public is also a member of the monitoring and supervision body of the social security system (i.e. *Dewan Jaminan Sosial Nasional/*DJSN) as well as the monitoring and supervision body of hospitals (i.e. *Badan Pengawas Rumah Sakit Indonesia/*BPRSI). As mentioned in the previous section, any member of the public can also submit legal proceedings against a hospital or a health professional.

2.9.6 Patients and cross-border health care

The Ministry of Tourism and Creative Economy (MTCE) states that in 2012 there were 600 000 Indonesian patients who travelled abroad for health care valued at US$ 1.4 billion, an increase from the 315 000 people who travelled abroad for health care valued at US$ 500 million in 2006 (MZW, 2013). There is no regulation in regard to the restriction or specific qualification required to allow patients (in Indonesia) to be referred to hospitals abroad. As an alternative, the Minister of Health recommends that Indonesian hospitals adopt the "World-Class Hospitals" strategy (Minister of Health, 2009). "World-Class Hospital" is a status that can be obtained using an international accreditation system. The MoH believes that developing world-class hospitals will serve a double purpose: (1) to improve the quality of hospital services in the country at par with international standards; and (2) to ensure that the Indonesians who currently seek treatment abroad instead seek services at home. Additionally, it also aims to develop medical tourism or health tourism

in Indonesia. The MoH, in cooperation with the MTCE, is establishing a programme to promote Indonesia Wellness and Health Tourism (Jayalaksana, 2013).

Meanwhile, the ASEAN Mutual Recognition Arrangement has opened up the possibility of doctors and dentists from ASEAN countries practising in Indonesia.[9] However, the government and professional associations require an appraisal process and registration of foreign doctors/dentists (the regulation also applies to Indonesians with a doctor/dentist degree from an overseas university) (House of Representatives, 2004b; Indonesian Medical Council, 2009b). They are required to undergo an adaptation process at an Indonesian teaching hospital and then pass a competency test administered by the Indonesian collegium.

On the other hand, Indonesian physicians have yet to play much of a role in international health services, with foreign language proficiency being one of the major obstacles (Widiatmoko and Gani, 2002). Meanwhile, there is a huge potential for Indonesian nurses to work abroad (Minister of Health, 2012e). The National Agency for Safety and Placement of Indonesian Workforce (BNP2TKI) (Agency for the Placement and Protection of Indonesian Migrant Workers, 2013), as well as many private firms, arrange for Indonesian nurses to work in overseas hospitals.

9 See further in Section 6.1.2.

3 Health financing

Chapter summary

This chapter describes the situation of Indonesia's health financing since decentralization in 2001 until the implementation of the national health insurance policy (Jaminan Kesehatan Nasional Scheme) in January 2014. This chapter begins with the Indonesian health financing situation using the National Health Accounts perspective, then describes the composition of health funding by governments and individuals (OOP payments).

Indonesia faced the challenge of increasing health expenditures at the national level by 222% over the last eight years. However, the proportion of health spending to GDP remains below average among the low-to-middle-income countries, accounted for 2.8% of GDP in 2014 according to WHO database (WHO, 2017) or 3.6% based on the 2014 NHA Indonesia country report (MoH et al., 2015).

This is primarily the result of a low government contribution to health financing, with a public share of only 37.8% of total health expenditure, whereas private, primarily OOP payments, contribute 62.2%. Higher OOP expenditure has resulted in an increased risk of catastrophic health expenditure for households. However, since 2004, the government budget for health has increased significantly. This health budget increase was the result of a shift in government health financing policy to focus more on reducing financial risk of health-care spending, particularly for the poor. This budget increase is also mandated by the Law on Health (*UU Kesehatan*), which stipulates that the government budget allocation (nationally) should be at least 5% of total central government budget (APBN); while for local budget (APBD) the allocation to health should be at least 10%. Based on that legal requirement, the government will increase the budget allocation for health care nationally to 5% of total government budget by 2016, a sum which is estimated to be 109 trillion Rupiah.

Following the amalgamation of a number of existing funding schemes, a national health insurance programme (*Jaminan Kesehatan Nasional* or JKN) commenced in January 2014, with contributions from members and the government pooled under a single health insurance implementing

agency (*BPJS Kesehatan*). The introduction of the JKN has been primarily responsible for ongoing increases in government expenditure since 2014.

Progressive expansion of coverage is planned with the aim of universal health coverage by 2019 with a comprehensive benefit package and minimal user fees or co-payments. Payments to primary care providers are through capitation, and to hospital providers through DRG episodes of service payments (INA-CBG). Salaries for public staff continue to be covered through budgetary allocations. However, the budget allocation for the JKN is mostly used for curative care services and health infrastructure that supports medical care. The allocation for public health and prevention remains relatively low compared with the higher allocation for curative services.

Challenges remain in the continuing high proportion of OOP expenditure, a complex system of funding channels and payments from national to subnational levels, expanding coverage to include the informal sector, and ensuring improvements in the supply of services to enable equitable access to services across all regions of Indonesia.

3.1 Health expenditure

Historical estimates of national health expenditure in Indonesia have been subject to considerable errors and inconsistencies in the past, owing to the lack of a systematic approach to comprehensively and consistently track spending, plus the fragmentary nature of data on spending in the public sector. However, since 2007 a joint effort by the MoH and the University of Indonesia has developed a series of national health accounts based on the System of Health Accounts (SHA 1.0) (MoH, 2008) proposed by the OECD (OECD, 2000). Revisions to these estimates with the use of new data and methods resulted in substantial upward changes in the estimates of private and total spending, which are reflected in the estimates presented here. In 2009, Indonesia reviewed the previously reported National Health Account (NHA) as recommended under the SHA 1.0. In this review the estimates from 2005 onward were revised. The majority of data in this section are derived from the SHA database. The figures are presented in nominal terms, unadjusted for inflation or annual average growth rate.

The total expenditure on health rose between 1995 and 2014 (in nominal terms). In 2012, the estimated total expenditure on health per capita was IDR 1 179 525 (US$ 299.41 PPP at current prices), higher than the IDR 45 143 (US$ 85.90 PPP at current prices) in 1995.

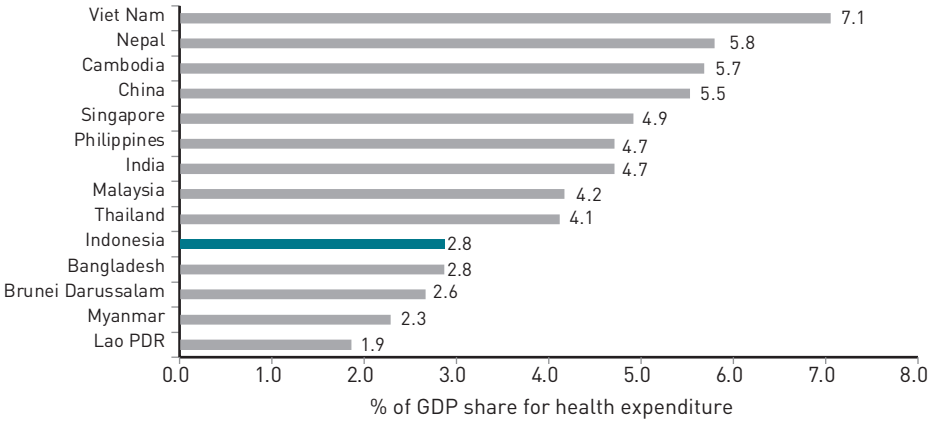
Table 3.1 Trends in total health expenditure (THE) in Indonesia, 1995–2014

Expenditure	1995	2000	2005	2010	2012	2014
THE per capita (in IDR at current prices)	45 143	129 972	342 052	778 615	1 006 588	1 179 525
THE per capita (in PPP US$ at current prices)	85.90	91.04	169.85	227.31	273.83	299.41
THE as % of GDP	2.0	2.0	2.8	2.7	2.9	2.8
Public expenditure on health as % of THE*	36.2	36.6	28.8	37.7	39.6	37.8
Private expenditure on health as % of THE**	63.8	63.4	71.2	62.3	60.4	62.2
Government health spending as % of total government spending*	4.9	4.4	4.2	6.1	6.1	5.7
Government health spending as % of GDP*	0.7	0.7	0.8	1.0	1.1	1.1
OOP payments as % of THE	46.5	46.0	54.6	47.2	45.3	46.9
OOP payments as % of private expenditure on health***	72.9	72.7	76.7	75.8	75.1	75.3
Voluntary Health Insurance (VHI) as % of THE	3.8	4.1	1.2	2.3	1.8	1.8
VHI as % of private expenditure on health***	6.0	6.4	1.6	3.7	2.9	2.9

* Excluding Parastatal and Rest-of-the-World expenditure.
** Including Parastatal and Rest-of-the-World expenditure.
*** Excluding Rest-of-the-World expenditure.
Source: Indonesia National Health Accounts (WHO, 2017). Available from http://www.who.int/nha/en/

Table 3.1, above, shows that the private sector had a greater share of health expenditure than the public (government) sector. The biggest share of THE was financed by the private sector, contributing more than 60% since 2005 to 2014. Of all of the private sector's contributions to health financing, OOP payments contributed the most, around 75% of total private expenditure from 1995 to 2014. Throughout the years, the OOP payment for health remained roughly the same.

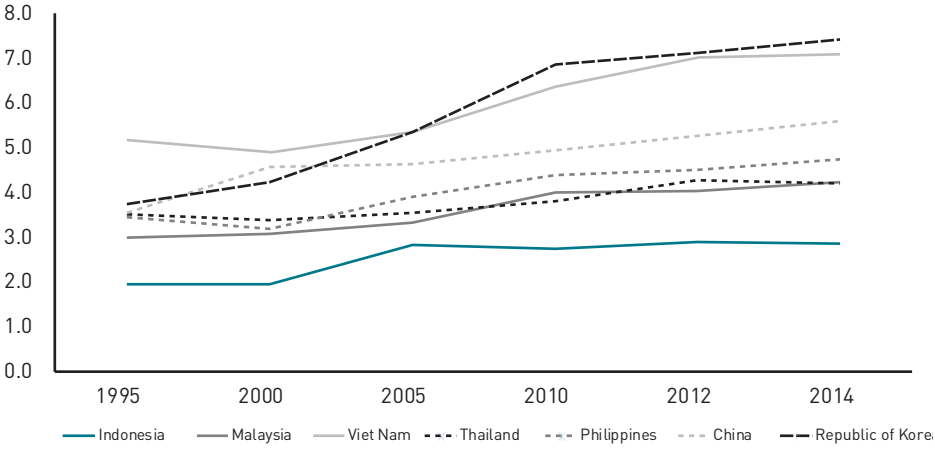
Figure 3.1 Health expenditure as a share (%) of GDP in the WHO South-East Asia and Western Pacific Regions, 2014



*Indonesia National Health Accounts, updated February 2014.
Source: WHO Global Health Expenditure Database – NHA indicators (WHO, 2017).

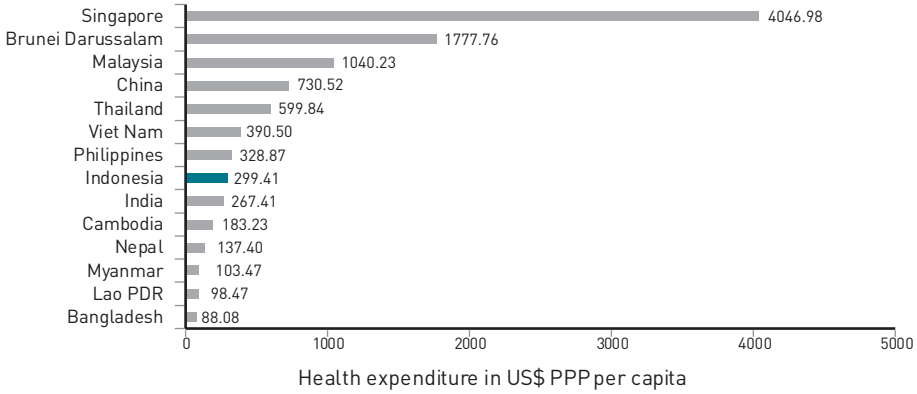
In 2014 Compared to other countries in WHO South-East Asia and Western Pacific Regions, THE as a share of Indonesia's GDP at only 2.8% based on WHO database, (or 3.6% based on the 2014 NHA Indonesia country report (MoH et al, 2015)), was much lower than in Viet Nam, Nepal, Cambodia, and China, and lower even than other low- and middle-income countries such as India and the Philippines (Figure 3.1). This may suggest that Indonesians did not spend enough on health. Trends in health expenditure (from 1995 to 2014) are also shown in Figure 3.2 below.

Figure 3.2 Trends in health expenditure as a share (%) of GDP in Indonesia and selected Asian countries, 1995–2014



*Indonesia National Health Accounts, updated February 2014.
Source: WHO Global Health Expenditure Database – NHA indicators (WHO, 2017).

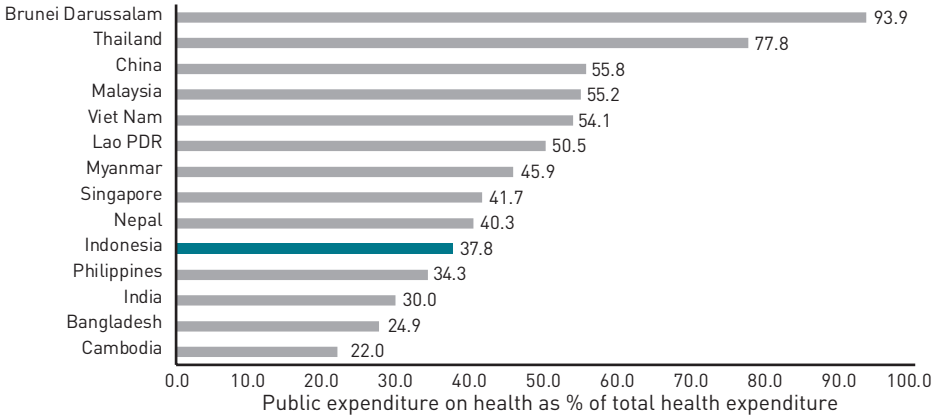
Figure 3.3 Health expenditure in US$ PPP per capita in Indonesia and countries in the WHO South-East Asia and Western Pacific Regions, 2014



*Indonesia National Health Accounts, updated June 2014.
Source: WHO Global Health Expenditure Database – NHA indicators (WHO, 2017).

Figure 3.3 shows that in 2014, per capita spending for health in Indonesia was lower than in Malaysia, Thailand and Viet Nam. This may reflect lower investment in health, but could potentially be influenced by a lower price of health care in Indonesia.

Figure 3.4 Public sector health expenditure as a share (%) of THE in Indonesia and in countries in the WHO South-East Asia and Western Pacific Regions, 2014



Source: WHO Global Health Expenditure Database – NHA indicators (WHO, 2017).

The proportion of health expenditure by public sector indicates the extent of government's involvement in social security and health financing (Ministry of National Development Planning, 2014b). In 2012, although national health insurance had not yet commenced, the share of public sector on total health expenditure went to almost 40% (Table 3.1). Obviously this share was expected to increase when social health insurance was implemented in 2014. In 2014, the nominal amount of public expenditure for health was 15% higher compared to that of in 2012 (WHO, 2017). However, the proportion of government contribution to the total health expenditure fell slightly to 37.8, which means private sectors still financed the majority of health spending. This percentage share of public sector on health expenditure, however, was still higher than in the Philippines, where social health insurance had already been introduced earlier than in Indonesia (Figure 3.4). Constraining growth in public expenditure in that country required cost containment in the public financing scheme, which could later evolve into increased OOP expenses, and would affect the public/private spending ratio on health expenditure.

Table 3.2 Public health expenditure on health by service programme, 2014

Health care by function	% of public expenditure on health	% of total expenditure on health
Health administration and health insurance**	5.3%	3.9%
Prevention and public health services	13.9%	6.6%
Medical services	80.8%	89.5%
– inpatient curative care	44.1%	37.9%
– outpatient curative care	35.6%	34.4%
– rehabilitative care services	0.4%	0.2%
– ancillary services to health care	0.2%	3.5%
– medical goods dispensed to outpatient services	0.5%	13.5%
Total % of Current Health Expenditure* **	**100.0%**	**100.0%**

* Public expenditure on health was measured from government schemes and compulsory contributory financing schemes.

**May also represents governance, health system and financing administration function.

*** The SHA 1.0 framework used in 2014 Indonesia National Health Account divided Total Health Expenditure into Current Health Expenditure (CHE) and Capital Expenditure. The health expenditure data by health care function is only available for CHE. In 2014, THE consisted of 96.2% CHE and 3.8% capital expenditure.

Source: MoH (Center for Health Economic Policy Studies), AIPHSS (2015).

Total expenditure on health mainly consisted of public and private spending, and majority of public sector expenditure on health (in 2014) was used for personal health-care services and goods 80.8%), consisting of inpatient care (44.1%), outpatient care (35.6%), rehabilitative care (0.4%), ancillary services to health care (0.2%) and medical goods dispensed to outpatients (0.5%).

3.2 Sources of revenue and financial flows

Public revenue for the health system is generated from multiple sources, including general (direct and indirect) taxes and non-tax revenues collected by the central government as well as by provincial/district governments, bilateral and multilateral loans, as well as bilateral and multilateral grants to the government (Ministry of National Development Planning, 2014b). Sources of public financing of health expenditure in Indonesia include revenues managed by central government, provincial governments, district governments, social security schemes and the Rest of the World (ROW), which is channelled through the government budget. The central government budget for health comprises of the budgets of Ministry of Health and other ministries (non-MoH), as described in Table 3.3.

Table 3.3 Actual spending on health at various ministries and central government institutions, 2005, 2012 and 2014

Ministries	2005		2012		2014*	
	IDR (in trillion)	%	IDR (in trillion)	%	IDR (in trillion)	%
MoH	7.9	69.2	28.7	72.3	47.5	≤94.1
National Food and Drug Agency	0.2	1.8	1.1	2.8	0.9	≤1.8
National Family Planning Coordinating Board	0.008	0.1	2.2	5.5	2.1	≤4.2
Others	3.3	28.9	7.7	19.4	N/A	N/A
Total	11.5	100	39.7	100	≥50.5	100

* For 2014, the actual spending on health by MoH, National Food and Drug Agency, and National Family Planning Coordinating Board was based on LKPP 2014 (audited).

Source: Directorate General of Budget, Ministry of Finance, Republic of Indonesia.

There has been an increasing trend of central government's health spending from 1995 to 2015. As Table 3.3 shows, central government's total health spending in 2012 increased almost fourfold from 2005. In 3

years, from 2012 to 2015 the amount of spending increased more than 25% from IDR 39.7 trillion to 50.5 trillion. The spending included many health programmes and activities, such as curative, prevention and public health services, administration, capital formation of health-care providers, environmental health, etc. However, according to the SHA 1.0 guidelines, not all of that spending could be categorized as expenditure on health.

Table 3.4 Ministries, institutions and health programmes

Institutions	Health programmes
Ministry of Education	Public Health Programme
Ministry of Religious Affairs	Public Health Curative Programme
	Health Resources Programme
Family Planning Bureau	Family Planning Programme
	Youth Reproductive Health Programme
Ministry of Public Works	Environmental Health Programme
	Drinking Water and Wastewater System Development Programme
Drug and Food Monitoring Bureau	Drug and Food Monitoring Programme
	Traditional Indonesian Medicine Development Programme
Ministry of the Environment	Environmental Pollution Control Programme

Source: Compiled by the authors

An identification process based on health programmes was conducted to sort out the expenses included in the definitions of total expenditure on health spending. Table 3.4 shows the non-MoH ministries that were considered to have contributed to health spending with programmes and activities as defined in SHA 1.0. Consistent with those definitions, health expenditures by non-MoH ministries amounted to IDR 1.5 trillion in 2012.

Funding from the public sector increased from 29.3% in 1995 to 39.2% in 2014 (Table 3.5 and Figure 3.5). The largest share of public expenditure was taken by the subnational level, in which the district governments' share was 34.6% of total public expenditure on health, while the provincial governments' share was 16.3% of total public expenditure on health. The decentralization policy was likely to be responsible for the larger contribution by government at subnational level in public sector financing, especially district governments, which receive funds not only from their own local revenue but also transfers from central government.

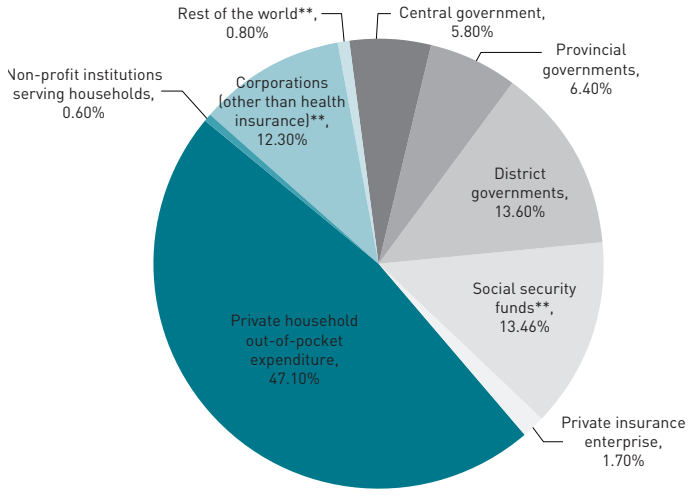
After implementing decentralization, district governments took a major role in managing health programmes at district level. Funding was

Table 3.5 Sources of revenue as a percentage of total expenditure on health according to source of revenue, 1995–2014

Source of revenue	% of total expenditure on health					
	1995*	2000*	2005	2010	2012	2014§
Central government	7.8%	9.7%	5.6%	7.0%	7.2%	5.8%
Provincial governments	5.4%	5.9%	6.5%	7.6%	7.7%	6.4%
District governments	12.4%	14.1%	11.5%	16.6%	17.4%	13.6%
Social security funds**	3.7%	2.3%	4.8%	6.0%	6.9%	13.5%
Private insurance enterprise	3.8%	4.1%	1.2%	2.3%	1.7%	1.7%
Private household out-of-pocket expenditure	46.6%	46.5%	53.9%	46.7%	44.9%	47.1%
Non-profit institutions serving households	1.3%	0.6%	1.3%	0.9%	0.8%	0.6%
Corporations (other than health insurance)***	19.0%	16.8%	13.9%	11.8%	12.3%	10.6%
Rest of the world			1.3%	1.2%	1.1%	0.8%
Total	**100%**	**100%**	**100%**	**100 %**	**100 %**	**100 %**

* WHO Global Health Expenditure Database, June 2014.
** Including Askeskin/Jamkesmas, *Askes*, and *JPK Jamsostek*.
*** Including parastatal companies.
§ Updated using data in the 2014 Indonesia National Health Account Report (MoH, 2015)
Source: Indonesia National Health Accounts, updated January 2017.

Figure 3.5 Percentage of total expenditure on health according to source of revenue, 2014*



* SHA 1.0 based.
** Including parastatal companies.
Source: The 2014 Indonesia National Health Account Report (MoH, 2015)

transferred from central to district level to support service delivery through various channels such as health operational costs (*Biaya Operasional Kesehatan/*BOK). BOK were first introduced by the MoH in 2010, to support health centre operational activities, including activities in preventive and promotive programmes at district level. Thus, BOK were run by DHOs, whereas the funding came from the MoH through a Special Allocation Fund (Dana Alokasi Khusus/DAK). More discussion about district and provincial governments' expenditure on health follows in the section below on financial flows.

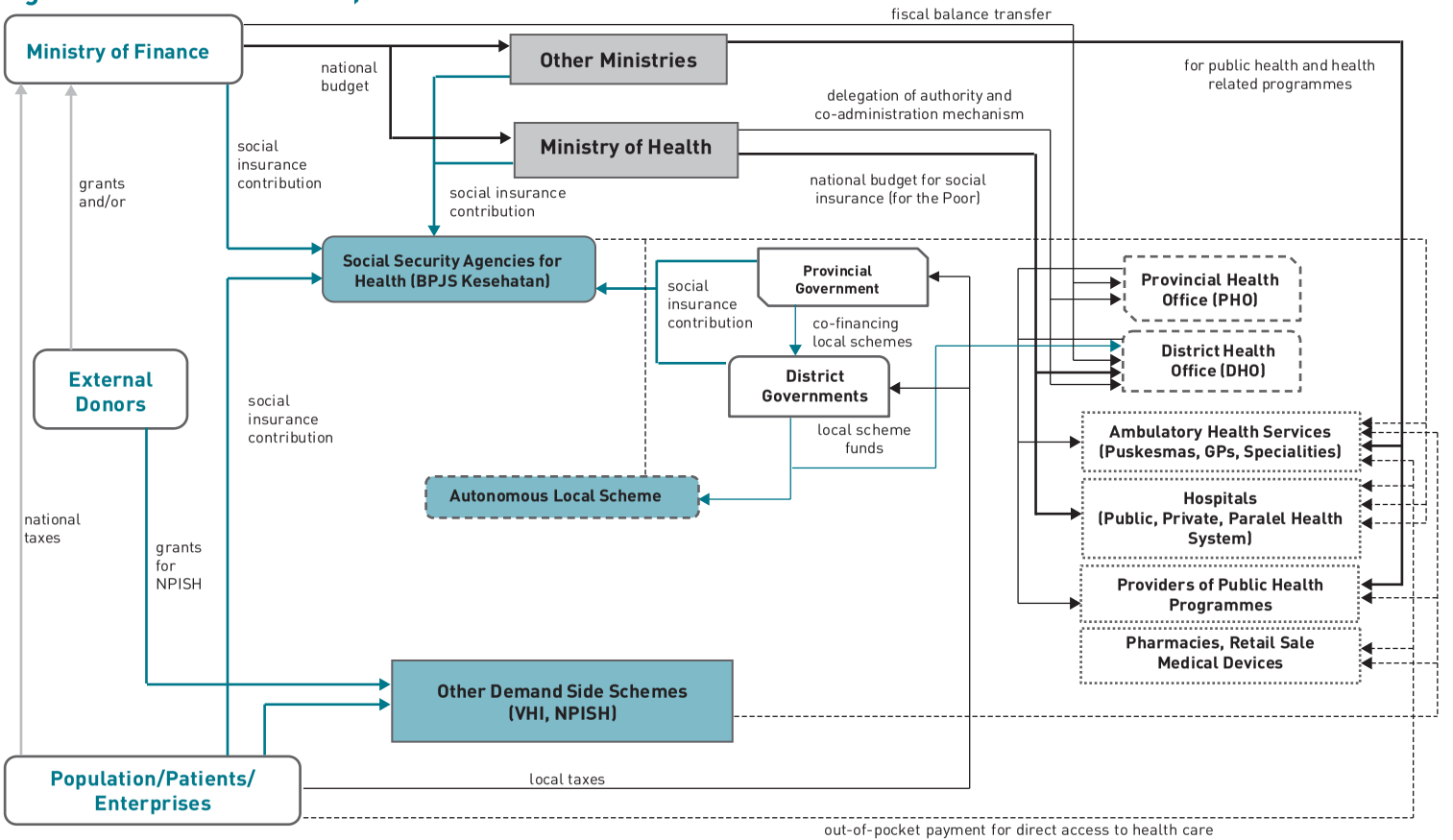
The other important sources of revenue for the public sector were social security funds which initially comprised: (i) health insurance for civil servants (the *Askes* scheme); (ii) health-care benefits programmes (*Jaminan Pemeliharaan Kesehatan/*JPK) in social security schemes for formal workers (the *Jamsostek* scheme); and (iii) health assistance schemes for the poor (the *Askeskin/Jamkesmas*, and *Jampersal* schemes).

Prior to 2005, *Askes* was the major expenditure under social security funds, but from 2005, increasing expenditure occurred through *Askeskin*, and subsequently *Jamkesmas* (in 2008) and further expansion with *Jampersal* in 2011. These programmes initiated by the central government as commitments to provide health protection for the poor were merged with *Askes* and *JPK Jamsostek* into one social insurance scheme starting in 2014.

By source of revenue, the largest portion of health spending was financed using revenue from private sectors, which include funds paid and managed by private insurance companies, households' OOP expenses, non-profit institution serving households, and corporations (Ministry of National Development Planning, 2014b). The largest component of private spending in 2014 was households' OOP expenses, which made up around 75% of private spending, or approximately 47% of THE, followed by corporations (other than health insurance), which accounted for 17% of private spending, or around 11% of THE.

In addition to public and private sources, there was also a component from Rest of the World (ROW). This comprises funds directly managed by donors, while funds from the ROW that were on government budgets were included in public spending, and funds that went directly to local institutions were included in the category of non-profit institutions serving households (NPISH). The ROW share of expenditure was about 0.8% of THE in 2014, and has been similar during the period 2005–2012.

Figure 3.6 Financial flows, 2014



Source: Adapted from Langenbrunner J, Hidayat B, Muirhead D, Nugroho D (2014). Health Sector Review: Health Financing (http://aiphss.org/wp-content/uploads/2015/02/Health-Financing.pdf, accessed 10 March 2016).

Financial flows

The central government's financing for health comes from national taxes, natural resources, as well as grants and loans from external donors that are included in the state budget. The Ministry of Finance (MoF) manages the state budget, which is then distributed to the MoH and other ministries (Ministry of National Development Planning, 2014b).

There are three main funding channels for funds for health expenditure from the MoF:

(1) Direct funding via the MoH

The MoF provides direct budget transfers to central level ministries including the MoH. The MoH then provides direct budget transfers to centrally managed hospitals (class A) and to central MoH agencies (such as the National Institute for Health Research and Development, and the National Health Manpower Agency). Moreover, the MoH channels funds vertically to provincial health offices (PHO) through two mechanisms: (1) the delegation of authority (in a form of *Dekonsentrasi – Dekon fund*) and; (2) co-administration (in a form of Tugas Perbantuan – TP fund) as well as to district/city health offices (DHO) through the co-administration mechanism (Ministry of National Development Planning, 2014b).

Through the delegation of authority mechanism, the PHO provides management and technical support for the implementation of programmes at district level. The funds channelled through the co-administration mechanism are allocated to the following programmes: (1) nutrition and MCH programmes; (2) management support and implementation of other technical tasks; (3) health financing initiatives (*pembiayaan upaya kesehatan*); and (4) disease control and environmental health programmes. These four programmes are organized by the DHOs, PHOs, and general hospitals at provincial level as well as district levels (Ministry of National Development Planning, 2014b). Funding for health operational costs (*Biaya Operasional Kesehatan/BOK*) is included in the co-administration mechanism. The Health Operational Cost programme is a central government assistance programme that aims to support health-care programmes linked to achieving national targets of health system, especially those delivered by health centres (*puskesmas*). In 2010, funding for the BOK programme was channelled through a social aid mechanism, but since 2011 to 2014 it was channelled through the co-administration mechanisms directly to Puskesmas or DHOs. In 2015, according to MoH Regulation 82 of 2015, the BOK is channelled through Special Allocation Fund and transferred to the district account (Minister of Health, 2015c).

As mentioned earlier, the national state budget is used not only by the MoH, but also by other ministries to deliver health activities. The Ministry of Law and Human Rights spends the funds for military health care, whereas the National Population and Family Planning Board (BKKBN) spends the funds for providing family planning activities (Ministry of National Development Planning, 2014b).

(2) General budgetary transfers from central government to provincial and district governments

Provincial and district governments can allocate the local budget (APBD) to health sector. The APBD budget receives funds from local source revenue (*Pendapatan Asli Daerah*/PAD), fiscal balance transfers from national level to sub-national governments (*Dana Perimbangan*), and regional grants and loans, all of which are governed by Law No. 33 of 2004 (*UU Nomor 33 Tahun 2004*). Local source revenue comes from local taxes, levies, and the revenue generated by local resource management (*hasil pengelolaan kekayaan daerah yang dipisahkan*) and other legitimate revenue sources. Fiscal balance fund derived from the state budget is transferred to the provincial governments to support the decentralization system. Types of funds intended for fiscal balance purpose include revenue sharing funds (*Dana Bagi Hasil*/DBH), general allocation funds (*Dana Alokasi Umum*/DAU), and special allocation funds (*Dana Alokasi Khusus*/DAK) (Ministry of National Development Planning, 2014b).

The local budget for health is managed by PHOs and DHO to fund activities in ranges of health-care providers, such as health centres, hospitals, and pharmacies (Ministry of National Development Planning, 2014b). As stipulated in Law No. 23 of 2014, Articles 11 and 12, the provision of health service is an obligatory function which provincial and district governments have to deliver (House of Representatives, 2014b). Furthermore, in accordance with Government Regulation No. 38 of 2007, provincial and district governments should collaborate in the delivery of health programmes; PHOs generally provides technical advice and support to DHOs for the implementation of a health programme.

Local government budgets are also used for funding the local health insurance schemes (*Jaminan Kesehatan Daerah*/Jamkesda) that have been established in many provinces and districts to complement the *Jamkesmas* scheme, prior to the establishment of the national system (JKN). Local government's *Jamkesda* schemes typically cover health care (mostly curative care provided by primary care facilities and province or district-level general

hospitals) for people who have not been covered by *Jamkesmas* (Ministry of National Development Planning, 2014b). According to a 2014 study, there are more than 460 *Jamkesda* schemes still in operation, covering approximately 63 to 70 million beneficiaries (Thabrany et al., 2014).

(3) Health insurance fund

Since 2014, Indonesia has started the implementation of Law No. 40 of 2004 on the National Social Security System, which mandates the introduction of a universal health insurance scheme. Implementation started by merging the public insurance schemes that already existed, i.e. *Askes, JPK Jamsostek* and *Jamkesmas*. In 2014, small businesses and population groups that previously had not had health insurance could enrol in the national social health insurance scheme by paying premiums to the National Health Insurance Agency (*Badan Penyelenggara Jaminan Sosial Kesehatan/*BPJS Kesehatan). However, until early 2014, many districts and provinces continued to provide organized autonomous local schemes (*Jaminan Kesehatan Daerah/*Jamkesda) (Figure 3.4). The issues regarding Jamkeda-to-JKN integration are further discussed in Section 6.1.4 on Health finance reform.

3.3 Overview of the public financing schemes

In 2004, Indonesia passed the National Social Security System (Law No. 40 of 2004), which provides a basic framework for the development of social security and social assistance programmes. The law aims to protect all citizens from financial risk arising from illness, injury, old age and death. It stipulates the general principles and goals, whereas the detailed rules are specified in the corresponding government regulations. In accordance with this law, the National Social Security Council (*Dewan Jaminan Sosial Nasional – DJSN*) was established in June 2008, under the jurisdiction of the President, to formulate policies and provide supervision for the implementation of the National Social Security System. However, further legislation to establish the National Social Security Agency (*Badan Penyelenggara Jaminan Sosial – BPJS*) had to wait until 2011. Law No. 24 was finally enacted on November 2011 with the establishment of two national agencies, BPJS Health for health-care benefits and BPJS Workforce for employment benefits (including those related to injury, retirement, pension and death). The Law states that it is mandatory for all citizens to enrol in the social security schemes through payment of contributions, either individually, in conjunction with their employer, or, in the case of the poor, through payment directly by the government. Implementation of the National Social Security Scheme finally commenced in January 2014.

3.3.1 Coverage

Breadth: who is covered?

Since the start of the operation of BPJS Health, in January 2014, the government has identified the achievement of universal health care as the main goal of its new health sector plan. As stated in the Roadmap towards National Health Insurance for 2012–2019 (*Peta Jalan Menuju JKN 2012–2019*), all Indonesian citizens will be progressively included as registered members of BPJS Health by January 2019. The phases are as follows:

- Target of membership expansion from 2012 to 2014, with the focus on:
  - Transferring membership of *Jamkesmas* from management of PPJK-MoH to BPJS Health
  - Transferring membership of JPK from Jamsostek to BPJS Health
  - *PT Askes* (*Persero*) to be transformed from a private company into a State agency (BPJS Health)
  - Transferring membership of TNI/Polri to BPJS Health
  - Integration of *Jamkesda* that are currently under management of PT Askes to BPJS Health
- Target of membership expansion from 2014 to 2019, with the focus on:
  - Integration of remaining Jamkesda to BPJS Health
  - Membership expansion among formal workers from large, medium and small corporations
  - Membership expansion from self-paid workers

In brief, the plan for membership expansion is shown in Table 3.6.

Table 3.6 Plan for membership expansion

TARGET 2014	TARGET 2019
Membership of BPJS Health comprises all members of Askes Sosial/PNS, Jamkesmas, JPK Jamsostek, TNI/Polri and part of the membership of Jamkesda currently contracted with PT Askes. It is estimated that there would be 121.6 million members under management of BPJS Health starting in 2014*	All residents of Indonesia (estimated at 257.5 million people) become members of BPJS Health

* As of December 2014, actual number stood at 138 million.
Source: Roadmap towards National Health Insurance 2012–2019 (MoH, 2012b).

BPJS Health is responsible for implementing a nationwide health insurance programme for all Indonesians, offering one single benefit package. As described earlier, the implementation will be in several

phases, in line with the plan for membership expansion, including expansion to foreigners working for a period of at least six months in Indonesia.

Members enrolled in the national health insurance (NHI) scheme are divided into contribution *beneficiaries* (*Penerima Bantuan Iuran*/PBI) and noncontribution *beneficiaries* (non-PBI). PBI comprises poor people determined in accordance with Government Regulation No. 101 of 2013. The non-PBI membership comprises: (1) salaried workers (*pekerja penerima upah)* and their family members; (2) nonsalaried workers (*pekerja bukan penerima upah)* and their family members; and (3) non-employees and their family members.

The membership, contribution mechanism and benefit entitlements of each group of members is illustrated in Table 3.7.

Table 3.7 Differences in premiums and benefits for membership classes in JKN

Category	Applies to	Premium per person per month	Paid by	Benefit
PBI	Jamkesmas and Jamkesda members and/or those who are eligible	Jan 2014–Mar 2016 IDR 19 225a) Apr 2016 onwards IDR 23 000b)	Respective governments	3rd class ward
Salaried workers and their family members	Civil servants, military/police staff, government officials	5% of salary	Employers, with contribution from employees	(#) Ranks 1 & 2: 2nd class ward; Ranks 3 & 4: 1st class ward
	Noncivil servant government staff;	5% of salary		Married with salary up to 1.5 times non-taxable income: 2nd class ward; married with salary 1.5–2 times non-taxable income: 1st class ward
	private employees (incl. State-owned enterprises) (Plan for 2015)	Jan 2014–June 2015: 4.5% salary; July 2015 onwards: 5% salary		

Table 3.7 Differences in premiums and benefits for membership classes in JKN (Con't.)

Category	Applies to	Premium per person per month	Paid by	Benefit
Nonsalaried workers and non-employees and their family members (Plan for 2019)	Informal, entrepreneurs/ business owners	Jan 2014–Mar 2016 a) IDR 25 500 (3rd class ward benefit); IDR 42 500 (2nd class ward benefit); IDR 59 500 (1st class ward benefit). Apr 2016 onwards b): IDR 30 000 (3rd class ward benefit) IDR 51 000 (2nd class ward benefit) IDR 80 000 (1st class ward benefit)	Themselves	According to the premium
	Pensioners	5% of monthly pension	Government, with contribution from the pensioner	Refer to their rank (see #)
	Veterans or their widows	5% of 45% of civil servant basic salary (rank 3)	Government	1st class ward

Notes: a) According to Presidential Regulation 111 of 2013, b) The regulation is revised by Presidential Regulation 19 of 2016
Source: President of Indonesia (2013c) ; President of Indonesia (2016)

Scope: which services are covered?

The benefit package of the JKN was introduced in MoH Regulation 69 of 2013 on the implementation guidelines for the national health coverage programme. Until January 2017, the document has been revised 3 times by MoH Regulation 59 of 2014, 52 of 2016 and 64 of 2016. This document stipulates that JKN offers comprehensive basic benefit package provided based on medical indications, covering outpatient and inpatient care at primary level up to tertiary hospital level, with exclusion to a few types of care that are partially covered and fully uncovered. Several equipment are included in the benefit package, but with upper limit or value or quantity, for example: (a) eye-glasses are covered, with upper ceiling of up to IDR 150 000 (US$ 15) (for 3rd class ward benefit) and IDR 300 000 (for 1st class ward benefit) for every 2-year; (b) hearing-aids capped at maximum

to up to IDR 1 000 000 for every 5-year; (c) medical handicap devices such as wheelchairs, canes, etc. capped at maximum to up to IDR 2 500 000 for every 5-year. Equipment in points (a), (b), and (c) are provided by contracted hospitals and are claimed using a specific INA-CBG code. The JKN does not cover: (i) services that are not in accordance with protocols; (ii) materials, tools or procedures for cosmetic purposes; (iii) general check-up; (iv) prosthetic dental care; (v) alternative therapy (acupuncture, traditional healer) and other curative care that is not scientifically proven; and (vi) in vitro fertilization and infertility programmes including treatment for impotence. Further explanation of the coverage of the benefit package (including limitations) has been provided MoH Regulation No. 71 of 2013 which was then revised by MoH Regulation 99 of 2015 (Minister of Health, 2015d). The health services covered in JKN are promotive, preventive, curative and rehabilitative, including pharmaceuticals and medical devices, related to medical needs.

Depth: how much is covered in terms of costs?

In the Minister of Health Regulation No. 40/2012 on the implementation guidelines of the community health coverage programme, it is clearly stated that the policy forbids co-payments and no upper ceiling will be applied under BPJS Health in relation to treatment in accordance with protocol guidelines.

3.3.2 Collection

Government budgets

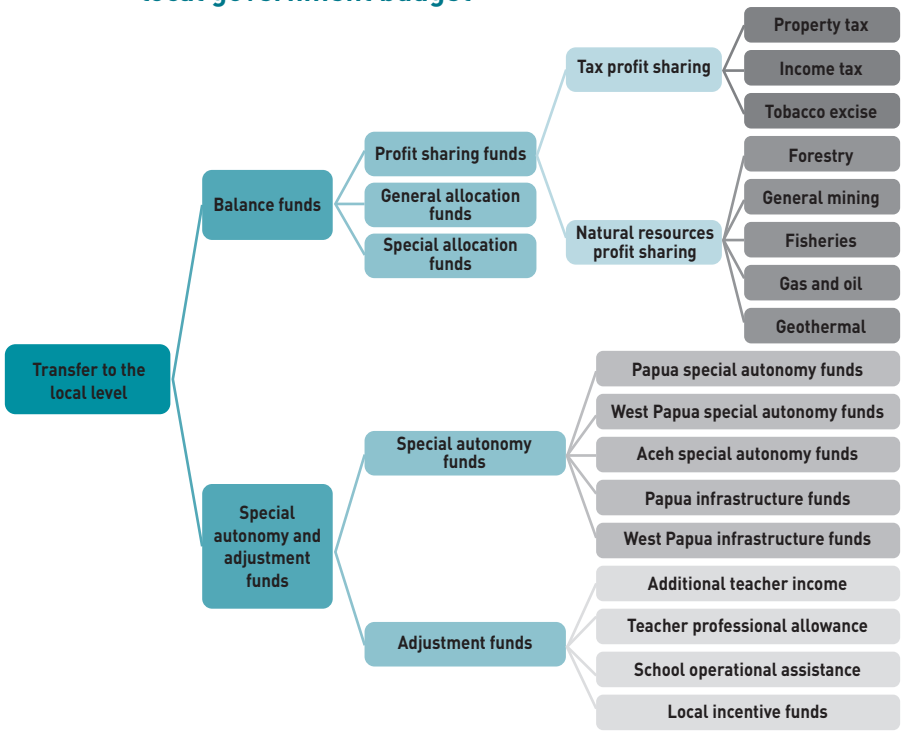
Government budgetary contributions to health finance are provided at each level of government: central government, provincial government and district government.

Central government revenue is derived from three sources: consumption taxes, income taxes (personal and corporate) and oil and gas related revenue. In 2013, consumption taxes (value added tax, luxury sales tax, and excises, mostly on tobacco), accounted for 34% of total revenue; income taxes (one quarter personal income tax and three quarters corporate income tax) accounted for 29%; and oil and gas-related revenues (30% taxes and 70% non-tax revenues) accounted for 20% (World Bank, 2014b).

Local government revenue is made up of transfers from the central government plus local revenue. The Actual Local Revenue (PAD) is the revenue earned by the local government based on the local regulation,

which is in accordance with the legislation, balance fund and other revenues (Minister of Home Affairs, 2006). The balance fund (*dana perimbangan*) is the revenue originating from the national budget, which is further allocated to the local government to fund its needs in the implementation of decentralization (Republic of Indonesia, 2003). The balance fund aims at reducing the fiscal gap between the central government and local government and among local governments. According to the Law, the balance fund consists of: (1) profit-shared funds, i.e. the funds originating from the State budget revenue, which is allocated to the local level based on a percentage figure in funding local needs in implementing the decentralization; (2) General Allocated Fund (DAU), i.e. the funds originating from the State Budget Revenue allocated to improve the equity of the financial capacity among the locals to fund their needs in implementing the decentralization; and (3) the Special Allocated Fund (DAK), i.e. the fund originating from the State budget revenue allocated to certain local bodies with a specific goal of helping the funding of special activities that become local affairs and in accordance with the national priorities.

Figure 3.7 Flow of transfers to the local level and fund sources for local government budget



Source: Republic of Indonesia (2003).

As a financial support to the implementation of decentralization, revenue sharing funds are allocated to local governments at provincial and district level based on the pre-determined percentages to fund their local needs (Republic of Indonesia, 2004). General allocation funds are allocated to provinces and districts to ensure the equity of interregional financial capacity for the implementation of decentralization (Republic of Indonesia, 2004). These funds refer to unconditional grants from the central government that are allocated and calculated based on the fiscal gap measurement, coupled with the basic allocation (Fiscal Decentralization Assistance Team, 2012). See Figure 3.5.

The capacity of local government to collect PAD depends very much on the local economy, and can be large in areas with a strong economy (e.g. Java–Bali), but is very small (often less than 5% of the total budget) in poorer areas. Regions with natural resources also receive a much larger allocation through the compensation allocation than those without natural resources (particularly oil and gas).

While overall revenue collection is not very regressive, due to the relatively small contribution derived from household income or expenditure, allocation to regional governments tends to be regressive, as the current mechanism tends to favour those regions with stronger economies and with natural resources. The government is progressively moving towards allocation based more on regional fiscal capacity, and does provide additional funds to poorer regions through various earmarked mechanisms.

Social health insurance contributions

Contributions to the JKN are directly deposited into BPJS Health through multiple mechanisms. The SJSN Act states that the mutual fund will come from contributions in proportion to the level of income/salary, which will be pooled to finance provisions when needed. This is a feature that is perceived as being more sustainable as the compulsory contribution is expected to eventually reduce State expenditures, while at the same time being cheaper over time as more members join the system (National Social Security System, 2004). Presidential Decree No. 19 of 2016 states that PBI contributions are paid by central government through the MoH to BPJS Health, using State budget transferred from the MoF. Meanwhile, non-PBIs have to contribute by paying premiums through different mechanisms (see Table 3.8). The non-PBI members are comprised of: (1) salaried workers and their family members; (2) nonsalaried workers

Table 3.8 Premium contributions by non-PBI members to the JKN scheme

No.	Members/participants	Contributors to premium payments	Contribution
1.	Government civil servants and pensioners, non-employees, members of the Indonesian National Armed Forces/Indonesian National Police (including family members)	Participants, central government for national level, and local government for local government civil servants and non-employees, government civil servants	5% of salary or wages per month (3% are paid by employer and 2% paid by participants)
2.	Salaried workers (*Pekerja Penerima Upah*) in the private sector	Participants/employees and employers	In 2014, 4.5% of salary or wages per month (4% is paid by employers and 0.5% by participants) After 2015, 5% of salary or wages per month (4.5% paid by employer and 0.5% by participants)
3.	Nonsalaried workers (*Pekerja Bukan Penerima Upah*) and non-employees	Participants	(a) IDR 30 000 per member per month with benefits services in 3rd class ward. (b) IDR 51 000 per member per month with benefits services in 2nd class ward. (c) IDR 80 000 per person per month with benefits in the 1st class ward.

Source: President of Indonesia (2016) (adapted).

and their family members; and (3) non-employees and their family members (President of Indonesia, 2013c).

JKN relies heavily on contributions from employees, employers and the government (Thabrany, 2008). All members are required to pay premiums/contributions as determined by the percentage of salaries (salaried workers) or a nominal amount (instead of salaried workers and PBI) as mentioned in Table 3.8. Each employer collects the contribution from its employees, adds the share of the contribution that is their responsibility, and pays the premium to BPJS Health every month (no later than the 10th of each month). Nonsalaried workers and non-employees are also required to pay JKN premium no later than the 10th of each month to BPJS Health.

As of December 2014, there were some 138 million members registered with the JKN scheme, or about 55% of the total population. Of these, nearly 70% were subsidized members, with contributions paid by central (APBN) or local (APBD) governments. The remainder are contributing members (see Table 3.9).

Table 3.9 JKN members, based on types of membership, 2014

Member categories		Number of members	Proportion
A. Subsidized members			
1	Subsidized members from APBN	86 400 000	62.37156%
2	Subsidized members from APBD	9 437 667	6.81299%
B. Government employee members			
1	Government employees (PNS)	11 657 043	8.41514%
2	Military members	2 639 965	1.90577%
3	Government employees, non-PNS	135 895	0.09810%
C. Non-government **employee members**			
1	Government companies	344 994	0.24905%
2	Local government companies	12 457 014	8.99263%
D. Informal sector members		**10 561 190**	**7.62405%**
E. Not employees			
1	Retired government employees	4 411 369	3.18454%
2	Veterans	430 083	0.31047%
3	Pioneering independence	2725	0.00197%
4	Private company retirements	45 730	0.03301%
5	Investors	51	0.00004%
6	Employers	943	0.00068%
TOTAL		**138 524 669**	

Source: Healthcare and Social Security Agency (BPJS) (2015).

After 3 years of implementation, by end of 2016, the number of people covered by JKN rose almost 25% to 172 million members (Healthcare and Social Security Agency, 2017). However, of 172 million member, only 19 million (17%) came from informal sectors group. This type of problem is a common challenge for developing countries, which has a large share of informal sector workers, and has been referred to as "the missing middle" issues. This population group is typically unwilling to participate in insurance schemes, including social health insurance (Bitran, 2014).

Law No.40/2004 on the SJSN establishes the mechanism and responsibilities for setting membership numbers and contribution amounts. The number of PBI is decided by the Statistical Bureau and data from the database of social assistance recipients maintained by the Poverty Reduction Team (TNP2K). According to the law on the SJSN, the national Social Security Council (DJSN) has the responsibility for proposing the JKN budget premium for PBI premium setting and the operational budget to the government. The MoH, through the Centre for Health Insurance (P2JK), also calculates the PBI premium rate as a reference for the MoF and other policy-makers. The MoF uses the information from different parties (P2JK, DJSN, etc.) to determine the PBI premium rate. In 2014, the MoF demonstrated its commitment to increase the PBI premium to three times the premium of 2013. In Indonesia, the MoF, the MoH, the Ministry of Social and Welfare, legislatures and the DJSN collectively set the PBI premium budget. According to the SJSN law, the JKN premium is adjusted every two years.

3.3.3 Pooling of funds: allocation from collection agencies to pooling agencies

Pooling occurs through two mechanisms: pooling of central government funds, and then transferring pooled funds to provincial and district governments; and pooling of social insurance funds through the BPJS.

Pooling and allocations from central, provincial and district governments

Allocation of funds for health at central level is determined by the State Revenue and Expenditure Budget (APBN). The APBN allocation to health is determined by BAPPENAS in consultation with the MoF and the MoH, and approved by the national parliament (DPR). While the Health law (No. 36 of 2009) mandates a minimum allocation of 5% of the total State budget to health, this has not yet been achieved, although it is proposed for the 2016 budget.

The budget allocation is traditionally undertaken on the basis of: (1) historical budgets; (2) proposals by ministries; or (3) the calculation of local needs according to population numbers (Marhaeni, 2008). Non-technical considerations may affect the planning process. Many believe that the political aspect retains a large influence since the House of Representatives (DPR) plays a considerable role in determining indicative budget levels.

The MoH allocates the health budget among the central level departments and health agencies, and also allocates funding for health through earmarked allocation mechanisms to local (provincial and district) governments. These include:

a. The de-concentration fund (*Dana dekon*) originates from the State budget executed by the governor as the government representative; it includes all revenues and expenditures necessary for the implementation of de-concentration. These funds are allocated to PHOs to support their role in managing health functions across districts, and building capacity of DHOs in national priority programmes.
b. The assisting task fund (*Tugas Perbantuan*) comes from the State Budget executed by the local government, and includes all revenues and expenditures needed to carry out the assisting tasks. The MoH uses this mechanism to allocate the *Puskesmas* Operation Support fund (*Bantuan Operasional Kesehatan*). This fund is allocated to DHOs, and subsequently distributed from DHOs to *puskesmas*.
c. The special allocation fund (Dana Alokasi Khusus) is allocated directly to local governments and earmarked for specific health infrastructure construction, such as the construction of *puskesmas*, *sub-puskesmas*, and district hospitals. Originating from the State Budget, the fund is allocated to specific areas to finance ranges of local activities in accordance with the national priorities, including health (Republic of Indonesia, 2004). However, it can only be used to fund certain activities, namely physical activities, research, training and business travel (Government of Indonesia, 2005a). For health sector, the special allocation fund can also be used for financing primary health care, referrals for secondary care and tertiary care, as well as pharmacy services (including procurement of generic drugs) (Minister of Health, 2011l).

Local (provincial and district) government resources are allocated to health through the local government Revenue and Expenditure Budget (APBD). The local budget is determined by the local level Bappeda in consultation with local agencies, and approved by the local level parliament (DPRD). The process of budgeting follows the planning process, which combines bottom-up and top-down planning as described in Chapter 2.

The provincial and district health agencies prepare plans and budget proposals, which are largely based on the same factors as at central level, i.e. historical allocations, requests and proposals originating from the

bottom-up planning process, and responses to identified local priorities, often determined by the political party in power.

The APBD budget allocation to health is divided into: (a) Indirect expenditure (*Biaya tidak lansung/*BTL), for the salaries of civil servants working in health facilities; and (b) direct expenditure (*Biaya langsung/*BL), for the operations of health services and programmes, and allowances of staff in the provision of services. The amount of BTL is determined by the number and salaries of civil servants, and must be allocated to cover this requirement. The BTL component can exceed 80% of the total budget allocation, limiting the allocation for operational expenditure.

Allocation of pooled funds for social health insurance

According to Law No. 40/2004 and Law No. 24/2011, BPJS Health has to manage a single trust fund (*Dana Amanat*), which is pooled from the contributions/premiums of a whole population, including government funds. With this single trust fund, the health-care costs for all sick people are taken from a single source, without having to pay attention to the amount of contribution or salary of each JKN member. As mandated in Law No. 24/2011, BPJS Health is a non-profit public entity, which is responsible to the President.

The allocation of revenue from central government to the BPJS is based on the number of members entitled to have their contribution paid by the government (PBI members), and the agreed premium to be paid by the government. The process for the number of PBI and the premium is described in Section 3.3.2.

Nominally, the PBI contribution is then allocated to districts based on the number of PBI members in each district. However, expenditure of the PBI contribution is based on the capitation payments and reimbursement of hospital utilization. Where access to hospital facilities is limited by their availability or geographical barriers, utilization may not absorb the premium paid by the government for PBI members in a specific area, and could result in effective transfer of PBI contributions to other areas where PBI members have greater access to hospital facilities. This issue is further discussed in Chapter 7.

3.3.4 Purchasing and purchaser–provider relations

a. Relations between public providers and purchasers (central and local governments)

Where the provider is a budgetary unit of the relevant level of government, the relationship is hierarchical and there is direct accountability. Provision of funds is based on the agreed budget, which cannot be changed. Funds received have to be acquitted according to financial regulations, and can be audited by the national or regional audit agency.

Funds provided through transfer mechanisms (*DAK, Tugas Perbantuan,* etc.) must also only be expended in accordance with the relevant mechanism regulations, and are also subject to audit by the audit agency.

Issues arise with the frequent late disbursement of funds from government to providers, which results in shortages of funding in the early part of the financial year, and overload of activities to expend all budgeted funds in the latter part of the financial year. This can lead to inefficient expenditure.

Budget allocations are not formally linked to performance in terms of outputs, although poor performance in terms of expenditure of allocated budgets (i.e. having unexpended funds) can lead to a reduction in budget allocations in the following financial year.

Some health facilities, notably some hospitals and *puskesmas*, have satisfied the requirements to be awarded the status of semi-autonomous public budgetary units (*Badan Layanan Umum Daerah – BLUD*). Facilities with BLUD status are not direct budgetary units of the local (or national) government and have greater autonomy in managing revenue earned as well as budgetary allocations. They are required to prepare annual business plans and have these approved, but have more flexibility in using revenue earned than direct budgetary units (See Chapter 6, Section 6.1.2).

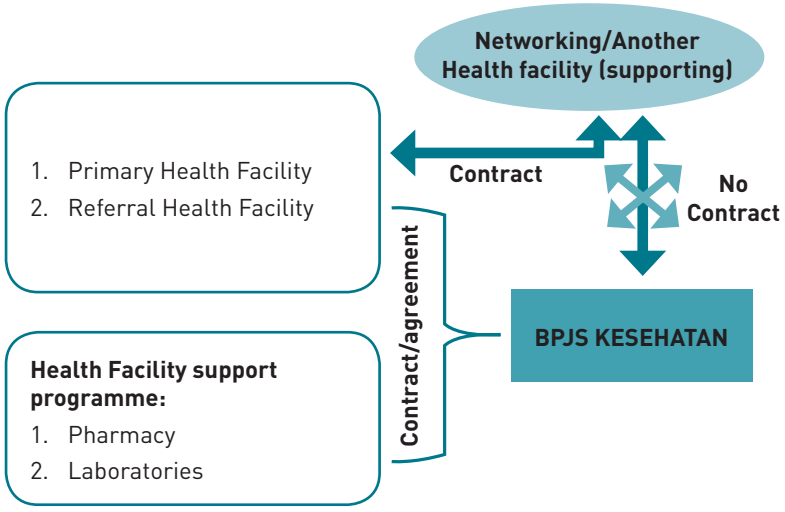
b. Contracting relations between BPJS Health and health providers

As a single institution managing pooled funds, BPJS Health has the responsibility to pay health-care costs to providers. And as the single payer, BPJS Health has a good bargaining position towards health-care providers in relation to such costs. This position can be used as one way to control the behaviour of health-care providers and health-care costs.

Presidential Decree No. 19 of 2016, Article 36, explains the arrangement/contracts between providers and BPJS Health. BPJS Health should coordinate with Local Health Office regarding this arrangement/ contracts. Government/local government health facilities are eligible

(through credentialing) to compulsorily cooperate with BPJS Health. Private health facilities are qualified to cooperate with BPJS Health. The design of such cooperation is the written agreement between the health facility and BPJS Health. The quality of BPJS Health facilities are managed by MoH law. The Presidential Decree also regulates the negotiations and contracts of health facilities. Contract models are also explained in MoH regulations. MoH Regulation No.99 of 2015, in its Article 4, explains the cooperation between health facilities and BPJS Health, and the form of cooperation between health facility leaders or owners with BPJS Health. Cooperation agreements have a validity period of at least one year and can be extended according to mutual agreement.

Figure 3.8 Cooperation model between providers and BPJS Kesehatan



Source: Ansharuddin (2014).

BPJS choses health facilities for contracting through a selection process called credential link.

This process determines the selection and retention of the network of health facilities that can provide high-quality services to JKN members. Basic designation in this selection process refers to the standard credential link, which is based on the number and distribution of the domiciles of the participants, the needs of the participants, the ability of companies (in terms of human resources) and the availability of health-care providers. The selection process includes the review and verification of the existence of health facilities. The verification process concerns the licensing of health facilities.

3.4 Out-of-pocket payments

OOP payments were the largest source of financing in the Indonesian health system, comprising about 46.9% of THE, in the year 2014. OOP payments accounted for the highest proportion of payments among private financing schemes. In general, the main area of expenditure for OOP payments was paying for personal curative health-care, including pharmaceuticals (about 95.6% from OOP spending). In Indonesia, the average level of household's spending on health care in 2005 was approximately 3.5% of its income (Rokx et al., 2009).

Despite the decrease in OOP spending after the early introduction of health protection scheme in 2005, the share of OOP in total health spending remained stable throughout 2010 – 2014. In the first year of JKN implementation, which started in January 2014, there was still no decrease in the percentage of OOP contributions compared to the years before JKN implementation. As stated in the World Bank document (Tandon et al., 2016), this indicates that although the insurance coverage has expanded and the amount of prepaid public financing for health has increased, the OOP spending has also simultaneously increased by a similar amount.

Promisingly, the share of OOP payments has tended to decrease once Indonesia introduced social health protection schemes for the poor and near-poor in 2005, implemented *Askeskin* in 2005, and subsequently *Jamkesmas* in 2007. Such an increase in public health expenditure changed the public, total private and OOP private shares in THE in Indonesia. NHA data show that private health expenditure was the largest contributor of THE from 1996 to 2004 (on average 58%). Following the increase in the public share of contributions to the THE, the share of OOP spending dropped and private shares of THE fell to 32.8% in 2006 (Rokx et al., 2009).

Problem of disparities also still exist in terms of OOP payments. Based on wealth differences and analysis of the proportion of average monthly per capita household costs for health, data from the Indonesian Family Life Survey (IFLS) show that for quintile 5, health costs were just 2% of monthly per capita income. But for near-poor people (quintile 2), the proportion rose to 8% and for the poor population (quintile 1) it escalated considerably, to 57%. Such findings suggest repressiveness in the cost of health-care in Indonesia. In addition, *Jamkesmas* did not manage to alleviate the burden on poor households, whether formal or informal health-care costs.

A separate analysis, using data from the National Socioeconomic Survey (Susenas) of 2012, showed that OOP correlates with urban/rural and population density status, as shown in Table 3.10.

Table 3.10 suggests that OOP is determined by health-care utilization, which relates to distance to hospitals. In other words, OOP is higher in areas where people have access to health care. Financial protection through social health insurance can be provided, but access among poor and rural populations remains an issue. Such findings also suggest that there is an equity issue in the context of social health insurance, where poor populations and those living in remote areas would benefit less, due to their limited geographical access to health care. It is also important to note that Susenas data do not include costs incurred from transportation, meaning that the findings on OOP can be assumed to be understated.

Table 3.10 Out-of-pocket (OOP) payments and population density

	OOP payments as % of total district per capita expenditure	OOPs per capita (IDR)
Rural remote districts	22%	74 067
Urban districts in more remote provinces	41%	129 060
High population density Java/Sumatra provinces	55%	142 303

Source: Susenas, 2012.

3.4.1 Cost sharing (user charges)

Cost sharing, in relation to health insurance, refers to provision of health insurance or third party payment that still requires the cost of health care received to be partially borne by the person covered (WHO, 2017).

Prior to the introduction of the JKN, public providers at *puskesmas* and at hospital level levied user charges. The registration fees at *puskesmas* level were very small, as also for accommodation in a public (3rd class) ward in a public hospital. However additional charges were levied for 2nd class, 1st class and VIP ward accommodation.

Under JKN regulations, cost sharing is not allowed. However, additional payments may be required for non-medical benefits such as a higher level of hospital accommodation. For example: Participants who want a higher class of hospital accommodation can take out additional Voluntary Health Insurance, or pay for the difference in class fees. These policies are stated in MoH Regulation No. 28/2014 on JKN implementation guidelines as described in Chapter 4.

3.4.2 Direct payments

These payments are made for goods or services that are not covered by any form of third party payment. Direct payments account for the highest share amongst OOP payments. They are largely for pharmaceuticals, as noted in the section on OOP, either self-purchased, or for pharmaceuticals outside the JKN agreed list, or where stock is not available.

Direct payment is also required for services not covered by the JKN, as noted above. With the introduction of comprehensive benefits under the JKN from 2014, it is expected that the share of direct payment will decline in the future.

3.4.3 Informal payments

Any unofficial payments made to obtain goods or services meant to be fully financed using pooled revenue are called informal payments. This term also refers to in-kind or in-cash payments made to individual or institutional providers beyond official payment channels or any purchases that should have been covered by the health financing system. It includes "contributions" to hospitals, "envelope" payments to doctors and the value of medical supplies purchased by patients and prescribed drugs obtained from private pharmacies that are actually part of services funded by the government (Lewis, 2000; Lewis, 2002; Figueras et al., 2002; Ensor, 2004).

Despite not being permitted within the Indonesian health system, the informal payments do exist although the amount is hard to estimate. They can be in various forms including payments to health providers made by outpatients to cut short the waiting time or the ones made by inpatients in order to receive earlier services (such as hospital's beds or room). The other form includes direct payments by patients to health providers for certain drugs or medical devices that are not provided officially by facilities where they work. Not only patients, pharmaceutical industries also sometimes make informal payments to doctors as gratuities for having prescribed their products to patients (Ministry of National Development Planning, 2014b).

3.5 Voluntary health insurance

3.5.1 Market role and size

Private voluntary health insurance (VHI) is not well developed in Indonesia and covers only 1.2–1.5% of the population. Data from the Financial Services Authority Indonesia revealed that the number of people covered by private VHI from 2008–2012 is shown in Table 3.11.

Table 3.11 Number of people covered by VHI, 2008–2012

Year	Number of people
2008	2 647 480
2009	3 710 870
2010	2 479 505
2011	2 384 617
2012	4 486 500

Sources: Financial Services Authority (2014).

It was reported by MoH that by the end of 2014, the number of people covered by commercial VHI was 2,937,627 people, significantly lower than that of in the previous years (MoH, 2015a). This was likely due to people switching from VHI to JKN.

While the Government of Indonesia has mandated a public universal coverage system, private VHI may still have an important role. Under the Jamsostek scheme, employers are allowed to opt out and buy VHI for the employee, but must be compelled to live up to their social responsibilities and to provide and purchase private VHI efficiently. The market role of VHI in Indonesia is considered as "substitutive" (people are allowed to opt out of the statutory system) for Jamsostek and "complementary" for some of the services provided under Askes for civil servants. In the future, as mandated by the law, the VHI will play a "complementary" role, as some services will be excluded from the JKN benefit package, as well as "supplementary" where the SJSN members seek services to meet consumer satisfaction, by buying VHI products.

NHA data show that VHI expenditure increased in nominal terms from IDR 0.3 trillion (1995) to IDR 4.4 trillion (2012). In contrast, the portion of VHI within total expenditure on health (THE) and private expenditure on health decreased from 3.8 % of THE (1995) to 1.7% of THE (2012) or 6.0% of private expenditure on health (1995) to 2.9% of private expenditure on health (2012).

3.5.2 Market structure

For the time being, any private employer and individual are eligible to buy VHI. The private employers who buy VHI are mostly large and medium-sized corporations while the market structure for individuals is mostly as a rider to life insurance or banks.

Table 3.12 Number of entities selling private VHI offering health benefits in 2012

Type	Insurance scheme	Company	Number
Non-life insurance and reinsurance (including sharia type)	Personal accident and health	Private insurance, joint-venture, reinsurance	88
Life insurance	Health	Private insurance, joint-venture	44
Life insurance-sharia	Health	Life-sharia	3

Source: Financial Services Authority, 2013.

In the future, the market structure for private VHI under the NHI will be mostly for complementary insurance as a top-up benefit package to the benefits provided by the universal coverage scheme. The benefits will cover, for example, a VIP hospital room or other services excluded from the NHI.

3.5.3 Market conduct

In general, VHI in Indonesia is profit-oriented. Its characteristics vary based on its benefit package and premium setting. As an illustration, "Inhealth", a leading private insurance company, is a subsidiary of PT Askes, a government-owned company that manages the social health insurance scheme for civil servants. Inhealth sells managed-care products to various companies, with quite a comprehensive scope of benefits with few limitations. Premiums are set based on actuarial estimates, and payment to providers are done using capitation for primary care and a negotiated fee schedule for secondary and tertiary care. Primary care institutions are mostly family doctors or private clinics.

Other insurance companies such as Allianz, Prudential, AIG and Sinar Mas sell products using the indemnity approach and sold (mostly) to groups. These insurance companies pay the provider using fee-for-service or per diem. Some companies are subsidiaries of banks (e.g. BNI life, AxaMandiri, ACA, etc.), selling insurance products as riders of life insurance. Little is known about the size of the resources consumed or total spending on this scheme. There are also some non-profit insurance companies offering sharia-type products.

3.5.4 Public policy

Private insurance is regulated by the MoF. Typically, insurance company management is structured as centralized, with all branches reporting to the main office.

3.6 Other financing

3.6.1 Parallel health systems

Parallel health systems are representative of services that are provided for employees and officials of certain ministries with different health delivery systems, such as health services for the National Police (POLRI), Ministry of Defence civil servants and military personnel (TNI), which is comprised of the army health directorate (TNI-AD), the navy health directorate (TNI-AL), and the air force health directorate (TNI-AU). TNI and POLRI have their own systems, separate funds and separate service provisions. Military hospitals can also be utilized by the public using a user-fee payment scheme.

As with other schemes, such as for civil servants where the government as the employer contributes a certain percentage on top of the employee's contribution, under the TNI and POLRI schemes the government also contributes to support health programme activities through the Republic of Indonesia National Police Department (Kepolisian Republik Indonesia) and Indonesia's Armed Forces. Data for these parallel health systems' expenditures are difficult to obtain, since administrative bottlenecks and also the reporting systems differ from one to the other.

3.6.2 Non-profit institutions serving households

Data from non-profit institutions serving households (NPISH) are also difficult to obtain since the development of NPISH is not monitored sufficiently. In addition, there has been no standardized reporting format. The institutions involved often make reports only for specific projects funded by certain donor agencies.

The expenditures of NPISH are not significant as a share of total expenditure on health. A national survey among NPISH in 2011 to support NHA work in Indonesia showed that most NPISH working for health are providers for public health interventions with funding from international donors, while some receive funds from domestic donors, government grants or a mixture (KBI, 2011). Only a limited amount of donor assistance is dedicated to personal curative care. Some NPISH also insure their employees for health care through third parties or through self-insurance.

3.6.3 Corporations (parastatal and private companies)

Corporations, both parastatal and private corporations/companies, have the choice to provide health services for their employees. The private companies can either use third party payments or manage insurance

for their employees. Companies can manage health funds for their employees.

From a private company survey, which was conducted in 2012 and involved 232 private companies, it was found that in providing health insurance for their workers, many private companies still preferred to handle such insurances by themselves (self-insurance).

3.6.4 Rest of the world

Donor assistance can play an important role in financing health care in many low- and lower-middle-income countries. In Indonesia, development assistance for health (DAH) is mostly channelled through the MoH for both grants and loans, as well as through non-profit institutions or managed directly. DAH – covering financial and in-kind contributors aimed to improve health – from all major donors – has increased, doubling from US$ 256.2 million in 2005 to $ 521.2 million in 2012. Overall, DAH contributed only a small portion of THE (less than 4%) during the period 2005–2012. Although external resources on health represent a relatively small portion, the figures are very different when analysed by programme. An analysis using NHA data (MoH et al., 2013) revealed that external partners' contribution was significant for fighting HIV/AIDS, TB and malaria (ATM) in Indonesia. These three programmes relied heavily on external resources that provided more than 60% of total spending, and mostly for direct costs such as for TB case-finding, HIV/AIDs prevention programmes for high risk populations, and malaria surveillance and case detection. One of the highest contributions among major donors to support ATM was from The Global Fund.

3.7 Payment mechanisms

3.7.1 Paying for health services

a. Public health services

Public health services are funded through several sources:

- Central budget

  The MoH provides funds to *puskesmas* for:
  - Drugs and vaccines, support for basic services and prioritized programmes such as immunization, TB, malaria, HIV/AIDS, maternal care, CDC programmes. Some of the funds are used to support outreach programme activities, such as transportation for public health centre staff. Drugs and vaccines from the MoH

are distributed in kind to PHOs, then the PHOs distribute them to DHOs. DHOs are responsible for ensuring that drugs and vaccines are received by *puskesmas*.
    - The MoH also provides funds for health operational costs (*Biaya Operasional Kesehatan* – BOK) that are distributed to *puskesmas* though Special Allocation Fund to district account. The funds are intended to support operational activities in *puskesmas*, including promotive and preventive activities. The MoH determined that at least 60% of the funds are allocated for health activities in order to achieve the MDGs, and a maximum 40% of the funds are allocated for management and other activities in *puskesmas*.
    - Payment for services under subsidies for the poor (Jamkesmas and Jampersal) programmes, using fees-for-service. Started in January 2014, payments to health centres are made through a capitation scheme and cover public health services (prevention and promotion) as well as primary/ambulatory care. This situation is described further under primary care below.

- Local government budget

  Local governments provide funds for:
    - Drugs and services, through the DHOs.
    - Services for Jamkesda (local government-funded free care programme for the poor), where available (not all districts). These funds are managed by the DHOs and distributed to health centres and midwifery programmes.
    - Salaries for civil servants assigned to PHOs (from provincial budgets), and DHOs and health centres (from district budgets).

- Funds from donors/external partners

  Donor/external partners provide funds to primary health care centres for:
    - Particular prioritized programmes such as HIV/AIDS, TB and malaria. Substantial amounts of support are received from The Global Fund. United Nations agencies such as WHO and UNICEF also provide some support through the MoH.

b. Primary/ambulatory care

Providers of primary care services in most provinces are *puskesmas*. Under particular schemes, such as health insurance for civil servants (Askes) and compulsory health insurance for corporations (Jamsostek), as well as some private insurance schemes, private clinics or family

doctors are also contracted by BPJS as primary care providers. Usually they are paid using capitation or claims based on negotiated fee schedules or fee-for-service. Physicians, medical specialists, dentists and midwives are permitted under the regulations to have their own private practices. Payments are made based on the type of patients, usually through fee-for-service.

- National Health Insurance/BPJS Health

Under the JKN scheme, BPJS Health pays the contracted primary care providers by capitation for outpatient services. However, obstetric and neonatal services, such as antenatal care, normal delivery and services for family planning programmes are not paid by capitation but by reimbursement.

JKN members must register with a *puskesmas*, primary care clinic or local GP/family doctor within three months of becoming a member (Wahyuningsih, 2014). If they are dissatisfied with their GP/family doctor, they are permitted to re-register with another. They are not allowed to randomly access a different GP every time they seek care.

Primary care providers in the JKN have an important role as gatekeepers of access to specialty and hospital services. BPJS Health expects that the system will encourage the gatekeepers to improve quality of services and well-being of their registered members by reducing the frequency of visits. Implicitly, this also requires the gatekeepers to ensure that promotive and preventive measures are not taking a back seat.

Under the capitation mechanism, first-level health-care providers (first level primary health care facilities/FKTP) receive a fixed amount per participant, paid in advance. The amount is based on the number of members registered without taking into account the types and amount of health services provided. The capitation payment is expected to fund personal health services that are non-specialty, first-level observation and diagnosis, primary health care and treatment, and/or other health services. The challenge for the gatekeepers is to manage all these available funds efficiently for promotive and preventive measures, not only for curative and rehabilitative services (Minister of Health, 2014b).

In addition, primary/ambulatory care providers receive payments from:

- Government budget: funding for public sector facilities (*puskesmas*), payment of salaries, and for drugs and supplies

Table 3.13 Provider payment mechanisms

	MoH	Other ministry	Prov. govt./ health office	District govt./ health office	National health insurance	Jamkesda	Private/ voluntary health insurers	Cost sharing	OOP	Corporations
PUBLIC										
GPs	S	S, or through third party	S	S	C	-	C, FFS	FFS	FFS	S, FFS
Dentists	S	S, or through third party	S	S	C	-	C, FFS	FFS	FFS	S, FFS
Public Health Services	S	-	S	S	C	FFS	-	-	FFS	-
General hospitals	S, DRGs	S, or through third party	S, FFS	S, FFS	DRGs	FFS + DRGs	PD, FFS	FFS	FFS	PD, FFS
Special hospitals	S, DRGs	FFS or through third party	S, FFS	S, FFS	DRGs	FFS + DRGs	PD, FFS	FFS	FFS	PD, FFS
Pharmacies	S, bundling in DRG for Jamkesmas	FFS or through third party	S,	S, FFS	Bundling in DRGs	FFS + bundling in DRGs	FFS	FFS	FFS	FFS
PRIVATE										
GPs	-	-	-	-	C	-	C, FFS	FFS	FFS	FFS
Dentists	-	-	-	-	C	-	C, FFS	FFS	FFS	FFS
Clinics	-	-	-	-	C	-	C, FFS	FFS	FFS	FFS
Public health services (clinics)	-	-	-	-		-	-	-	FFS	-
General hospitals	DRGs for Jamkesmas	-	-	FFS for Jamkesda	DRGs	FFS	PD, FFS	FFS	FFS	PD, FFS
Special hospitals	DRGs for Jamkesmas	-	-	FFS for Jamkesda	DRGs	FFS	PD, FFS	FFS	FFS	PD, FFS
Pharmacies	-	-	-	-	Bundling in DRGs	FFS	FFS	FFS	FFS	FFS

Notes: FFS – Fee-for-service; PD – Per diem; S – Salary; C – Capitation; DRGs – Case payment e.g. DRG.
Source: MoH (2008b) and Dwicaksono A, Nurman A, Prasetya PY (2012).

are received from the local and national budget, particularly for priority programmes such as maternal and child health, infectious disease management.

- Out-of-pocket payment: public health centres and private providers receive payment from patients (who are not covered by any scheme) for curative care, antenatal care, delivery care and some other basic services using a fee-for-service scheme.
- Third party/insurance companies: public health services and other primary care providers are paid by insurance companies using capitation and fee-for-service.

c. Hospital/inpatient care:

- National Health Insurance/BPJS Health

BPJS Health pays hospitals for services provided to its members using a prospective payment system based on Indonesian Case Mix-Based Groups (INA-CBGs). Health-care costs based on INA-CBGs varies according to region and hospital class. Top-up payments are available only in special cases and using a cost-to-charge ratio. The INA-CBG payment system aims to encourage more patient-focused, efficient and quality services, as well as to avoid overtreatment, undertreatment, moral hazards and adverse events. INA-CBGs pay the same rate for either public or private hospitals. Drugs and medicines are one of the components in the INA-CBG financing payment system, which is based on a diagnostic package.

The government has divided the country into four regional JKN service areas. Those regions are: Region 1 (Java and Bali), Region 2 (Sumatra), Region 3 (Kalimantan, Sulawesi, and West Nusa Tenggara) and Region 4 (Maluku, Papua and East Nusa Tenggara). The regional classification is associated with differences in distance and price (distribution cost factor) between regions and provinces. There are differences in rates of up to 7% for medical consumables.

The INA-CBG packages will be updated and corrected every year. These corrections are to adjust the rates in relation to inflation and economic growth. As a result, INA-CBG package rates will change every year, but after 2014 this will not cause any change in the price of drugs in the INA-CBG packages.

Issues with INA-CBGs

The tariff for hospital-level reimbursement is set through MoH Regulation No. 64/2016, the third, an updated version of the first regulation, i.e. MoH Regulation No. 69/2013. The tariffs use diagnostic grouping software, where tariffs are determined by the codes entered during patient admission, based on the groupings of patient diagnosis. The system, i.e. INA-CBG, has more than 1000 categories with three levels of severity. The tariffs are also differentiated between regions in Indonesia so as to respond to the different levels of costs of services between regions.

However, there are some issues with the use of INA-CBGs for Indonesia's UHC programme. First, the full documentation of the software, which would show how the groupings were made based on local epidemiology and data, has not been provided by the consultant from the United Nations University. Since there were 200 groups, with little or no data from Indonesia, data from other countries may have been used, such as from the United States Medicare programme. The limited documentation and the fact that INA-CBG was not developed within the country means that the BPJS has to rely on the developer/consultant if changes need to be made.

Second, the INA-CBG software uses ICD codes. However, as the use of ICD codes in Indonesian health facilities is very limited (less than 10%), there will be limited precision in reimbursement for hospitals and also limited precision in quality assurance efforts, e.g. prevention of unnecessary admissions and readmissions, and sub-standard inpatient care.

- Public and private hospitals may also receive payments through the following mechanisms:
    - Jamkesda (local governments' free care scheme, mainly for the poor, where available): local governments usually pay through fee-for-service; some are managed by Askes and paid using negotiated fee schedules and a few Jamkesda schemes use DRG payments.
    - Third-party payment: Askes, Jamsostek and private insurance companies pay hospitals using negotiated fee schedules.
    - Direct payment from patients using fee-for-service: the tariff is set by the government (central government if the hospitals are owned by central government or local government if the hospitals are owned by the local government).

- Public hospitals owned by central government receive funds from the central government, while public hospitals owned by local government receive funds from the local government. The funds are used for salaries and capital investment.

d. Pharmaceutical care

Pharmaceutical care is paid for using several methods, depending on the payer. For JKN, ambulatory care capitation payments include the costs of pharmaceuticals according to the list of essential medicines. After obtaining health care in hospitals, patients can be referred back to primary health care setting to obtain the drugs. Primary health care providers can then propose claims to BPJS Health for the drugs provided.

For third-party funding, drugs are claimed separately from services charged, and paid for only if providers use drugs listed in the formulary. For OOP patients, payments are made directly after service provision using fee-for-service.

3.7.2 Paying health workers

In general, health workers are paid based on:

- The institution in which they work (hospital/health centre/DHO/MoH, etc.).
- Type of health care professional status (doctor/nurse/midwife/pharmacist, etc.), which determines the medical care payment/fees (jasa medis), that is stated on the INA-CBGs or capitation payment mechanism.
- Employment status. Civil servants are paid by monthly salaries and allowances according to the government worker/civil servant (PNS) mechanism. While part-time medical doctors are paid from the national programme (Dokter PTT), private employees are paid based on contract.

If health workers work as staff of a public institution (i.e. as civil servants), they receive a fixed salary. Private hospital staff are paid by salaries, which are calculated based on a specific remuneration system developed by the hospital's management (Ministry of National Development Planning, 2014b).

Usually, for each health care service provided to patients, e.g. delivery care, surgical care, examinations, etc., medical staff (doctors, specialists,

nurses, pharmacists, etc.) working in a hospital will receive a certain amount of incentives. According to Law No. 29/2004 on Medical Practice, a GP, medical specialist, or dentist is permitted to conduct practices in no more than three different locations/facilities and shall be given fees based on the number of patients treated. Doctors are allowed to work in public health care facilities in the morning and in private facilities in the afternoon, for instance (Ministry of National Development Planning, 2014b).

The provider payment system from third-party purchasers has been affected by JKN. Adjustments in the payments to doctors have been made in many public hospitals by implementing remuneration schemes linked to JKN payment mechanisms. Indonesia lacks experience in pay-for-performance systems, with only a few pilot projects implemented in certain provinces. A limited number of pilot projects have been developed for "performance-based" payment supported by donors, but have not been sustained. Some schemes using pay-for-performance have been implemented in provinces using local government funds to improve performance of hospital and health centre staff, but the challenge remains to evaluate how such payments influence performance.

According to Presidential Decree No. 32 of 2014 on the Management of the National Health Insurance Programme (JKN) and Minister of Health Regulation No.21 of 2016, the updated version from MoH Regulation No. 19 of 2014, on the Use of the National Health Insurance Capitation Fund for Health Service and Operational Support Costs for Health in Primary Health-care Providers, the allocation for medical payment services is at least 60% of the capitation funds, while the difference is used for health-care operating costs. The amount of the allocation is determined each year through decree on the proposed Regional Health Office (SKPD Kesehatan).

Policies to support health-care services have been developed and refined by relevant stakeholders such as the MoH, BPJS and the Bappenas (National Planning Board) to respond to the need for improved access to quality services, especially for people who live in remote and border/islands areas. The eastern part of the country faces difficulties in terms of remoteness, lack of human resources and facilities. Policies to attract medical staff to stay in remote areas, including incentives, have been introduced. However, challenges remain.

4 Physical and human resources

Chapter summary

Indonesia has experienced an increase in health infrastructure, including primary and referral health facilities, in the last two decades. Inpatient beds in both public and private hospitals and primary health centres have also increased. *Puskesmas* (primary health centres) are important, particularly in the context of Indonesia's UHC programme as the gatekeeper for medical cases as well as public health efforts. However, the ratio of both hospital beds and *puskesmas* to population remains below what is required and lags behind other Asia-Pacific countries. In addition, there are varying conditions and quality of the facilities, resulting in geographical disparities between Indonesian regions.

Capital investment is financed by the government budget from various institutions and different levels of government. At the hospital level, a hospital with BLU status can finance its own capital investment. Other sources of funds include cooperation with private institutions. Foreign investments are welcomed, but limited to hospital-level investment only.

There is wide use of mobile technology in Indonesia, which is currently the eighth largest Internet user globally. However, the adoption and use of information technology in the health system is still limited and not well coordinated. This includes limited growth in the use of electronic medical records.

Human resources for health have also grown in the last two decades, with increases in health worker to population ratios. However, the ratio of physicians to population is still lower than the WHO-recommended figure, and ongoing geographical disparities exist. There is also a pronounced shortage of nurses and midwives at both hospital and *puskesmas* level, despite the increase in absolute numbers. Professional mobility of health workers has been modest, but with growing outmigration of nurses to the Middle East. Health training institutions have grown in number, with various changes in the curriculum aimed to improve quality of the graduates, but they still need significant investment to meet the needs of the population.

4.1 Physical resources

4.1.1 Capital stock and investments

Health-care institutions

The physical infrastructure for delivering health services includes hospitals, health centres and a range of lower-level facilities. The public sector categorizes its facilities as hospitals (general and specialty), which provide both inpatient and outpatient services, health centres (*pusat kesehatan masyarakat,* or *puskesmas*), which focus on outpatient care but can also operate beds and provide inpatient services, and auxiliary health centres (*puskesmas pembantu*, or *pustu*). The private sector operates a range of hospitals, providing both inpatient and outpatient services, and health centres and clinics, providing outpatient care.

Currently, one third of *puskesmas* have beds, with an average of 11 beds each (Directorate of Health Services, 2014d), although there is a tendency for district authorities to expand these numbers with time. These *puskesmas* admit inpatients, and can provide referral services and more complex care, including essential obstetric and neonatal care.

Pustus are networks of facilities organized and supervised by *puskesmas*. They are intended to function as outreach health facilities, providing only outpatient and community outreach services, and serving the remoter parts within the service area of a *puskesmas*, which send health workers periodically to visit them. The extended health network in the public sector also includes the mobile *puskesmas* that operate via motor vehicles or boats, village health posts (*poskesdes*) and village midwife posts (*polindes*).

Current capital stock

a. Inpatient facilities

According to MoH statistics, there were 2410 hospitals as of January 2015 (Directorate of Health Services, 2015), consisting of 1782 general and 547 specialty hospitals. Of these, 1553 hospitals (64.4%) were in the private sector; they are on average smaller than public hospitals and contribute 140 186 beds (46.4%). However, these statistics do not give the full picture of the available inpatient infrastructure, since they do not take into consideration the 3320 *puskesmas* with inpatient beds (Directorate of Health Services, 2014d) (Table 4.1). Counting these, there were a total of 5734 inpatient facilities in Indonesia as of January 2015, with a total of 338 370 inpatient beds.

Table 4.1 Number of inpatient facilities and beds, by ownership and service class, 2014

Types of hospital	Hospital classification[1]				Non-specified class	Total number of hospitals	Total number of beds
	A	B	C	D			
Public hospitals[2]							
MoH	26	6	1	-	-	33	17 563
Provincial government	20	45	18	3	13	99	27 059
District government	2	122	271	98	63	556	95 151
Military	1	15	15	16	77	124	17 079
Police	1	3	17	4	17	42	4878
Other ministries	-	1	1	1	4	7	522
Puskesmas with beds[3]						3320	35 932
Total	50	192	323	122	174	4181	198 184
Private hospitals							
Non-profit organizations	-	60	258	182	206	706	71 079
Private	3	53	133	90	160	439	37 955
Enterprise/company-owned	1	15	79	35	141	271	20 026
Individuals	1	1	19	20	33	74	3970
State enterprise	2	6	25	12	18	63	7156
Total	7	135	514	339	558	1553	140 186
Overall total	**57**	**327**	**837**	**461**	**732**	**5734**	**338 370**

Notes:

1 Type A hospitals: Top referral hospitals providing a wide range of subspecialties services, as well as academic hospitals owned by the MoH.

Type B hospitals: Hospitals providing wide range of specialist services and limited sub specialist services, established in each provincial capital as the referral point for district hospitals. Type B also includes academic hospitals that are not classified as Type A and receive case referrals from district hospitals.

Type C hospitals: Hospitals providing limited specialist services, which should at the minimum include internal medicine, surgery, paediatric medicine and obstetric services. Type C hospitals receive case referrals from the *puskesmas*.

Type D hospitals: Hospitals that are in transition/development to becoming Type C hospitals, which currently only provide general medicine and dental health-care services. Type D hospitals also receive case referrals from the *puskesmas*.

2 According to ministerial decree, privately established, not-for-profit hospitals are classified as public hospitals for official statistical purposes.

3 This number includes *puskesmas* with inpatient facilities.

Sources: Regarding hospitals: Directorate of Health Services, 2014b (http://202.70.136.52/rsonline/report/report_by_catrs.php, accessed 10 April 2015).
Regarding puskesmas: http://202.70.136.52/app_puskesmas/report/6_distribusi_puskesmas_menurut_fasilitas.php (accessed 10 April 2015).

The general condition of the health facilities varies, particularly between urban and rural areas. For example, only 75% and 81% of hospitals in North Sulawesi and Central Kalimantan province, respectively, have access to clean water and electricity 24 hours per day (NIHRD, 2012). Both public and private hospitals are required to pass an accreditation test every three years (Minister of Health, 2011f), which takes into account their capacity to deliver a range of services at appropriate levels of quality (see Chapter 2 for more details). However, a nationwide 2011 health facility survey found that only 51% of the public hospitals in Indonesia were accredited, with 30.5% of hospitals accredited at the basic accreditation level, 10.5% at the advanced level, and less than 10% at a higher level (NIHRD, 2012).

At the community level, *puskesmas* are more important, being central to the primary care delivery strategy. Data from the 2011 national primary health facility survey (NIHRD, 2012) show the availability of basic utilities at the *puskesmas* level where 71.7% of *puskesmas* had a clean water supply; 87.4% had 24-hour access to electricity; 84% had telephones; and 69.5% had transportation modalities for referral services. Basic medical equipment availability is lower. For basic equipment, most *puskesmas* were reported to have stethoscopes (96.3%), blood pressure apparatus (93.7%), adult scales (93.9%) and an examination bed (93.6%). Regarding equipment for immunization, 60.3% of *puskesmas* were reported to have cold boxes, 81.1% vaccine carriers and 90% refrigerators.

There are some gaps in the availability of *puskesmas* and their general condition and readiness to deliver services. A further analysis of the 2011 national village survey by Sparrow and Vothknecht found that 430 subdistricts (6.3%) did not provide a *puskesmas*, most of which were located in Papua and Papua Barat, with the rest in rural areas outside Java. Most of the *puskesmas* without electricity were in provinces outside Java, primarily Papua, Sulawesi Tenggara, NTT and North Sumatra. Overall, 380 *puskesmas* (4.2%) were found not to have any physician in place, with most of these located in Papua, NTT, Papua Barat, Maluku and Sulawesi Tenggara (NIHRD, 2012). The lack of staff in rural areas is linked to poor housing facilities, and the survey also found that around 12 000 housing facilities for doctors and nurses were in damaged condition (Sparrow and Vothknecht, 2012).

Investment funding

In the public sector, capital investment is financed mostly by the government budget of the relevant authority. For example, hospitals owned by the MoH are funded from the Ministry's budget allocation, while hospitals owned by provincial or district government are funded by their respective local budgets. In addition, since decentralization, the central government has allocated specific funding for infrastructure development at the subnational level, through the Special Allocation Funds (DAK, or *Dana Alokasi Khusus*) (House of Representatives, 2004c) channelled directly to the district level. The DHO could use the DAK fund to finance physical investment for district hospitals, primary health care centre and its networks.

The implementation of the Indonesian universal health coverage through the national health insurance programme (JKN) has increased the budget for primary health centres through the capitation system. However, based on the latest MoH Regulation – No. 19 of 2014 on the Utilization of National Health Insurance Capitation Fund for Health Services and Primary Health Centres Operational Costs (Minister of Health, 2014a) – the *puskesmas* are not allowed to use the capitation fund to invest in capital investment or any maintenance costs.

Allocation of capital investment in the public health sector is controlled by the government, and is based on an annual needs assessment conducted by the MoH (House of Representatives, 2004c). More generally, the government has prioritized upgrading of the *puskesmas* so that they can provide inpatient care, with the objective of expanding the number of beds by an additional 310 000 by the end of 2019 (Ministry of National Development Planning , 2015b).

Autonomous public health facilities with BLU status are no longer expected to have full support from the government, and can finance their own capital investment (Ministry of Home Affairs, 2007b). They can do this through a collaboration framework with the private sector or KSO (*Kerja Sama Operasi*). By making business agreements with private companies, these hospitals can procure medical equipment and human resources for health through a bidding process. However, health infrastructure, including hospital buildings, has not been permitted to date to be included under this KSO cooperation. This public–private collaboration is supervised by the Directorate General of the MoH (BUK DG), which oversees the proposed financial and overall business agreement arrangements.

In the private sector, foreign investments are not allowed for medical clinics, delivery clinics, specialized clinics and dental clinics, but investment in hospitals by overseas investors is permitted. The regulation on foreign capital investment is explained in more detail in Section 2.8.6. Investment in the private sector has been expanding rapidly whereas in 1990 there were only 352 private hospitals (with around 31 000 beds); the number has expanded to 626 hospitals in 2005 (with around 52 300 beds) (World Bank, 2008b) and has now reached 1474 hospitals. This translates into an increase from 31 000 hospital beds in 1990 (World Bank, 2008b) to the current 128 000 beds (Directorate of Health Services, 2014b). Both domestic and foreign investment for hospitals is regulated by the MoH (Minister of Health, 2010e), which also states that investment plans should undergo needs analysis that is based on demographic, socioeconomic and epidemiological factors as well as the current conditions of existing health facilities (see Section 2.8.6 on the regulation of capital investment).

4.1.2 Infrastructure

Hospital beds

Data sources for hospital beds

Official statistics do not provide reliable and consistent estimates of the number of hospital beds in Indonesia. The MoH routinely reports the number of hospital beds in both public and private sectors in its annual Health Profile publication, but the public sector total has not included beds in *puskesmas*. In addition, the reported numbers are based on the totals reported by individual facilities, and no adjustments are usually made for the significant numbers of hospitals that do not report in any given year. Furthermore, there is a significant discrepancy between the number of beds reported by the MoH in its Health Profile publication and those reported in the online registration database maintained by the MoH, BUK (http://buk.depkes.go.id); the reasons for this are not apparent. In 2013 the BUK reported a total of 255 400 beds (excluding beds in inpatient *puskesmas*), compared with a total of 231 432 beds reported for 2012 in the MoH Health Profile 2012.

Hospitals

Official MoH statistics showed that there were 282 923 beds in 2014 (Directorate of Health Services, 2014b), but these numbers refer only to inpatient beds in hospitals. If beds in *puskesmas* are included, the latest MoH online database recorded a further 35 932 beds in 2014 (Directorate

of Health Services, 2014b), the total number of beds in Indonesia was around 318 855 in 2014, equivalent to approximately 1.26 beds per 1000 population. This is an increase from 173 460 beds, or 0.97 per 1000 population, in 1990.

Figure 4.1 uses the MoH database with an adjustment for an estimated underreporting of inpatient facilities, for which a better online registration system was in place only after 2013. The figure shows a relatively stagnant ratio between the availability of beds and population between 1990 and 2007, with an increase between 2008 and 2014. The increase was partly due to investment in the private sector that resulted in an increase in the number of beds in private hospitals as well as an increase in the number of *puskesmas* with inpatient facilities. In addition, the MoH registration system experienced a policy change, whereby prior to 2013 registration was restricted to hospitals that can be classified in categories A, B, C or D. But starting from 2013, the MoH allowed the registration of non-classified hospitals. This change enabled many previously unregistered hospitals to be included in the MoH database.

The majority of private hospitals are not-for-profit (NFP), mainly operated by religious charitable foundations. With no tax incentives and reduced income from overseas donors, the growth of NFP hospitals has stagnated.

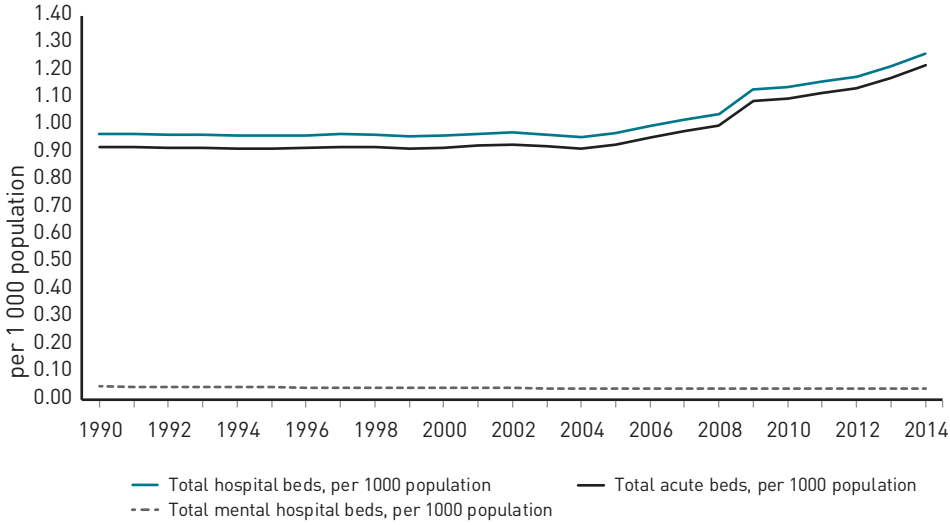
Table 4.2 shows the corrected numbers of hospital beds and mental hospital beds from 1990 to 2014. The number of patient beds in Indonesia increased during the last decade, partly as a result of the expansion of public hospitals at district level following decentralization as well as the growing investment in the private sector. However, prior to 2013, the hospital beds database did not include private sector data. This information is presented graphically as the ratio of beds to population in Figure 4.1.

Table 4.2 Number of beds in acute care hospitals, 1990–2014

	1990	2000	2005	2010	2013	2014
Hospital beds, excluding *puskesmas*	158 179	181 945	196 748	242 670	268 128	282 923
Hospital beds, including *puskesmas*	173 460	201 264	218 469	274 273	304 028	318 855
Mental hospital beds	8745	9163	9359	10 011	10 349	10 464
Total inpatient beds per 1000 population	0.97	0.96	0.97	1.14	1.22	1.26

Note: Corrected numbers using Indonesia Health Profile, BUK online registration database.
Source: Indonesian Health Profile, various years.

Figure 4.1 Mix of beds in acute and psychiatric hospitals (including inpatient *puskesmas*) in Indonesia per 1000 population, 1990–2014



Note: Corrected numbers using Indonesia Health Profile, BUK online registration database.
Source: Indonesian Health Profile, various years.

The majority of hospitals are located in Java and Bali (49.9%), where almost 60% of the Indonesian population resides (Table 4.3) (MoH, 2012a). In contrast, 9% of the total hospitals are located in the eastern part of Indonesia, which accounts for 29% of the total land area, but is populated by only 9% of the total population. Since hospitals outside Java and Bali generally have to serve much larger geographical catchment areas, this limits the accessibility to hospital care in these outer regions. The geographical distribution of private hospitals is mainly concentrated in the Java–Bali region (64.5%), while only 12.9% private hospitals are located in the central and eastern regions of Indonesia.

Table 4.3 Geographical distribution of hospitals in Indonesia by region, 2012

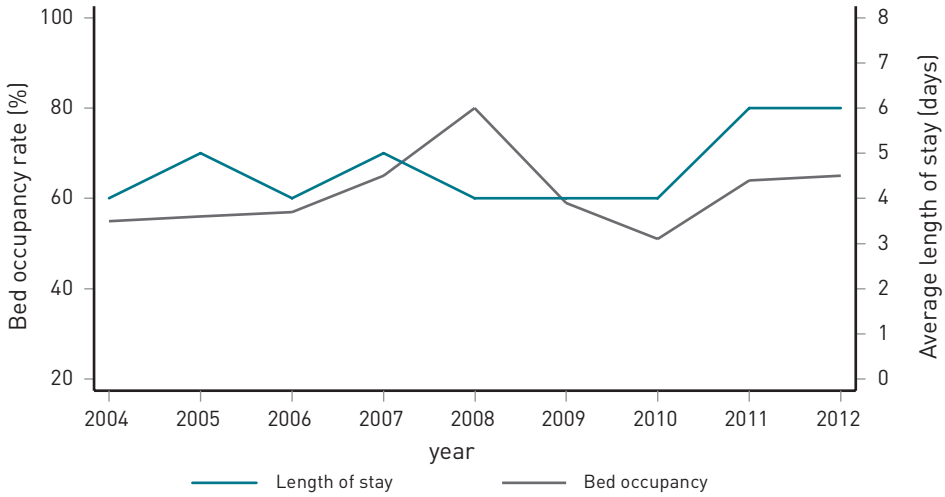
Region	% of population	% of land area	Number of hospitals located in the area/total		% of public hospital	% of private hospital	% of all hospitals
			Public Hospital	Private Hospital			
Sumatra	21.3%	25%	221	287	27.2%	22.6%	24.4%
Java–Bali	59.1%	7%	291	819	35.8%	64.5%	53.3%
Kalimantan	5.8%	28%	81	52	10.0%	4.1%	6.4%
Sulawesi	7.3%	10%	108	70	13.3%	5.5%	8.5%
Maluku–NTT–NTB–Papua	6.5%	29%	111	42	13.7%	3.3%	7.3%

Source: MoH (2013e).
Population information: Central Bureau of Statistics (2010a).

There are large variations in the availability of hospital beds per capita by province, with higher population to bed ratios in regions outside Java–Bali, e.g. West Nusa Tenggara, Lampung and West Sulawesi. This is a longstanding pattern, as for example West Nusa Tenggara had the highest ratio of population to hospital beds between 1975 and 2013 (Directorate of Health Services, 2013). Despite the higher bed-to-population ratios in provinces such as Maluku and West Papua, which are less densely populated, the provision of beds is not sufficient to equalize access disparities given the wide dispersal of the population in these provinces compared with those in Java.

The average length of stay (ALOS) in acute care in Indonesia has tended to increase over the period 2004 to 2012, while bed occupancy rates have remained fairly steady at just over 60%.

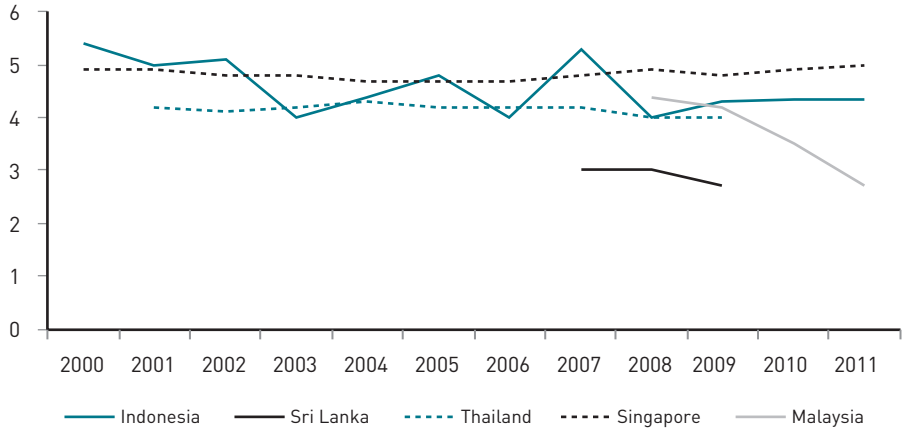
Figure 4.2 Bed occupancy rate and length of stay, Indonesia, 2004–2012



Source: Ministry of National Development Planning (2014c).

The ALOS in acute care in Indonesia ranges from 4 to 5.4 days, which is similar to neighbouring countries such as Singapore and Thailand.

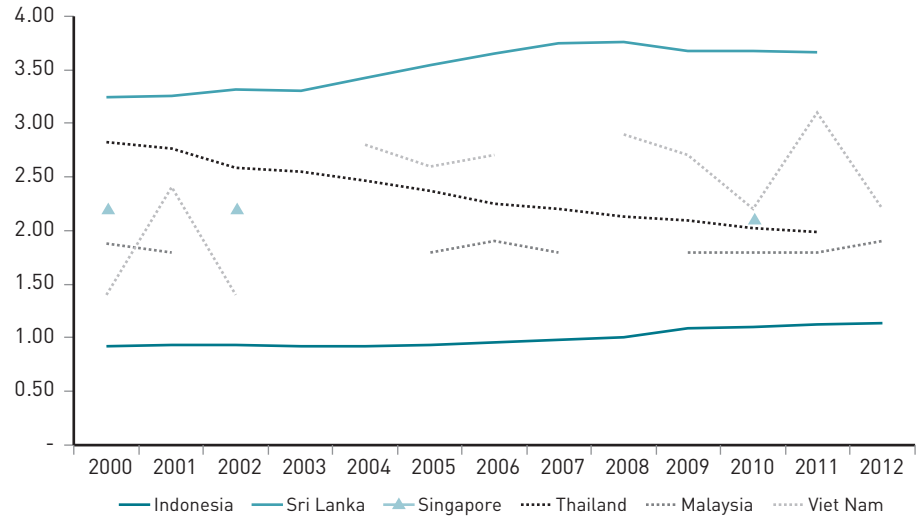
Figure 4.3 Average length of stay in Indonesia and selected countries, 2000–2011



Sources: MoH (2012a); OECD (2014).

Indonesia experienced a slight increase in the ratio of beds to population from 2000 to 2012. When compared internationally (Figure 4.4), the ratio of inpatient beds to population in Indonesia is one of the lowest in the region, much lower than the regional average, and lower than countries such as Sri Lanka and Singapore.

Figure 4.4 Trends in the number of hospital beds per 1000 population in Indonesia and selected countries, 2000–2014



Source: Indonesian Health Profile, various years; World Bank (2015a).

Within public hospitals, beds are categorized by level of service and fees, with 38% of beds being designated for 3rd class patients, 25% for 2nd class, and 14% for 1st class. There are only a few private institutions providing long-term care, and numbers for these are not readily available, so the preceding statistics given for hospitals and bed numbers refer almost exclusively to acute facilities.

Primary health care

Puskesmas and lower-level units in the public sector, and clinics and doctors' offices in the private sector primarily provide ambulatory care, and provide more extensive access than hospitals. The government has made significant efforts to increase the provision and widen the distribution of *puskesmas* and lower-level units, and overall numbers have steadily grown from around 1000 in 1969 to reach 9601 in 2013, as shown in Table 4.4. The overall ratios of *puskesmas* to population are highest outside Java, and regional differences are small, as shown in Table 4.5.

Table 4.4 Number of public sector primary care facilities in Indonesia, 2000–2014

	2007	2008	2009	2010	2011	2013	2014
Puskesmas	8234	8548	8737	9005	9321	9601	9601
Puskesmas without beds	-	-	-	-	-	6292	6281
Puskesmas with Beds	2683	2438	2704	2920	3019	3309	3320

Source: Indonesian Health Profile, various years.

Table 4.5 Distribution of *puskesmas* by Region, Indonesia 2013

Region	Number of *puskesmas* without beds	Number of *puskesmas* with beds	Total number of *puskesmas*	Population to *puskesmas* ratio
Sumatra	1644	819	2463	20 556
Java–Bali	2543	1149	3692	38 055
Kalimantan	538	340	878	15 703
Sulawesi	704	534	1238	14 032
Maluku–NTT–NTB–Papua	863	467	863	11 540

Source: Indonesian Health Profile, various years.

Statistics on the numbers of private ambulatory care providers are not routinely produced, and reliable data exist only for public sector facilities. However, private clinics are concentrated in urban areas and parts of

more densely populated provinces in Java, and so show the opposite distribution to public sector facilities.

4.1.3 Medical equipment

Procurement

In the public sector, the Directorate General of Pharmaceutical and Medical Equipment in the MoH supervises investment in and the management of biomedical equipment. The directorate is responsible for: (1) executing policies on pharmaceutical and medical equipment procurement and maintenance; (2) determining the norms and standard procedures for medical equipment procurement and operations; (3) providing technical guidance and evaluation on the use of pharmaceutical and medical equipment; and (4) supervising the administrative procedures for managing pharmaceutical and medical equipment.

Availability

Table 4.6 shows that there were 69 magnetic resonance imaging (MRI) machines or 0.286 units per million population; 1.053 per million CT scan machines and 0.017 PET scanners per million population. These represent lower ratios than most developing countries in the South-East Asia Region, e.g. compared to Malaysia, Singapore and Thailand. Expensive diagnostic and imaging equipment is mainly available in the major cities and some regions of Indonesia. For example, 56% of CT scanners are located in the Java–Bali region and all PET scanners are located there.

Table 4.6 Number of functioning diagnostic imaging technologies (MRI units, CT scanners, PET scanners) per million population in Indonesia, 2013

Item	Absolute number	Per 1 000 000 population
MRI units [a]	69	0.286
CT scanners [a]	254	1.053
PET [b]	5	0.017

Sources:
[a] MoH registry/database (includes private and public health facilities).
[b] Telephone survey of major hospitals by the Centre for Health Policy and Health Service Management/UGM, 2013.

The availability of basic equipment at primary care facilities in the public sector is often poor, especially in rural areas. There were 5860 *puskesmas* (65.6%) without any working incubator and 7448 (83.4%) without laboratory

facilities in 2011 (NIHRD, 2012). The same survey also found that only 556 *puskesmas* (6.2%) had complete outpatient polyclinic equipment. When rating equipment completeness as equivalent to a minimum of 80% complete medical equipment, of the remaining 5496 *puskesmas* (61%) only 40–79% were found to have complete medical equipment, and 33% had less than 40% complete medical equipment. Equipment availability was better at the hospital level, but 2.7% of public hospitals did not have any necessary medical equipment for all four major basic specialties, namely obstetrics, paediatrics, internal medicine and surgery, and only 35% of public hospitals had complete medical equipment for these four specialties (NIHRD, 2012). Information on the availability and condition of equipment in the private sector is not available or routinely collected.

4.1.4 Information technology

The use of mobile phone technology is widespread in Indonesia, with access to networks in all provincial capitals, district capitals and most rural areas in central islands. Access in more remote areas of NTT, Maluku and Papua is limited. According to a US Census Bureau survey in 2014, there were 281 million active mobile subscriptions, exceeding the total number of the population (US Census Bureau, 2014). The excess number implies that many mobile phone users subscribe to more than one number/SIM card, with teledensity at 112%. Approximately 83.2% households had access to mobile phone and 78% to Internet connection (Ministry of Communication and Information, 2014b).

The number of Internet users in Indonesia reached more than 83.7 million in 2014 (Ministry of Communication and Information, 2014a), placing Indonesia as the eighth largest Internet user globally. Approximately 80% of the users are teenagers between 15 and 19 years of age, with the main usage for social networking such as Facebook (Indonesia is the fourth largest user of Facebook globally), Twitter and Instagram. The average time that mobile Internet users spend using mobile Internet equipment per day is 2.5 hours (US Census Bureau, 2014). A survey on adolescents conducted by UNICEF and the Ministry of Communication and Information revealed that 80% of the respondents were Internet users (Ministry of Communication and Information, 2014b). According to Ministry of Communication and Information data, Internet connection speed in Indonesia is among the slowest in Asia at 2.4 Mbps. As comparisons, the Republic of Korea, Singapore and Malaysia have broadband connection at 23.6 Mbps, 8.4 Mbps and 3.5 Mbps, respectively (Ministry of Communication and Information, 2015).

The adoption and use of information technology (IT) in the Indonesian health system is still limited and uncoordinated. Responsibilities for procurement and design are fragmented, and interoperability of systems is a significant challenge.

Electronic medical records are starting to be adopted in Indonesian hospitals, but growth is slow. There is currently no legal regulation that governs the use of electronic health records nor national guidelines to support their introduction. Hospitals are free to adopt or develop their own electronic medical records, but this is not currently mandatory in Indonesia.

Under the MoH roadmap for HIS development, all *puskesmas* and hospitals will have an online health information system that is interoperable with each other and linked centrally. *Puskesmas* are now starting to be equipped with Internet connections that are directly linked with the MoH database on a real time basis. The plan is to link all 497 DHOs and 33 PHOs with each of the different directorates at the MoH. Primary health care facilities and hospitals will be linked to both the local health offices and the MoH. Under this initiative, various information systems are being introduced, including a generic local health information system (SIKDA Generik) that is used at the DHOs and hospitals, the SIMRS or hospital-level management system, SIM Kespel or the Port Health Management Information System and the Human Resource Information System (SIM PPSDM) linked to a central human resource database. The SIKDA Generic system is now being implemented in a pilot programme in 138 underserved and remote districts.

4.2 Human resources

The data sources used for this section include the registration database from the Indonesian Medical Council (KKI/Konsil Kedokteran Indonesia), the Indonesian Health Profiles published by the MoH and the Village Potential survey (PODES 2011). There were some inconsistencies in the data from these various sources.

The first data source for the number of physicians is the KKI that generates a registration database for every physician in the country, and in which registration is mandatory in order to obtain a national practice licence. However, the KKI database uses aggregated data over years, meaning that there might be an overestimation for the number of practising doctors. The database could include retired, emigrated or deceased physicians. The second data source, Indonesian Health Profile

reports from various years, mainly use data on physicians practising in the public sector, and in some years also included doctors with private practice. However, in some of the profiles, there are difficulties in distinguishing between private and public practice doctors. Furthermore, dual practice of physicians is common in Indonesia. The third data source is the PODES survey (2011), which surveys all villages in Indonesia to obtain information on the health workforce and facilities. However, the limitation of using PODES data is that they do not cover the hospital health workforce. To overcome the data issue, this report uses data splicing for the different data sources to obtain estimated numbers and trends in the number of physicians (for Table 4.7 and Figure 4.5).

4.2.1 Health workforce trends

Human resources for health in Indonesia have grown rapidly over the last decade, as shown by the increasing ratio between health workers and the population.

The basic health workforce available in Indonesia includes general practitioners and specialized doctors, nurses, midwives, dentists and specialized dentists, optometrists, pharmacists, psychologists, radiographers, sanitarians, nutritionists, and physical therapists. Table 4.7 shows the trends in public sector health-care providers, in which there is a steady increase in the ratio of health workforce to the population. However, the ratio between physicians and the population in Indonesia is still below the ideal ratio recommended by WHO.

Table 4.7 Health workers in Indonesia per 1000 population, 1990 to latest available year

Indicators	1992	2002	2010	2011	2012	2013	2014
Physicians	0.15	0.17	0.37	0.39	0.41	0.43	0.46
Nurses	0.52	0.50	0.67	0.91	0.99	1.16	0.70
Midwives	0.12	0.26	0.41	0.51	0.53	0.55	0.54
Dentists	0.02	0.02	0.04	0.04	0.05	0.05	0.02
Pharmacists	0.00	0.03	0.03	0.04	0.13	0.16	0.05
Sanitarian	0.03	0.01	0.09	0.07	-	-	-
Nutritionists	-	0.03	0.05	0.07	-	-	-
Physiotherapists	-	-	0.01	0.01	-	-	-

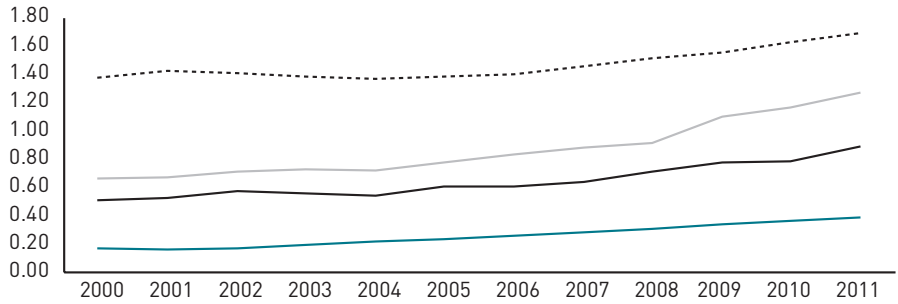
Source: Indonesian Health Profile, MoH database of government employees (http://www.bppsdmk.depkes.go.id/sdmk/).

Physicians

Based on current physician registration data (Indonesian Medical Council, 2014b), Indonesia has more than 139 000 registered physicians, which include general practitioners, specialized physicians and dentists. However, the Ministry of Health's Human Resources database of 2015, only identifies 101 000 registered physicians of the same categories (MoH, 2016). The data discrepancy with the Ministry of Health database is due to the fact that the MoH database is more complete for health workers listed in the private sector. As most doctors work in both the public and private sectors, it is difficult to track down and disaggregate doctors on this basis. Furthermore, Indonesian Medical Council data registers all physicians regardless of whether the doctors are actively practicing medicine or not. As an illustration, physicians who are researchers, and not practicing medicine, would be registered in the Council registry but not in the MoH database.

As noted in Figure 4.5, the number of physicians in Indonesia has been increasing in the last decade. This increase relates to the increasing number of graduates in both general medicine and specialized medicine. In 2010, the Indonesian Medical Association registered 7326 graduates from the medical school, compared with only 838 graduates in 1990. A similar pattern is also seen in the number of specialized doctors graduating, where the graduates in 2010 were more than three times the numbers found in the 1990s. However, compared to countries within the Asian region, Indonesia has the lowest ratio of physicians to population, as seen in Figure 4.5.

Figure 4.5 Ratio of physicians to 1000 population in Indonesia and selected countries, 2000–2011



Notes:
2000–2006 data: Indonesian Health Profile data adjusted so that 2006 number matches 2006 Indonesian Medical Council number.
2006–2011 data: Indonesian Medical Council data.
Geometric interpolation used on raw data for 2003 and 2011–2012 which is missing data.
Source: Indonesian Health Profile.

Most of the increase in physicians results from an increase in the number of medical schools, particularly in the private sector. The number of medical schools increased from 40 in 2003 to 72 in 2013, an increase of 80% during the last 10 years. Of those 72 schools, about 60% are private.

Table 2.8 highlights physician distribution in 2015. As indicated, most Indonesian doctors (57.4%) were located on the islands of Java and Bali, serving 36.7% of the population and only 6.9% of the total area of Indonesia. The lowest number of doctors is located in the eastern part of Indonesia, where only around 4.6% of total doctors reside in the provinces categorized as eastern Indonesian provinces (East Nusa Tenggara, Maluku and Papua). Based on population numbers, the distribution of doctors is very low in eastern region but seems to be not too skewed in the rest of Indonesia. Moreover, there is a large geographical inequity whereby doctors in eastern Indonesian regions have to serve much larger areas due to the limited number of physicians.

In terms of specialized health-care, the Risfaskes (2011) survey reveals that from 142 hospitals in 10 provinces, 32 hospitals did not have any in-house paediatric specialist, 27 were without an internist or surgeon, and 20 did not have any obstetrician (NIHRD, 2012).

Table 4.8 Distribution of doctors in Indonesia by geographical areas (2015)

Regions	Doctors		% Population	% Land mass	Doctors to 1000 population ratio	Specialized doctors to 1000 population ratio
	No.	% of total				
Sumatra	24 595	24.2	13.6	24.6	0.44	0.19
Java–Bali	58 283	57.4	36.7	6.9	0.39	0.20
Kalimantan	5726	5.6	3.8	27.9	0.37	0.13
Sulawesi	8302	8.2	4.6	11.8	0.44	0.19
Maluku–NTT-Papua	4709	4.6	41.4	28.8	0.03	0.01
Total	**101 615**				**0.25**	**0.12**

Source: MoH (2016); Central Bureau of Statistics (2017) (on population size).

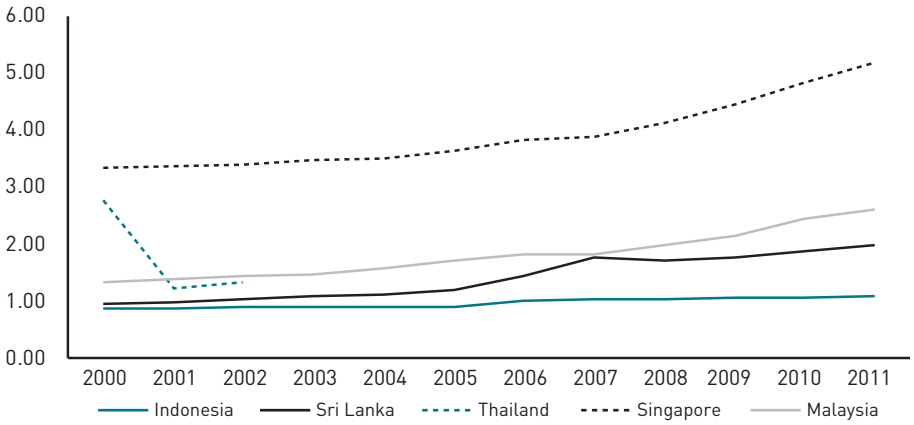
The distribution of physicians and the ratio of doctors to population varies across the different provinces in Indonesia. DKI Jakarta province, where the capital city is located, has the highest number of doctors as well as the highest ratio of doctors to population. In contrast, West

Sulawesi province, located in the eastern part of Indonesia, has both the lowest absolute number of GPs and the lowest per 1000 population. The Indonesian Medical Council database – which registers physicians every five years in each province – shows that only a few provinces in Indonesia have the WHO-recommended ratio of doctors to population of at least one doctor for every 1000 population (Indonesian Medical Council, 2014b). Even in several areas in Java, the most developed part of Indonesia, the ratio of doctors to population is below the WHO recommended ratio.

Nurses and midwives

Similar to developments in the number of physicians, the number of Indonesian nurses has also slightly increased over the past decade. However, the ratio of nurses to population is also the lowest among countries in the Asia region, e.g. in Malaysia, Singapore, Sri Lanka and Thailand (Figure 4.6).

Figure 4.6 Number of nurses per 1000 population in Indonesia and selected countries, 1990–2011



Source: Indonesian Health Profile, various years and BPS (on population size)

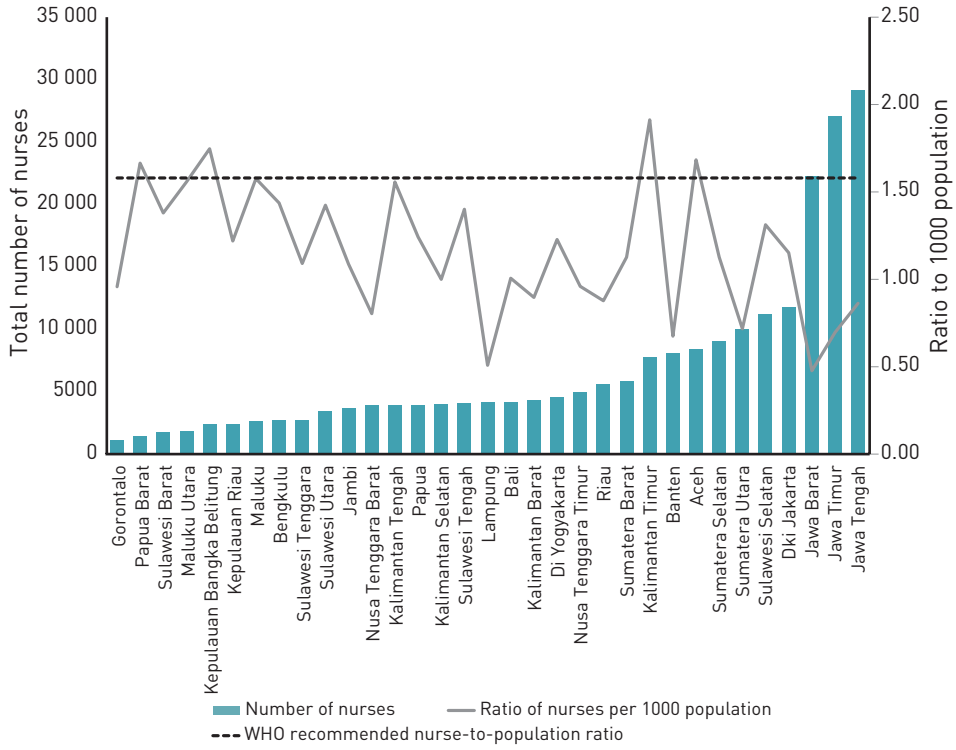
Despite the increase in the number of nurses and midwives, there is a pronounced shortage at both hospital and *puskesmas* levels. The shortage is calculated on the basis of unfilled positions. According to a study by the World Bank (World Bank, 2014c), there is a shortage of 87 874 nurses and 15 311 midwives at the hospital level. The shortfall at *puskesmas* level is less severe compared to that at hospital level, but is still markedly high, with shortages of nurses and midwives of 10 146 and 4485, respectively.

The geographical distribution of nurses and midwives is better than that for doctors, but inequities do exist. According to the latest Ministry

of Health data (MoH, 2016), the majority of nurses and midwives are located on Java and Sumatra islands, in comparison with Papua, NTT and Maluku islands. However, given the shortfalls in the overall number of both nurses and midwives in Indonesia, only few provinces have met the WHO-recommended ratio, i.e. 1.58 nurses and 0.75 midwives per 1000 population.

As shown in Figures 4.7 and 4.8 on nurse and midwife distribution across Indonesian provinces, even some provinces of Java Island have not met the required ratio, i.e. West Java, East Java and Central Java. Areas with a high maternal and neonatal mortality burden also face similar shortfalls. In relation to the maternal and neonatal health burden, a study by the World Bank found that even in areas with a similar availability of nurses and midwives, maternal and neonatal health outcomes show large variations (World Bank, 2014c). There are some acknowledged data challenges for the analysis, such as the quality of data recording for

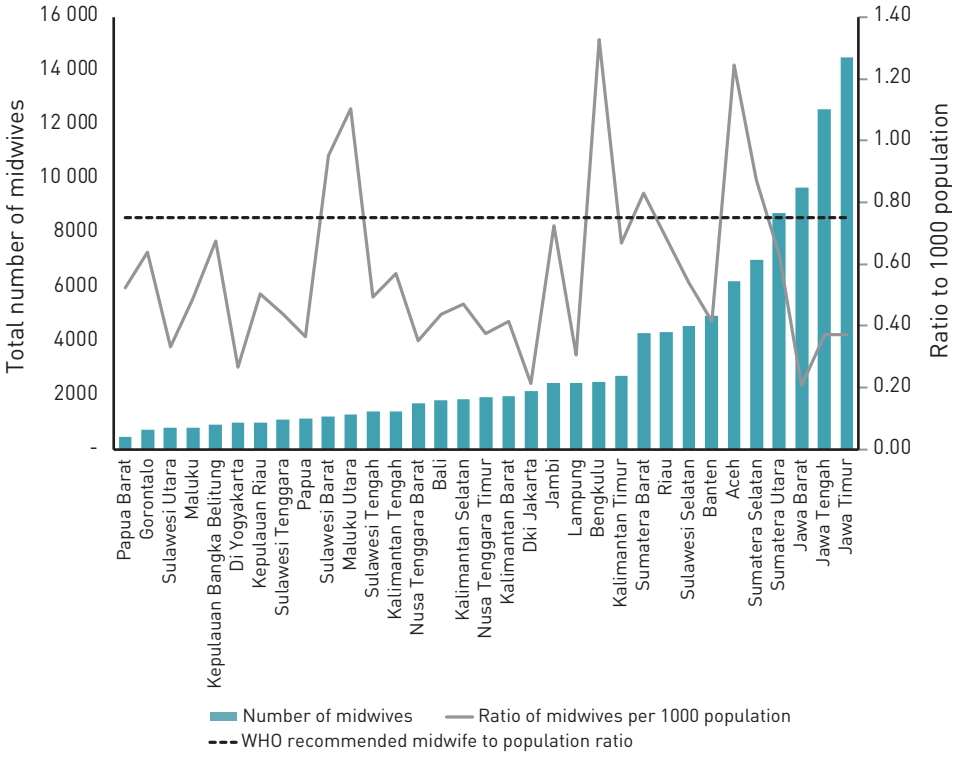
Figure 4.7 Nurse distribution and ratio to population



Source: MoH (2016); Central Bureau of Statistics (2017) (population data).

maternal and neonatal deaths in various areas. However, the analysis suggests that further assessment is warranted to explore the relationship between health worker distribution and MCH outcomes. This would include the quality of services, utilization and accessibility of services, and factors related to nutrition, poverty and remoteness.

Figure 4.8 Midwife distribution and ratio to population

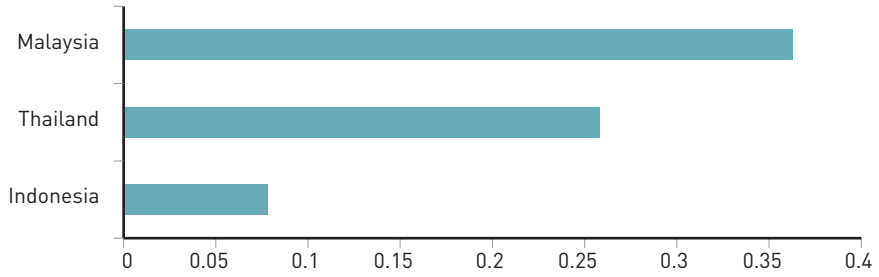


Sources: MoH (2016); Central Bureau of Statistics (2017) (population data).

Dentists

Figure 4.9 shows the ratio of dentistry personnel to 1000 population in Indonesia and selected countries in the South-East Asia Region in 2010. Similar to the ratios of physicians and nurses to population numbers, Indonesia has the lowest density of dentistry personnel compared to other countries.

Figure 4.9 Number of dentistry personnel per 1000 population in Indonesia and selected countries

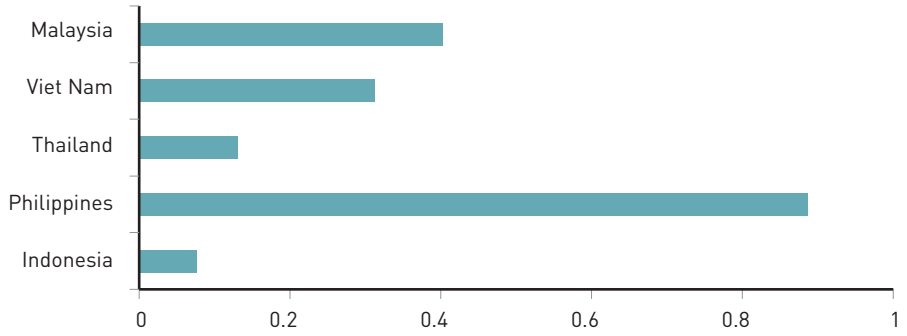


Source: WHO database (http://apps.who.int/gho/data/node.main.A1444?lang=en).

Pharmacists

Figure 4.10 shows the ratio of pharmaceutical personnel to 1000 population in Indonesia and selected countries in the South-East Asia Region in the latest available year. Indonesia has the lowest density of pharmaceutical personnel, compared to Malaysia, Viet Nam, Thailand and the Philippines.

Figure 4.10 Number of pharmaceutical personnel per 1000 population in Indonesia and selected countries, 2010 and 2011



Note: Malaysia, Thailand and Indonesia use 2010 data, Viet Nam and the Philippines use 2011 data.
Source: WHO database (http://apps.who.int/gho/data/node.main.A1444?lang=en).

4.2.2 Professional mobility of health workers

The migration of health workers from and to Indonesia has traditionally been modest. The lack of recognition by most other countries of Indonesian qualifications and language barriers acted as significant barriers to migration of doctors and nurses, even to neighbouring Australia. OECD estimates indicate that in 2000 there were around 3500 nurses and 2700 doctors from Indonesia working in developed

countries, implying that the overall percentages of Indonesian doctors and nurses emigrating were substantially lower than from countries such as Malaysia, the Philippines and Viet Nam, but comparable to the rates for India (OECD, 2007). From this perspective, migration has not been a significant factor constraining the availability of health workers in Indonesia.

However, in the past decade outmigration of health workers has become more significant, particularly of nurses, mainly to the Persian Gulf States (Saudi Arabia and Kuwait), and most recently to Japan and Taiwan, with numbers limited only by language issues and inadequate training levels (Suwandono et al., 2005). Further, the Ministry of Labour and the MoH have recently facilitated the posting of health workers abroad, by providing regulations through Law No. 36/2009 (House of Representatives, 2009c) and No. 39/2004 (House of Representatives, 2004f) and by negotiating bilateral agreements with foreign governments. In May 2008, Japan signed an accord with Indonesia to accept 1000 nurses and nurse specialists over the following two years. These nurses were officially trainees, and worked in either rural areas or nursing homes for the elderly (Connell, 2010). A total of 1677 Indonesian health workers are now posted through these schemes to various countries, most of whom are nurses (n=1636) along with a few medical doctors, physiotherapists, midwives, sanitarians and medical safety coordinators. These recent trends have been supported by the development of training courses geared to producing nurses and doctors for export, and concerns have been expressed that the increased export of health-care workers from Indonesia may exacerbate the problems of shortage and quality of care in the Indonesian health system (Kanchanachitra et al., 2011).

4.2.3 Training of health workers

Training institutions

As of 2014, there were 73 medical schools in Indonesia producing an average of 5500 medical graduates a year. This represented an increase of 40% since 2001, mainly due to an expansion in the number of private medical schools – there are 42 private medical faculties (Indonesian Medical Council, 2014a). Following decentralization, there has been pressure from many local governments to establish their own medical faculties to meet their own demands for new doctors. However, quality issues remain a concern, with 33 faculties (45%) only given C-class (the lowest level) accreditation. The accreditation of medical school is decided

by the Higher Education National Accreditation Bureau (BAN-PT), where A-class accreditation is the highest and C-class the lowest. Among the 73 medical faculties, only 18 (24.6%) have A-class accreditation (Indonesian Medical Council, 2014a). The concern in quality education for medical students has led to the suggestion to close down C-class medical faculties by the Indonesian Medical Association (IDI), but the proposal has not yet been agreed to or realized.

There are more than 400 schools offering midwifery education, and over 600 schools offering nursing education. Most of these are privately managed (84% of the midwifery schools and 51% of the nursing schools in 2009). As with medical training, decentralization has also led to local governments establishing their own midwifery and nursing schools.

Medical doctors

Following reforms in 2004, the Indonesian Medical Council (KKI) was established to oversee curriculum development and registration of medical doctors. It requires all new medical graduates to undertake 3.5 years of undergraduate training at a faculty of medicine to obtain a bachelor of medicine degree, followed by two years of clinical rotation leading to the national board examination, after which the medical school can award the final degree. Medical training has shifted to the use of a competency-based curriculum and problem-based learning approach, and it is now mandatory that all medical faculties use the same system. However, the rapid adoption of both reforms has proven challenging and resource-intensive, even for the best medical schools, and implementation varies across medical schools. The KKI is mandated to hold the national board examinations and determine the level of passing grades for medical graduates. Since 2006, the national board examination has been a prerequisite for new medical graduates to register for a medical licence, and for existing doctors who are renewing their registration.

Since 2011, in addition to formal undergraduate training and a two-year clinical rotation programme, medical graduates have to undergo an additional one-year medical internship, during which the fresh graduates serve in public hospitals under the supervision of senior medical professionals (*Programme Internship Dokter Indonesia/*PIDI).

PIDI is a one-year service for recent graduates from faculties of medicine that already use a competence-based curriculum (*kurikulum berbasis*

*kompetensi/*KBK) (Minister of Health, 2013a). PIDI is a pre-registration training and is a prerequisite for obtaining registration (*Surat Tanda Registrasi/*STR) by the Indonesian Medical Council (*Konsil Kedokteran Indonesia/*KKI) (Indonesian Medical Council, 2010a). In order to undertake PIDI, the recent graduate has to pass a competency test (*Ujian Kompetensi Dokter Indonesia/*UKDI). Their deployment is coordinated by the internship committee (*Komite Internship Dokter Indonesia /*KIDI) (Minister of Health, 2011b).

However, complaints surrounding the medical internship programmes persist due to low payment, unclear rights and expectations of the interns, and an unclear medical curriculum during the internship period. Since 2006, medical graduates will have to pass the national board examination after completion of formal undergraduate training and clinical rotation.

The MoH organizes and allocates funds for the training of specialist doctors. Specialist training is done in a number of designated academic hospitals, all of which are public hospitals affiliated with public medical faculties. The duration of training varies from eight to nine semesters. The specialized doctor training programmes provide specific allocations for doctors originating from remote or underserved areas, which is consistent with Minister of Health Regulation No. 535/2008 (Minister of Health, 2008a) and aims to fulfil the requirements for human resources for health in remote and underserved areas.

Nurses

The current training for nurses is in accordance with the Law on the National Education System (House of Representatives, 2003b). There are four levels of nurse training (PPNI, 2014): (1) vocational training leading to a diploma certificate; (2) academic training, which includes undergraduate and postgraduate nursing studies; (3) professional training, which involves a two-year internship required for obtaining a national nursing licence from the Indonesian Nursing Association; and (4) specialized nursing training, which includes specific training for surgical, maternity, community, paediatrics or psychiatric nursing.

Standards for nursing competency were revised in 2008, and the national nursing board examination is mandatory to obtain a nurse's licence after the completion of professional training for nurses.

Midwife

Midwifery training in Indonesia started in the mid-nineteenth century, when the Dutch colonial government established midwifery schools for indigenous Indonesians. Following independence, midwifery training was organized at the same level as high school education, and junior high school graduates were accepted into three-year midwifery schools. Localized midwifery training at the district level was started in the 1980s, when one-year crash programmes were established to ensure the availability of midwives in remote parts of Indonesia, which was known as the Midwife C and D programme.

Currently, midwifery training is at four different levels: (1) Diploma III midwives; (2) Diploma IV midwives who will serve as educators at midwifery schools; (3) undergraduate and graduate level midwives; and (4) post-doctorate midwives. The Indonesian Midwifery Association (IBI) functions as the governing body for midwife certification and professional registrations.

4.2.4 Doctors' career paths and registration

Doctors' career paths depend on where they work. For public servants at subnational level, the appointment and promotion of medical officers is undertaken according to the minimum qualifications/credit points established for each level and according to the policies determined by the Ministry of Internal Affairs.

Since government policy permits dual practice, most government doctors also work in the private sector, usually at corresponding levels. However, doctors working purely in the private sector can have different career paths, depending on the level of training obtained. Most private general practitioners pursue higher education and obtain specialization after several years working as a GP.

All physicians are now obliged to register with the Indonesian Medical Council (KKI) after the completion of medical education and successfully pass the national medical board examination (set by the KDI). Registration is valid for five years, and physicians must renew their licence by providing proof of competency. For licence renewal, doctors have to collect a minimum of 250 credit points, which can be acquired through medical practice and various activities in the form of continuing medical education, including academic seminars, professional training, and research. Similar credit unit requirements are also applicable for

nurses and midwives to renew their licences. Regulations concerning registration, practice licences and human resources planning are explained in detail in Section 2.8.3.

4.2.5 Dual practice

Indonesia's health regulations allow health personnel to work in both public and private sectors, with a limit of a maximum of three practice locations. This arrangement aims to increase the availability of health personnel in both public and private sectors. Dual practice in Indonesia is not a new phenomenon. According to a study from 1993, approximately 80% of public physicians in Indonesia engaged in dual practice (Bir and Eggleston, 2003). However, dual practice is a contributing factor to maldistribution of health personnel, particularly specialist doctors: maldistribution is caused by the reluctance of specialist doctors to move to areas without private practice and with less well-equipped medical facilities, where they would miss out on a significant portion of income. This statement is supported by a study by Meliala et al., which found that 65.6% of income for surgeons and 81.2% of obstetricians were from the private sectors (Meliana A, Hort K, Trisnantoro L, 2013). Despite the regulations, the study also found that most specialists included in the study were working in more than three practice locations, some in up to seven locations. Very few specialists spent the required hours of work in state hospitals, which caused limited availability of key services in public hospitals.

5 Provision of services

Chapter summary

The MoH has overall responsibility for the organization and management of programmes addressing public health issues, such as programmes to combat communicable diseases, including TB, HIV/AIDS, malaria, dengue and avian influenza. These programmes are led by the MoH at national level, but are delivered by the network of public facilities at district level (hospitals and DHOs), and at community level (*puskesmas* and their networks). There is also an active surveillance and outbreak response system, and regular national surveys to measure and monitor key aspects of population health.

The *puskesmas* and their networks manage and deliver the basic immunization programme, although the programme can also be accessed through private providers. The immunization programme still faces significant challenges from both supply and demand sides, e.g. geographical disparity, topographical situation, limited availability of outreach activities and cold chain maintenance due to the decentralization and availability of funding, negative perception of the side-effects of immunization, and suspicion of *haram* ingredients, despite awareness campaigns.

The MoH also organizes and directs health promotion activities, which again are delivered through the network of facilities at district and community levels. Preventive efforts also focus on NCDs, including through health promotion to raise public awareness and community-based health awareness groups, early screening and early detection. For example, the *Posbindu* is a community engagement programme that addresses almost all NCD risk factors, and is integrated within other settings in communities, such as schools, workplaces and residences. Although Indonesia is neither signatory or a party to the FCTC, several policies on tobacco control have been implemented, such as higher excise taxes on cigarettes, stricter regulation of tobacco advertising, and of the promotion and sponsorship of tobacco products,

the introduction of smoke-free public places, and regulations covering packaging and labelling of tobacco products.

The patient pathway commences at the primary care facilities, *puskesmas* and their networks, which act as gatekeepers for JKN patients before they are referred to hospitals for further treatment. Without a referral letter, a JKN patient is not allowed to seek treatment directly at a hospital or specialist clinic, except in an emergency situation. The *puskesmas* provide both curative and public health services, with a focus on six essential service areas: health promotion, communicable disease control, ambulatory care, MCH and family planning, community nutrition and environmental health, including water and sanitation. Information and education on family planning is provided by the National Population and Family Planning Board (BKKBN) and its subnational level agencies, while clinical family planning services are provided by MoH facilities.

Inpatient facilities include public hospitals at national, province and district levels, and a growing number of private hospitals, particularly in the central islands of Java–Bali. While patients who consult at a hospital should be referred from PHC level, many patients come directly to hospitals and pay OOP. As a result, patients accumulated at hospitals and faced a long queue. Emergency care is provided by all levels of services. Since 1970, pre-hospital care has radically improved when the Indonesia Surgeons' Association started to operate the 118 EAS in Jakarta with the support of the local government.

The provision of pharmaceuticals and oversight of the quality of pharmaceutical production is managed by the MoH Food and Drug Supervisory Board. In ensuring access to pharmaceuticals, the MoH ensures the availability of 484 essential drugs for primary care as listed in the National List of Essential Medicines, the list of national health programme-related drugs and vaccines. The government also monitors production capacity in the country and regulates the drug price by imposing price ceilings for several essential drugs.

The need for long-term care is small but increasing. Private providers have emerged to offer nursing and homecare services to affluent households. Unfortunately, the data are not well documented. Basic mental health services are integrated into general health services but the shortage of mental health specialists remains. Community-based mental health organizations play a significant role in reducing stigmatization and discrimination against people with mental health disorders. There is

still inadequate provision and underutilization of dental care. Common problems are shortages and maldistribution of dentists in public health facilities, with distribution heavily skewed to urban areas. The private sector provides a substantial part of all dental care treatment.

Many people, especially in rural and remote areas, still turn to alternative medicines (known as *"jamu"*) and traditional treatment conducted by a shaman (known as *"Dukun"*) rather than going to health professionals.

5.1 Public health

The MoH has overall responsibility for organizing and developing public health services in Indonesia, and in particular for disease surveillance and preventive activities. Delivery is shared with provincial and district health authorities, and provided through specialized programmes and individual health facilities, including *puskesmas* and their networks at the local level.

In early 2015, the MoH launched the Healthy Indonesia Programme to develop an Indonesian community with healthy behaviour, living in a healthy environment and able to reach quality health services, in order to achieve the highest possible health status. The Healthy Indonesia Programme consists of: (1) paradigm of health; (2) primary health care strengthening; and (3) national health insurance. These three components will be applied through a continuum of care approach and risk-based interventions.

5.1.1 Environmental and communicable disease control functions

Communicable disease control and environmental health are led by the MoH and implemented together with PHOs and DHOs. The Directorate General for Disease Control and Environmental Health consists of five directorates: (1) Directorate for Surveillance, Immunization, Quarantine, and environmental health; (2) Directorate for Communicable Disease Control (tuberculosis, HIV/AIDS, sexually transmitted diseases, diarrhoea and other abdominal infections, acute respiratory infections, leprosy and frambusia); (3) Directorate for Animal Borne Disease Control (arbovirus, filariasis, malaria, vector control and zoonosis); (4) Directorate for Noncommunicable Disease Control; and (5) Directorate for Environmental Health (water, basic sanitation, food sanitation, housing sanitation, public area sanitation, climate change, and radiation waste).

Communicable Disease Control

Tuberculosis control

Control of TB in Indonesia is implemented within the framework of autonomous districts/cities as the centres of programme management, including planning, implementation, monitoring and evaluation as well as ensuring the availability of resources (funds, facilities and infrastructure). At the national level, TB control efforts are conducted through the National Integrated Movement for the Control of Tuberculosis (TB Gerdunas), a cross-sectoral partnership forum under the coordination of Minister of Social Welfare, in which the Minister of Health is in charge of the technical aspects. This national programme is implemented by the Directorate General of Disease and Environmental Health of the MoH, Subdirectorate of Tuberculosis. At provincial level, the provincial TB Gerdunas is implemented by the PHO. The TB Gerdunas is also implemented at the district/city level by district/city health offices. Programme services are provided by hospitals, clinics, private doctors, and *puskesmas* (MoH, 2014c).

Since 1972, hospital-based TB treatment was replaced with ambulatory-based treatment, heavily emphasizing the role of *puskesmas*. In 1999, the government launched the National Unified Movement to Combat TB. Since then, every hospital and *puskesmas* has been required to have a minimum of one medical doctor and one polyclinic staff member who is in charge of the TB programme. Every *puskesmas* must also have one trained laboratory member of staff. Although public providers are the backbone of TB control in Indonesia, private practices also provide TB treatment and some private providers apply the DOTS strategy.

To ensure coordination among stakeholders at district level, TB control is supervised by a vice supervisor (VS) from the DHO. The VS collects data concerning new cases from *puskesmas* and ensures sufficient supply of TB drugs. Every VS is responsible for a maximum of 20 *puskesmas*. The TB provincial team has a role in monitoring and providing technical support to the DHO. Therefore, at the provincial level, the TB team consists of: a provincial project officer, a provincial training coordinator, and a provincial technical officer. Basic TB case management policy is based on Health Ministerial Decree No. 364/2009 on guidelines for TB control, and Health Ministerial Regulation No. 13 of 2013 on guidelines for the integrated management of drug-resistant TB (MoH, 2014c).

HIV/AIDS control

The first National Strategy on HIV and AIDS was formulated in 1994, long before the establishment of the National AIDS Commission in 2006. The National Strategy for HIV and AIDS is intended as a guideline for all government sectors, local governments, NGOs, the private sector and donor agencies in tackling HIV and AIDS. The 2010–2014 strategy and national action plan on HIV and AIDS focus on: (1) prevention; (2) care, support and treatment; (3) impact mitigation programmes; and (4) programmes to improve the enabling environment. The budget is estimated at IDR 10.3 trillion (US$ 1.1 billion). The efforts to tackle HIV and AIDS are led by the MoH (HIV/AIDS subdirectorate). However, to ensure the involvement of various stakeholders, Presidential Regulation No. 75/2006 and Minister of Internal Affairs Regulation No. 20/2007 assign the National AIDS Commission (NAC) and local AIDS commissions to lead, manage, control, monitor and evaluate the implementation of HIV and AIDS control programmes at the respective levels of government. The NAC (national and local levels) consists of relevant government sectors, civil society, including people living with HIV/AIDS, representatives of community AIDS service organizations, professional organizations and the private sector. Additionally, the Minister of Health promulgated Regulation No. 21/2013 to clarify the roles and responsibilities of government (central, provincial and district/city) in the efforts to control HIV and AIDS, including HIV diagnosis and the duties of health-care facilities, particularly in hospitals (AIDS Prevention and Control Commission, 2010).

Malaria control

Malaria is endemic in most parts of Indonesia, but is more common in rural and remote areas. The malaria elimination programme provides a comprehensive and integrated platform for central government, local government, and development partners, including NGOs, the private sector, donor agencies, professional organizations, community organizations and the public. Guidance and supervision of the implementation of the elimination of malaria in Indonesia is provided by the MoH, through local health offices in provinces/districts/cities by involving professional organizations and relevant stakeholders. Treatment of malaria using ACT (artemisinin-based combination therapy) is provided free of charge at *puskesmas* and government hospitals.

Before the era of decentralization, malaria elimination was mostly carried out centrally, especially in the eradication programme through

the Malaria Eradication Command (KOPEM). In the era of autonomy and decentralization, the malaria elimination programme is based on circular No. 443.41/465/SJ of the Minister of Home Affairs on the Elimination of Malaria in Indonesia. The elimination programme is also supported by Health Ministerial Decree No. 293/Menkes/SK/IV/2009 that sets out the role of government, local governments (provincial/district/city), as well as the entire health personnel at central and local levels in taking proactive and responsive measures, and building networks and partnerships with stakeholders in malaria control efforts. The decree also regulates the role of the private sector, NGOs, CSOs community-based organizations, religious/faith based organizations, donor agencies, professional organizations and other community organizations as equal partners of government through the "Gebrak Malaria" forum or other collaboration forums that have been formed for the elimination of malaria.

The majority of programme funding for TB, malaria and HIV is derived from The Global Fund, which has provided support since 2002. The Global Fund has committed to provide a budget of 693 million US dollars for the eradication of these three infectious diseases in Indonesia. The fund is allocated for TB (35%), HIV/AIDS (34%), malaria (29%) and a small proportion for health system strengthening (2%) (Global Fund, 2015). In 2014, the chairman of the Tahir Foundation established a new Indonesian Health Fund with an initial investment of US$ 40 million from eight Indonesian business leaders. The Bill & Melinda Gates Foundation matched this investment. A separate investment of US$ 65 million to The Global Fund was also made by Dr Tahir. This is the largest investment ever made by a private foundation in an emerging economy country to The Global Fund. The Indonesian Health Fund aims to bring additional private donors in the future (Global Fund, 2014).

Dengue control

The local governments in provinces and districts with endemic dengue prioritize the dengue eradication programme in an effort to break the chain of disease by conducting programmes to clean up mosquito breeding sites (PSN snapping). This activity involves various parties, including the Working Group on dengue haemorrhagic fever (DHF), a village midwife, and *Jumantik* (larva monitoring workers). *Jumantik* are comprised of community/health volunteers who are appointed by the provincial government and local authorities in charge of house-to-house monitoring in villages. To expand the scope of these activities, *puskesmas* (which are responsible for eradicating DHF at the village level) also

involve elementary students in monitoring mosquito larvae in homes and surroundings through distributing periodic monitoring of larvae cards (PJBs). This activity is also supported by the private sector in collaboration with the Indonesian Public Health Association to train teachers and elementary students in monitoring mosquito larvae.

Avian influenza control

Avian influenza (AI) has been a serious concern in Indonesia since an outbreak that took place in 2005. Considering that the spread of AI in humans and poultry needs serious intersectoral collaboration, the government set up a national commission on avian influenza control (Komnas FBPI) through Presidential Regulation No. 7 of 2006. The regulation also structured the development of local committees, expert panels, working groups and the secretariat of the Komnas FBPI. The main duty of Komnas FBPI is to disseminate knowledge and programmes related to AI to all citizens. Additionally, Presidential Instruction No. 1 of 2007 mandated the Coordinating Minister for People's Welfare, the Minister of Finance, the Minister of Agriculture, the Minister of Health, and the Chief of the Armed Forces of Indonesia, as well as governors, heads of districts, and mayors, to increase the intensity of efforts to strengthen control of AI and take concrete and efficient steps for the handling and strengthening of AI control in districts/cities, including surveillance, detection, containment, response and communication. The Minister of Finance was asked to prepare the budget, and coordinate and optimize funding for the management and control of AI. However, the governors, heads of districts and mayors were also instructed to allocate funds for the implementation of the management and control of AI at the local level.

Environmental health

The government has committed itself to creating a healthy environment as part of its national health strategy, to achieve MDG 7 with efforts focused on preventive measures to ensure a healthy environment and improving access to clean water. Responsibility for improving access to clean water is multisectoral, with the MoH responsible for improving community knowledge and behaviours, while Ministry of Public Works is responsible for ensuring clean water supply and infrastructure. The environmental health section of each DHO has the main responsibility to prepare, develop, and implement technical training for environmental health improvement. In addition, the Directorate for Environmental Health

in the Directorate General for Disease Control and Environmental Health oversees the management of medical and hazardous waste at health facilities, management of hazardous materials, such as pesticides, and prevention of radiation contamination. The Directorate also monitors food sanitation and hygiene by certifying and supervising food sellers and catering services. However, the task of carrying out Planning, Execution, Control, Monitoring and Evaluation of Regional Policy in the field of Environmental Management Protection (PPLH) is conducted by the Local Environmental Management Body (BPLHD) or, in some parts of Indonesia, by the Environmental Impact Management Agency (BAPEDAL), which is under and responsible to the governor/head of district/mayor through the district secretary.

Meanwhile, according to Government Regulation No. 82/2001 on water quality management and water pollution control, management of water quality and water pollution control is as follows: the central government manages water quality and water pollution control for cross-provincial and cross-border areas; the provincial government coordinates provincial water quality management and water pollution control for cross-district/city areas, while the district/city government manages water quality and water pollution control at the district/city level.

Air quality directly affects public health. To check air quality, the authorities have introduced monitoring systems that utilize a variety of techniques. A continuous automated monitoring network using the Air Quality Management System is available in 10 cities. Passive monitoring has also been established in 33 provincial capital cities and 248 regencies to measure nitrogen dioxide (NO_2) and Sulfur dioxide (SO_2) levels in more than 400 locations. Parameters for roadside measurement of air quality include carbon monoxide (CO), hydrocarbons (HC), SO_2, total suspended particulate (TSP) , ozone, and NO_2. Data collected between 2006 and 2012 in 33 provinces indicate a rising trend in NO_2 concentration, possibly due to increased burning of fossil fuels. Increased air pollutants negatively affect people health, particularly respiratory health (Ministry of the Environment, 2013).

Forest fires are also a major problem in Indonesia, where the uncontrolled burning of large areas of land and the associated haze, which often occurs (as a result of human activities or natural phenomena), are now an almost annual problem. Following the 1997 fires, an estimated 20 million people in Indonesia suffered from respiratory

problems, with 19 800 to 48 000 premature deaths. In severely affected areas, more than 90% of people had respiratory symptoms (Ministry of the Environment, 2013). According to the 2010–2014 National Disaster Management Plan, combating the threat of forest fires is carried out under the coordination of the National Disaster Management Agency (BNPB). The BNPB as the lead agency at the national level will support funding for fire control operations, establishing smoke disaster assistance emergency command posts in the priority provinces, providing necessary support to the region, and coordinating the deployment of the national resources when needed. At the local level, the Regional Disaster Management Agency (BPBD) is responsible for the implementation of disaster management in the provincial and district/city level based on the policies defined by the BNPB. Forest fire management also involves other ministries and institutions such as the army/police, Ministry of the Environment, Ministry of Forestry, Ministry of Agriculture, and local governments (National Agency for Disaster Management, 2010).

Environmental protection

The law regulates environmental protection, which includes the management of materials and waste that are considered dangerous and/or poisonous (*bahan berbahaya dan beracun/*B3) (House of Representatives, 2009b; Government of Indonesia, 2001b) and any other waste (Government of Indonesia, 2012a). Enforcement is carried out through the supervisor for the environment (*Pejabat Pengawas Lingkungan Hidup/*PPLH), a functional body in local governments and in central government (in the State Ministry of the Environment). At the moment there are 334 PPLH at the central level, and 1491 PPLH in provincial and district/municipality governments (Ministry of the Environment, 2014). The law also regulates pollution and any other potential damage to the environment. One of the implications is that a thorough environmental impact assessment (*analisis mengenai dampak lingkungan/*AMDAL) is required for major building development (Government of Indonesia, 2012a). A hospital, for instance, has to submit its AMDAL and comply with the regulation regarding hospital waste management (Minister of Health, 2004c). There are regulations regarding air and noise pollution (House of Representatives, 1997; Government of Indonesia, 1999), water pollution (Government of Indonesia, 2001a), groundwater (Government of Indonesia, 2008b), ground pollution (Government of Indonesia, 2000), and forest/land fire (Government of Indonesia, 2001a). Enforcement is undertaken at local government level through the Environmental Impact Management

Agency (*Badan Pengendalian Dampak Lingkungan/*BAPEDAL) using local regulations. The Ministry of Public Works is responsible for providing and protecting clean water sources (Government of Indonesia, 2005b).

Climate change

The MoH and WHO have raised concerns over the impact of climate change on health since 2008 (WHO, 2008). The MoH has strengthened its efforts in surveillance of major diseases that are related to climate change, e.g. diarrhoea, pneumonia, malaria, influenza-like illness and dengue (MoH, 2013g). The Ministry also reinforced the early warning and mapping model in collaboration with the Research Centre for Climate Change Universitas Indonesia (RCCC-UI), in particular with regard to dengue and malaria. At the local level, the health offices are working together with the Technical Environmental Health and Disease Eradication Body (*Balai/Balai Besar Teknis Kesehatan Lingkungan Pemberantasan Penyakit/*B/BTKLPP) in surveillance of environmental risk factors.

At the central level, the Climate Change National Council (*Dewan Nasional Perubahan Iklim/*DNPI) (President of Indonesia, 2008d), which is directly under the authority of the President, is a multisector group consisting of representatives from the State Ministry of the Environment, the Coordinating Ministry of Social Welfare, and the Coordinating Ministry of the Economy. The DNPI developed the National Action Plan for Climate Change (Rencana Aksi Nasional Perubahan Iklim/RAN-PI). The RAN-PI maps out the strategy for each sector to manage and reduce the impact of climate change (Ministry of the Environment, 2007). The sectors that are involved include the Bappenas, the Ministry of Forestry, the Ministry of Marine Affairs and Fisheries, the MoH, the MoF, the Ministry of Public Works, the Ministry of Energy and Mineral Resources, the Ministry of Education and Culture, the Ministry of Industry, the Ministry of Research and Technology, as well as several other Government institutions and local governments.

Clean water and sanitation

Improving access to safe water and basic sanitation for the poor is the responsibility of the Ministry of Public Works. Water and sanitation programmes are also undertaken by NGOs and health sector development partners/agencies. These programmes usually involve not only better access to safe water and sanitation but also a community education programme on good hygiene practices (World Bank, 2008a).

However, water and sanitation remain serious issues in Indonesia especially in the rural areas. Since decentralization, local governments have gained responsibility for the provision of clean water and sanitation. But the delegation of this responsibility has not been accompanied by an adequate fund channelling mechanism to enable them to carry out the programme, nor by adequate local capacity, resulting in varying achievements in ensuring access to safe water and basic sanitation among provinces (UNICEF, 2012).

5.1.2 Mechanisms for notification and surveillance of disease outbreaks

The outbreak reporting mechanism was established with the Health Outbreak Law of 1969, and Ministerial Decree No. 949/2004. Following reports of an increase of certain disease cases or symptoms, an investigation team will review the epidemiologic trend and produce a plan of action to curb the outbreak within 24 hours. The MoH conducts surveillance for vaccine-preventable diseases (acute flaccid paralysis/polio, measles, diphtheria and TB), HIV and AI. The MoH has also implemented an early detection tool, the early warning and response system (EWARS), which is part of the surveillance programme. The data for EWARS are collected from the local area monitoring system (PWS) that collects data from health providers at *puskesmas* level.

5.1.3 Mechanisms for surveillance of the population's health and well-being

There are several health-related surveys in Indonesia. The Indonesian Health and Demographic Survey has been conducted every five years since 1987. This survey is organized by the Central Statistics Bureau in collaboration with the National Family Planning Coordinating Board and the MoH. The latest survey was conducted in 2012 to collect data on demography, birth rate, death rate, family planning and the health of the Indonesian people over the preceding five-year period. The 2012 HDS covered 1840 census blocks in rural and urban areas, for a total of 46 000 households.

The Household Health Survey has been conducted every three years since 1972 to collect data on mortality, morbidity, and maternal and child health. This survey is organized by the National Institute for Health Research and Development (Balitbangkes). A total of 1250 census blocks are selected from the census blocks of the National Socioeconomic Survey (Susenas) for more detailed questions on household health, giving a total of 10 000 households.

The Susenas are large-scale, multipurpose socioeconomic surveys initiated in 1963 and conducted every year or two. The Susenas cover a sample of 200 000 households. The surveys collect core basic data on sex, age, marital status and educational attainment of all household members, supplemented by modules covering about 60 000 households that are rotated over time to collect additional information on health care, nutrition, household income and expenditure, and labour force experience.

The National Tuberculosis Prevalence Survey was initiated in 2004 as a module of the Susenas that included a total of 20 000 households. Questions related to history, signs, symptoms, treatment, as well as knowledge, attitude and practice about TB were given to all adult household members (aged more than 15 years). Sputum samples from TB suspects were collected for examination. The latest such Survey in 2013/2014, was conducted in collaboration with the WHO Global Task Force on TB Impact Measurement. Additional TB examinations were added in the last survey, which included a chest X-ray, sputum culture and rapid molecular test with GeneXpert MTB/RIF.

The Balitbangkes also organized four other activities related to the surveillance of population health, i.e. the National Health Survey (Suskernas), the Basic Health Research (Riskesdas), the Health Facilities Research (Risfaskes), and the Special Survey (Riset Khusus). The National Health Survey integrates the results of the Household Health Survey, the Demographic Health Survey and the National Socioeconomic Survey to provide information for health planning and development.

The Riskesdas survey was initially conducted in 2007 and the second survey was conducted in 2013. A total of 12 000 census blocks, covering 300 000 households, were selected from the Susenas survey to be representative of the national population. Data were collected at household and individual level. Eighteen modules were included in the survey, i.e. (1) Access and Health-care, (2) Pharmacy and traditional medicine, (3) Environmental Health, (4) Settlement and Economy, (5) Communicable Diseases, (6) Noncommunicable Diseases, (7) Injury, (8) Mouth and Dental Health, (9) Disability, (10) Mental Health, (11) Knowledge, Attitude and Practice, (12) Health-care Finance, (13) Reproduction Health, (14) Child Health, (15) Anthropometric and Blood Pressure Measurement, (16) Eye and Ear examination, (17) Dental examination, and (18) Examination of Blood and Urine samples, Household Salt and Household Water.

In addition, many surveys have been carried out to investigate specific health conditions and risk factors among different populations groups. For example:

- The Indonesian Family Life Survey (IFLS) is an ongoing longitudinal survey in Indonesia conducted by RAND. The sample is representative of about 83% of the Indonesian population and contains over 30 000 individuals living in 13 of the 27 provinces in the country. The fifth wave of the IFLS was conducted in 2014/2015 in collaboration with the Centre for Population and Policy Studies of the Universitas Gadjah Mada and Survey METER.
- National Influenza Surveillance (Virology-based), which was initiated in 2009 and has been updated monthly.
- The Global Adult Tobacco Survey (GATS), which was conducted in 2011 as a household survey of persons 15 years of age and older by BPS-Statistics Indonesia and the National Institute for Health Research and Development. A total of 8994 households were sampled and one individual was randomly selected from each participating household to complete the survey.

5.1.4 The Organization of occupational health services

The occupational health programme is an effort to promote and maintain the highest degree of physical, mental and social well-being of workers in all occupations. Occupational health services provide employees with preventive, treatment and rehabilitation services for work-related illness and diseases. Indonesian Law No. 36 of 2009 on Health, Section XII, stated that Indonesia must strengthen its national efforts on occupational health. The local health offices supervise occupational health efforts by using the policies and guidelines issued by the MoH.

In the new era of the National Health Insurance system it is mandatory for the entire workforce to be registered with the Social Security Agency for the workforce (BPJS Ketenagakerjaan) to obtain social protection related to work-related accidents or work-related diseases. Law No.24/2011 on the BPJS and Presidential Regulation No. 109/2013 state that all Indonesians – including foreigners who have worked for at least six months in Indonesia – must be covered by insurance from the state's social protection programme. Employers are responsible for paying the insurance premiums to the government, according to the workforce's salary categories, which range from 0.24% to 1.74% of total salary.

Basic occupational health services are provided in the occupational health unit of the company, and in public health facilities such as *puskesmas*, including *pustu*. If patients need further treatment, they are sent to the occupational health referral services (*Balai Kesehatan Kerja Masyarakat/BKKM*) or Hospitals class A–D according to the capacity of hospitals and service needed (refer to Chapter 4).

5.1.5 The Organization of preventive services

Immunization programme

The national immunization programme provides basic immunization for children aged 0–1 years, immunization for school-age children, and tetanus immunization for girls before they enter reproductive age. The main purpose of the immunization programme is to reduce morbidity and mortality due to diseases that can be prevented by immunization through eradication, elimination and reduction. These are eight basic immunizations in the programme: hepatitis B, BCG, polio, diphtheria, pertussis, tetanus, measles, Haemophillus influenza type B vaccine for pneumonia and meningitis. In 2013 the government introduced a new pentavalent vaccine, distributed by Bio Farma, a national vaccine supplier. The new vaccine contains five antigens in one shot and provides protection against diphtheria, pertussis, tetanus, hepatitis B and haemophilus influenza type B. The public primary care facilities, *puskesmas* and their networks, manage and deliver the basic immunization programme, although the programme can also be accessed through public and private secondary level facilities, private midwives, clinics and doctors. Local governments are responsible for the delivery of immunization programmes in their areas, but the central government remains responsible for additional immunization activities, providing vaccines, syringes and needles, technical assistance, developing guidelines, monitoring and evaluation, maintaining quality and training. The programme faces significant challenges from both supply and demand sides. There are still unsolved challenges of geographical disparity, topographical situation and limited availability of some services due to reduced budget allocation following decentralization of responsibility for public health activities (outreach activities and cold chain maintenance) to local governments. In addition, negative perceptions of immunization, such as its side-effects, and also suspicion of its harmful and *haram* ingredients persist in communities despite awareness campaigns. However, the government plans to improve the quality of the basic immunization programme by adding five more new

vaccines in 2019 while improving the availability of vaccines in the district pharmaceutical unit from 77% in 2015 to 95% in 2019.

5.1.6 Health promotion and education programmes

Health promotion

According to Minister of Health Regulation No. 1144/Menkes/PER/VIII/2010 on the Organization and Administration of the MoH, the Centre for Health Promotion is responsible to the Secretary-General. The main function of the Centre for Health Promotion is to implement technical policy formulation, guidance and enactment of community development and health promotion. Since the Centre for Health Promotion is responsible to the Secretary-General of the MoH, the budget of the Centre comes under the Ministerial budget. At the local level, the budget for health promotion is also very limited. Only a very small part of the excise tax is used for health promotion programmes.

The MoH engages with various NGOs as well as private non-health sectors to support preventive and promotive programmes, particularly regarding the achievement of the MDGs. Aside from that, the four main health promotion programmes under the MoH are: (1) HIV/AIDS awareness; (2) Vigilant Village (*Desa Siaga*); (3) clean and healthy living behaviour (*Perilaku Hidup Bersih dan Sehat*/PHBS) in households, schools, health institutions, workplaces, places of worship and public places; and (4) nutrition awareness. Any government health service in a facility or as an outreach activity will usually involve some promotion of healthy living behaviour and nutrition awareness.

Vigilant Village (*Desa Siaga*) was initiated by community members in West Java in the early 2000s, as a simple effort to improve alertness and community participation in identifying health issues (Pepi, 2013). Later, the MoH formally adopted and expanded the concept (Minister of Health, 2006b). The Ministry has a target of 80% of the villages being *Desa Siaga* by 2015, and the *Desa Siaga* programme has now become one of the mandatory tasks for district/municipality governments (Minister of Health, 2010c). *Desa Siaga* is a community empowerment and community participation strategy, whereby the village uses its own resources to identify and tackle local health issues, health emergency situations and disaster events (MoH and Ministry of Home Affairs, 2010). As community-based health-care provision, a *Desa Siaga* usually has a functional *poskesdes*/*polindes*, *posyandu*, village drug post (*pos obat desa*), local health cadres and some other community-based provisions

(Karawang Distric Health Office, 2014). Additional community-based programmes might include the establishment of a village health fund *(dana sehat*), traditional medicine programme *(tanaman obat keluarga*) and so on.

There are various health campaigns in the media, usually relating to hygiene and sanitation, reproductive health, illicit drugs and tobacco. Sometimes private companies use paid advertisements to promote preventive behaviour as part of their corporate social responsibility activities. The backbone of health literacy and health education for the public is done at the grass-roots level through *posyandu* and health movements in schools (*Usaha Kesehatan Sekolah*/UKS). There is the "little doctor" (*Dokter Kecil* (World Bank, 2012c) programme at primary school whereby a student is appointed by the teacher to promote healthy behaviour among the students. There are also adolescent health cadres (*kader kesehatan remaja*) at high school level. *Dokter kecil* and *kader kesehatan remaja* are trained by the *puskesmas* staff.

NCD prevention

In response to the increasing burden of NCDs, in mid-2000 the MoH established a unit at directorate level, the Directorate of Noncommunicable Disease, to lead and manage NCD prevention in the country. NCD programmes are mainly preventive efforts, including health promotion to raise public awareness and community-based health awareness groups, early screening and early detection. In addition, with the assistance of the Indonesian Cancer Foundation, the MoH established a pilot project hospital-based cancer registry in Cipto Mangunkusumo, the national general hospital in Jakarta in 2005, before scaling up the project to a further 39 hospitals in Jakarta in 2006. Currently, there are 10 districts/cities that contribute to a cancer registry nationwide to cover 5% to 10% of the population in each district/city.

At the village level, *puskesmas* have developed community-based integrated coaching posts named *Posbindu* (*Pos binaan terpadu*). The *Posbindu* enables community participation in the activities of early detection, monitoring and follow-up of people with NCD risk factors independently and continuously. This activity was developed as a form of early warning system, given that almost all of the NCD risk factors are initially asymptomatic. Specific NCD risk factors that are controlled in *Posbindu* services include hypertension, coronary heart disease, diabetes, cancer, chronic obstructive pulmonary disease, osteoporosis,

gout, asthma, stroke, obesity (overweight), kidney stones and others. The *Posbindu* programmes can be integrated into other community activities, such as those in schools, workplaces and residences. The operational costs of *Posbindu* come from public funds with some funding help from local governments. The *puskesmas* serves as a referral if there are residents who require further treatment. The MoH is facing huge challenges to ensure the responsiveness and readiness of its public health network, especially in terms of health personnel skills and knowledge, and availability of diagnostic equipment and medications. This is in addition to the need to involve the private sector not only in providing treatment but also, more importantly, in public education and early detection for NCDs.

Tobacco control

Indonesia is the only country in the South-East Asia Region that is not a signatory or party to the FCTC, but it has implemented several policies aiming to control tobacco use. Law No. 39/2007 on Excise Tax levies higher excise taxes on cigarettes, while Law No. 36/2009 on Health imposed stricter regulation of tobacco advertising, and promotion and sponsorship of tobacco products, and introduced smoke-free places; and set specific packaging and labelling of smoked tobacco products. To operationalize these laws, the government has issued Government Regulation (PP) No. 109 of 2012 to regulate advertising, promotion and sponsorship of tobacco products, smoke-free places, and packaging and labelling of smoked tobacco products. Details of the implementation of pictorial health warnings, which cover 40% of cigarette packaging on each side, are provided under MoH Decree No. 28/2013 that came into force in April 2014. Law No. 32/2002 on Broadcasting, Law No. 40/1999 on Press, and Law No. 33/2009 on Film also regulate advertising, promotion and sponsorship of tobacco products. Moreover, Law No. 23/2002 on Child Protection places responsibility on the government and State agencies to provide special protection to children who are victims of addictive substances abuse.

Tobacco and alcohol products are goods that are subject to excise as they pose health risks to consumers (House of Representatives, 2007c). In accordance with Law No. 28/2009 on Local Taxes and Retributions, a cigarette tax was implemented from 1 January 2014. The cigarette tax is calculated from 10% of the excise tax and distribution is based on the population number in each district/city. The local government will be able to utilize a minimum of 50% of the cigarette tax for health programmes but the implementation of this aspect of the law is still unknown. It is

hoped that the health promotion programmes in the local level can be funded from this source of funding.

Local governments are mandated to develop local regulations on no-smoking areas (*Kawasan tanpa rokok/*KTR) to ban smoking in certain areas including hospitals, schools, workplaces, public transportation, public places and places of worship. Hotels, restaurants and shopping malls are encouraged to implement smoke-free environments. It is also prohibited to smoke in all public transport equipped with anir conditioner. With the support of various NGOs, and professional organizations, the National Tobacco Control Commission encourages governments to control tobacco through a variety of regulations. This includes support to the efforts of local partners in developing and implementing smoke-free zones. Policies on smoke-free places that have been implemented in more than 32 districts/cities in Indonesia. These initiatives, as well as smoke-free home initiatives and quit tobacco clinics, need to be scaled up nationwide in order to improve quality of life. By the end of 2014, as many as 30% of districts and cities in Indonesia were expected to already have KTR policies in place and implemented. However, the target was only achieved by mid-2015, when just 30% of districts had implemented a local regulation on smoke-free areas.

Guidance and supervision of KTR are conducted jointly by the MoH and the Ministry of Internal Affairs. The MoH through the Director General of Disease Control and Environmental Health is responsible for giving technical guidance while the Ministry of Home Affairs through the Director General of Community and Village undertakes the general guidance and supervision of the implementation of KTR. At the local level, governors provide guidance and supervision of the implementation of KTR at the district/city level, and the mayors/heads of district guide and supervise the implementation of KTR in villages. Guidance and supervision are done through socialization and coordination, provision of guidelines, consultation, monitoring and evaluation, and awards.

5.1.7 National screening programmes for the whole or part of the population

Following a pilot project in six provinces, which began in 2008, the government expanded the implementation of early detection of breast cancer and cervical cancer to 180 districts in 32 provinces, provided by 500 of the 9500 health centres. Trained practitioners in public primary health care centres provide screening, with nurses and volunteers

undertaking community awareness efforts to encourage the targeted group to come for screening. Breast cancer is screened using Clinical Breast Examination method. Cervical cancer is screened using pap smear or visual inspection with acetic acid (VIA) to detect pre-malignant lesions in areas where cytology services are not available. When cases are detected, patients are referred to health practitioners at hospitals to perform cryotherapy to prevent cancer from advancing. However, up to 2013, only 635 181 women had been screened with VIA method, which accounted for about 5% of women in the population screened.

To improve health prevention and promotion, BPJS Health has incorporated screening for breast cancer, cervix cancer, type-2 diabetes mellitus and hypertension into the programme. In addition, started in early 2014, BPJS Health in collaboration with Indonesian Cancer Foundation launched the National Movement for Early Detection of Cervical Cancer. BPJS Health provides screening at *puskesmas* using pap smears and VIA.

5.2 Patient pathways

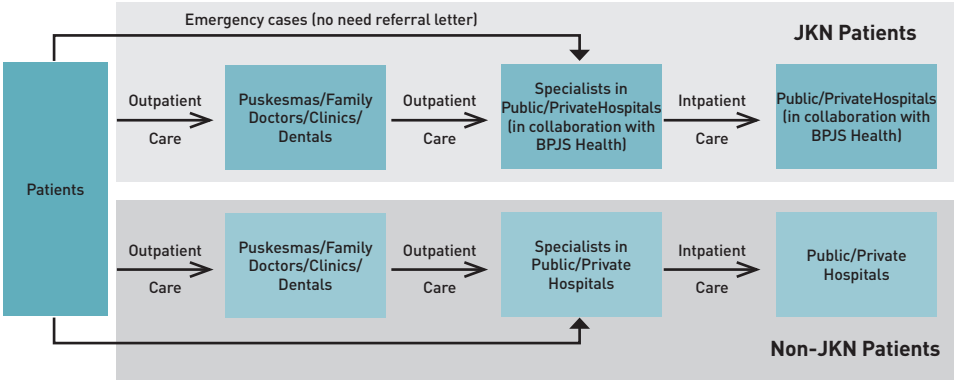
In the national health insurance programme (JKN), all residents who are members of the JKN can visit an appointed *puskesmas/*family doctor/polyclinic/dental clinic without prior appointment. The patients need a referral letter if they seek further treatment in hospitals/specialist clinics. Without a referral letter, they cannot go directly to hospital/specialist clinic, except in an emergency. In an emergency, the JKN patients are allowed to go directly to hospital, even hospitals that are not in collaboration with BPJS Health. If they go to non-BPJS Health hospitals, patients do not have to pay the costs of treatment. BPJS Health will pay the costs to the hospital but, when their condition allows, the patients will be transferred to a hospital that has a collaboration agreement with BPJS Health.

However, long queues for obtaining some treatments in public hospitals, in addition to limited numbers of hospitals, particularly private hospitals that are in collaboration with BPJS Health, have led to serious barriers to access for those services. Most patients have to come to the hospital very early morning to take a registration number. After getting the number, they still have to wait a long time for treatment.

In contrast, non-JKN patients can obtain treatment from primary health care facilities or they may go directly to specialists, though they

are obliged to pay their own fees. Similarly, non-JKN patients may also choose between public and private hospitals when they require hospital care without a referral letter, although the patients must pay any costs incurred. In many cases, patients who are prepared to pay themselves will receive some privileges in most of the hospitals in Indonesia. These include bypassing queues for services and being prioritised for hospital inpatient beds.

Figure 5.1 Pathways of JKN and non-JKN patients



Source: Authors' analysis.

5.3 Primary/ambulatory care

In Indonesia's health system, primary health care is defined as health-care services that are provided by a non-specialist health-care worker and accessible on a first point of contact basis. In the public sector, providers of primary care include *puskesmas* (primary health care centre) and their linked networks of auxiliary *puskesmas* or *Pustu*, mobile *puskesmas*, village health posts and village midwives. These are organized in hierarchical networks covering defined areas. In the private sector, primary care providers include type D hospitals, private physicians, private dentists and private clinics. Private midwives and nurse practitioners are also providing limited health care to the people as allowed by law number 38 year 2014 about practicing nurse.

In the public sector, primary care service delivery is organized around over 9700 *puskesmas* or health centres (Table 5.1), whose numbers have been gradually expanded since the late 1960s as the central element in the government's efforts to improve access to primary health care. *Puskesmas* originally focused on providing outpatient, public health and

community outreach services to their locality, but an increasing number of *puskemas* have been upgraded to also provide basic inpatient services, including essential obstetric and neonatal care services in some cases.

The *puskesmas* perform a comprehensive set of mandatory services and tasks that include curative, rehabilitative, preventive and promotive services delivered within the facility and through outreach programmes (MoH, 2004). *Puskesmas* also develop cooperation with a network of community-based health-care units. Community-based health-care units include *polindes*, *poskesdes* and *posyandu*.

Table 5.1 *Puskesmas* network and community-based care

Facility	Population served	Service
Primary health centre (*puskesmas*)	30 000	Primary care curative, rehabilitative, preventive, promotive
Auxiliary *puskesmas* (*pustu*)	Up to 3000	Simple health service unit
Mobile *puskesmas* (Pusling)		Replacing *puskesmas* and *pustu* for remote areas, using motorcycles, cars or boats
Village midwives (*Bidan di desa*)	1 or a few villages	Maternity care, prenatal and postnatal care as well as family planning, provided by village midwives usually at *polindes*
Village maternity clinic (*Polindes*)	1 or a few villages	Maternity care, prenatal and postnatal care as well as family planning. The land and/or buildings are a combination of government and community funded. Usually *polindes* are also where the village midwives are based
Village health post (*poskesdes*)	1 or a few villages	A community-based care unit. Served by village midwives and health cadres, providing a more comprehensive service than *Polindes*, including surveillance and health promotion
Integrated health service post (*posyandu*)	120 households	A community-based care unit. Information and services on family planning, maternal and child health, immunization, nutrition, diarrhoea, basic sanitation and essential drugs, conducted by local health cadres with regular visits by *puskesmas* staff

Sources: Adapted from "Basic Data of Puskesmas", Pusdatin-MoH, 2013 (Pusdatin, 2013).

According to MoH Regulation No. 75 of 2014, a *puskesmas* has to function as the first level of public health and clinical care provider in its service area. Each *puskesmas*, as a public health provider, has the

responsibilities to: (a) implement the planning based on the analysis of public health issues and service needs as required; (b) carry out advocacy and dissemination of health policy; (c) implement communication, information, education, and community empowerment in health; (d) mobilize the community to identify and solve health problems at every level of society in cooperation with other related sectors; (e) provide technical guidance to implement network-based services and community health efforts; (f) ensure that there is increased competence of human resources for PHC; (g) monitor developments in the *puskesmas* area and make sure that these are aligned with the vision for health; (h) carry out recording, reporting, and evaluation of access, quality, and coverage of health services; and (i) provide recommendations related to public health issues, including support for early warning systems and responses to disease prevention.

As a clinical provider, each *puskesmas* has the responsibilities to: (a) organize basic health services in a comprehensive, sustained and quality way; (b) prioritize promotive and preventive efforts; (c) deliver health services for individuals, families, groups and communities; (d) deliver health services that promotes security and safety of patients, staff and visitors; (e) deliver health services using the principles of coordination and cooperation among and between professions; (f) implement medical records; (g) carry out recording, reporting, and evaluation of the quality and access to health services; (h) improve competency of health personnel; (i) coordinate and implement the development of PHC facilities in the region; and (j) implement screening and referral in accordance with the medical indications and referral systems.

The six essential public health services in *puskesmas* consist of: health promotion; disease control, including immunization and surveillance; ambulatory care; MCH and family planning; community nutrition; and environmental health, including water and sanitation. These basic services can be further disaggregated into specific programmes or, in MoH terminology, "development programmes/activities", based on local needs. Although all *puskesmas* are required to deliver these services or implement these programmes, availability of services often depends on the availability of health personnel. For instance, public dental health programmes require the presence of a dentist or dentist assistant/nurse. On average, each *puskesmas* serves around 30 000 individuals, but numbers tend to be lower in rural areas. Outside Java, catchment populations are also on average smaller, but the catchment areas tend

to be larger. The adequacy of inputs and staffing also tends to be worse outside Java (see Section 4.1).

Puskesmas supervise and support a wider network of primary care services that extend to village level, including *pustus*, mobile *puskesmas*, village health posts, private clinics and village midwives (Table 5.1). There are currently 23 875 *pustus* or almost 2.5 *pustus* per *puskesmas*. *Pustus* function as outreach health facilities, providing only outpatient and community outreach services, and serve the remoter parts within the service area of a *puskesmas*. These providers can be supplemented by mobile *puskesmas* that operate via motor vehicles or boats, village health posts (*poskesdes*) and village midwife posts (*polindes*). *Poskesdes* and village midwife posts, which are partly organized through community mobilization programmes, are extensively distributed across the country, with 42 656 of these village-based primary care providers located in a total of around 75 000 villages in the country.

Starting in 2014, the MoH has required *puskesmas* to be accredited according to a national accreditation standard. The accreditation process will improve quality of administrative management, management of public health programmes and quality of health-care services.

Private sector

Various types of private providers include:

- Hospitals and clinics: NGOs such as Muhammadiyah and Nahdatul Ulama (NU), as well as Christian/Catholic churches operate clinics and hospitals throughout Indonesia. For example, *Muhammadiyah* (an Islamic group) as a network consists of 69 hospitals and a number of maternity clinics; *Nahdatul Ulama/*NU (an Islamic group) as a network consists of 70 hospitals, and *Persatuan Karya Dharma Indonesia/*PERDHAKI (a Catholic group) as a network consists of 85 hospitals (Chee et al., 2009b). For-profit/corporate hospitals have increased in number significantly since the economic boom of the late 1980s, partly as a result of the MoH regulation that permits the opening of hospitals by corporations. However, the number of beds in the private sector is still below the number of beds provided by public sector (Trisnantoro et al., 2012).
- General physicians (GPs): An estimate suggests that in 2008, 80% of all GPs, including government employees, also had private

practices (Trisnantoro et al., 2012). The percentage may be growing.

- Midwives are responsible for a large portion of MCH services, have a relatively organized professional association (*Ikatan Bidan Indonesia*/IBI), and are legally authorized to operate private practices. *Bidan Delima* (*BD*) is a large-scale network of individual practitioner midwives (Chee et al., 2009c). In 2013, there were approximately 10 000 BD midwives operating in over 200 districts in Indonesia (BD, 2013). However, there are a large number of midwives with private practices who are not operating under the *BD* network.
- Data on other private providers are largely uncaptured, including pharmacies (*apotik*), clinical laboratories, drug sellers (*toko obat)*, hawkers (*warung* and *kakilima*) selling drugs, traditional healers, sellers of medical devices/equipment, dispensing opticians, and so on. For instance, MoH data show that there are 202 pharmaceutical manufacturers, 234 medical devices manufacturers, 2463 pharmaceutical wholesalers, 21 852 pharmacies/dispensaries, 5625 drug sellers and 368 medical devices distributor (MoH, 2013f), but little is known about the number of traditional healers, clinical laboratories or dispensing opticians.

Since 2004, the amount of private health facility utilization has decreased while at the same time public health facility utilization rates have increased by almost 100% (Rokx et al., 2009). This might be due to substitution as the government introduced social health insurance for the poor in 2004.

Private primary care providers mostly operate on an independent basis. Many private primary care providers are members of the Indonesian Clinics Association. Most such private care is provided by public sector doctors (or called dual practice), including 70% of doctors working at *puskesmas* (Harimurti et al., 2013). In the JKN era, some private doctors/private clinics would collaborate with BPJS Health to accept JKN patients through a capitation payment system. As primary health care facilities, they provide basic health-care services to JKN patients. Starting in 2014, the government has published new rules and requirements regarding clinics (MoH Regulation No. 9 of 2014). It is also stated in the new rules that private clinics must follow an accreditation programme to have permission to practise and serve JKN patients.

5.4 Inpatient care

In Indonesia, inpatient services are provided by public and private hospitals, *puskesmas* with inpatient wards, and by some private specialist clinics. Although the MoH has the mandate to oversee all hospitals including those operated by State-owned enterprises, the military and the private sector, responsibilities for implementation of hospital supervision has been decentralized. Most public hospitals are managed by provincial and district governments, and only a few remain under direct MoH supervision and management, including the national referral hospitals, centres of excellence, and specialized hospitals such as State mental hospitals. The licensing of private hospitals has also been decentralized, with subnational authorities responsible for issuing two-year licences, according to standards set by the MoH. Owing to significant gaps in the reporting of hospital statistics to the MoH by district and provincial health authorities and deficiencies in the enforcement of licensing, available official statistics on hospitals are subject to considerable inaccuracies and deficiencies.

The hospital classification is based on the services provided, human resources, medical equipment, facilities and administration (Minister of Health, 2014c), type D being the simplest, while type A is the most comprehensive (see Table 5.2).

In terms of quality, all hospitals must apply for an accreditation programme. This programme is managed by the Hospital Accreditation Committee (KARS). The 2012 version of the national hospital accreditation standard is adopted from the JCI standard for hospitals. As at May 2015, only 106 hospitals had been accredited against the latest hospital accreditation standard.

There is a referral back system from hospital to primary care. Unfortunately, the system is not running well since the availability of certain medicines in *puskesmas* is very limited. Home care is also not popular in Indonesia since it is not covered by the JKN programme. Another challenge is that the low level of the INA-CBGs tariffs has caused many private hospitals to be reluctant to cooperate with BPJS Health to treat JKN patients.

Table 5.2 Hospital classification

Type	Min. number of beds	Geographical level	General medical Services	Specialist medical services
Type D	50	District	Primary medical care, primary dentistry care, primary mother-and-child care and emergency care	At least two of the following four specialities: internal medicine, paediatric, ob-gyn, surgery
Type C	100	District	Primary medical care, primary dentistry care, primary mother-and-child care and emergency care	Four specialities covering internal medicine, paediatric, ob-gyn, surgery and dentistry specialist
Type B	200	Province	As above	As above PLUS 8 of 13 specialties, PLUS 2 of 4 subspecialties either in internal medicine, paediatric, ob-gyn, surgery and/or dentistry subspecialties
Type A	400	Province / region	As above	As above PLUS 17 specialties (in ophthalmology, ENT, neurology, cardiovascular, skin and venereal diseases, psychiatry, orthopaedic, urology, neurosurgery, plastic surgery and forensic medicine. PLUS 14 subspecialties (in surgery, internal medicine, paediatric, obstetric & gynecology, ophthalmology, ENT, neurology, cardiovascular, skin and venereal diseases, psychiatry, pulmonology, orthopaedic, urology and oral surgery).

Sources: Adapted from Minister of Health Regulation No. 56/MENKES /2014 (Minister of Health, 2014c).

5.4.1 Day care/ day hospitals/day clinics/surgi-centres

According to Minister of Health Regulation No. 560 of 2014, concerning hospital tariffs, one-day care is defined as health-care services for observation, diagnosis, treatment, medical rehabilitation and other types of health care, which are provided to a patient who occupies a hospital bed for less than 24 hours. There are currently no official policies to plan the development of day care services in Indonesia, and no systematic data are collected. However, organized day care services are available on a limited basis in both public and private hospitals. Such services are typically provided for treatments such as haemodialysis and thalassemia that require regular blood transfusions, and some surgical procedures such as tonsillectomy, and are mostly financially covered by the JKN.

5.5 Emergency care

Emergency care is provided by all levels of services, from the primary to highly specialized, tertiary facilities. *Puskesmas* without beds only provide emergency services during opening hours, while those with inpatient facilities provide 24/7 emergency services. All emergency care units in hospital or *puskesmas* are expected to provide emergency care within five minutes of the patient's arrival.

In the mid-1970s, pre-hospital care radically improved when the Indonesian Surgeons' Association established the 118 EAS in Jakarta with the support of the local government. Every ambulance of 118 EAS is equipped with emergency equipment and emergency medical technicians (EMTs). The 118 EAS normally responds to calls within 10–15 minutes. The majority of 118 EAS transports are actually transfers coordinated by hospitals, shuttling patients to and from their homes or for tests at other hospitals. Hospitals increasingly rely on 118 EAS though most hospitals maintain their own ambulances (although these are often less well equipped than 118 EAS). The 118 EAS charges patients a flat rate of IDR 200 000 (or USD 14.90 using January 2017 exchange rate), no matter how far the trip or whether patients require a special or a regular ambulance. However, the services are free for poor Jakartans who can prove their financial status. With the support of local governments, the 118 EAS currently operates in several cities in Indonesia, such as Yogyakarta, Denpasar, Surabaya, Makassar, Palembang, Malang and Banyuwangi. In addition to 118 EAS, there are also pre-hospital services run by private providers, such as Emergency Response (ER) and Medic One. Some political parties also run emergency ambulances for free but

Table 5.3 Summary of market characteristics of pharmaceuticals

Criteria	Amount	Explanation
Market size, supplier prices	US$ 2.7 billion (2007)	Pharmacy purchase price (9083 rupiah per US$, mid-2007)
Annual growth rate	Approx. 10%, average from 2004–2007	Growth rate in total market value in current rupiah
Forecast change for coming year	9%	Predominantly price growth; low volume growth
Imports, as share of market*	11% (2003)	Rising slowly
Exports, as % of sales by local manufacturers	6% (2003)	Rising slowly
Panel market		
Share of total market	50% (2004)	Falling share
Hospital share of panel market	Approx. 25% (2004)	Public and private hospitals
Pharmacy share of panel market	Approx. 49% (2004)	Private retail pharmacy
Licensed drugstore share of panel market	Approx. 25% (2004)	Licensed drugstores only
Non-panel market		
Share of total market	50% (2004)	Includes sales to doctors, nurses, midwives for own dispensing; plus sales to supermarkets, stores, street vendors, etc.; rising share
Ethicals (prescription drugs). Share of total market	62% (2005)	
OTC share of total market	38% (2005)	
Unbranded generic market share	10–11%	Static
Per capita spending on drugs per year	US$ 12	Market size US$ 2.7bn assumed
Public sector share of market		
Puskesmas (primary care) and public health programmes, subject to public procurement	Approx. 10% of total market	
Public hospitals	Of the order of 12%	

* All shares quoted are shares by value. Data on shares by volume are not readily available.

Source: World Bank, 2009b.

mostly only to transfer patients to and from their homes and to hospital without adequate equipment.

5.6 Pharmaceutical care

The government has a role and responsibility to ensure the accessibility and affordability of pharmaceuticals, as well as the rational use of medicines. In ensuring the access to pharmaceutical care, the MoH has a responsibility to ensure the availability of 484 essential drugs for primary care as listed in the DOEN (National List of Essential Medicines), the national health programme-related drugs and vaccines. The government also monitors the production capacity in the country and regulates the drug price by imposing a price ceiling for several essential drugs.

The current total number of pharmaceutical manufacturers is 202, of which 78.2% are certified GMP (National Agency of Drug and Food Control, 2013a). Even though there are more than 2400 major pharmaceutical suppliers and more than 5000 drug stores in addition to almost 22 000 pharmacies (*apotek*), half of the drugs available in the market were (including the prescription drugs) sold through private practices, general stores, street vendors and supermarkets. The private sector dominates, with around 75% of the market offering approximately 16 000 types of drugs, of which only 10% are generic drugs.

Registered drugs dominated the Indonesian pharmaceutical market in 2013 with a market share of 59% or US$ 3.2 billion, while OTC drugs came second with 41% market share, or US$ 2.2 billion. The amount of drugs sales is expected to decline as community coverage of the JKN increases, since the JKN encourages the use of generic drugs. Furthermore, the production costs of drugs will increase because 95% of raw materials are imported from overseas (International Pharmaceuticals Manufacturers Group, 2013).

Since implementation of the JKN began on 1 January 2014, patients insured by the JKN are able to obtain medicines from health-care facilities free of charge. Nevertheless, some patients still have to buy (OOP) medicines that are not listed on the medicine lists of the JKN from pharmacies. The lists of medicines should ideally be consistent with the standard treatment guidelines (STGs), on which health-care practice and prescriptions should be based. The National Formulary Committee should select the enlisted drugs for the JKN according to the treatment standards and current evidence.

Currently, there are two existing drug lists in the national health system: (1) the National Essential Medicines List (DOEN), serving as the base for medicines procurement; and (2) the National Formulary, listing the medicines that should be available in health-care facilities as a reference to be used within the JKN system. The MoH has the responsibility to prepare and establish the national formulary, BPJS Health guarantees/pays for the medicines listed on the National Formulary, and health-care facilities use the medicines listed therein. However, numerous products on the National Formulary are not listed on the e-Catalogue yet.

Procurement and distribution

In the public sector, prior to decentralization, pharmaceuticals were planned, procured and distributed by the Ministry of Health; the drug warehouse (*gudang farmasi*) kept the drug inventory at the local level and distributed drugs to *puskesmas* (MoH, 1983). After decentralization, pharmaceuticals for the local level are planned and procured by local governments (International Trade Centre, 2005b), while the Ministry of Health procures only for national buffer purposes and supplies of drugs for the poor (Minister of Health, 2002b; MoH, 2005). Supplies of vaccines are still centralized. They are financed and procured by the MoH, and distributed to provinces, which then distribute to districts (World Bank, 2009b). Public hospitals plan for and procure pharmaceuticals through bidding, direct appointment or contract (Minister of Health, 2004b; MoH, 2008a).

To ensure transparency in the procurement of medicines in the public sector, the government has developed the e-Catalogue (LKPP, 2016), an electronic information system that contains information about the name, type, technical specifications, lowest unit price, and provider factory prices. In the e-Catalogue the prices given are for the smallest unit, tax and distribution costs. Procurement of generic medicines contained in the e-Catalogue is carried out by e-Purchasing through direct appointment (no bidding). All public health facilities are obliged to buy medicines and consumable medical materials through e-Catalogue on electronic procurement services pages that link to the Government Procurement Agency of Goods/Services (LKPP) portal. The MoH conducts auctions of required goods/services through the national procurement portal (INAPROC).

The MoH claims that the e-Catalogue results in budget efficiency (Nawawi, 2013). However, open auction usually results in selection of a bidder with the lowest price. As a consequence, most winners are new players in the drug industry, offering limited types and stocks of medicines, and with limited access to distribution channels. As a result, numerous products listed in the national formulary are not listed on the e-Catalogue.

The MoH also uses e-logistics to monitor the availability and distribution of drugs (Directorate General of Pharmaceutical and Medical Devices, 2014b). Both systems are gradually replacing the current system to support the implementation of the national health insurance system. The MoH has also developed the e-PBF (MoH, 2013a). The software is an online system to report the fluctuation of drugs supplies at pharmaceutical wholesalers (PBFs). The MoH requires the PBFs to report their drug supplies, distribution and inventory every three months (Minister of Health, 2011g).

The overall level of availability of common drugs in primary level clinics is relatively satisfactory. Less than 5% of PHC facilities have a level of availability of common drugs which is less than 40% of the standard. However, a closer look at the PONED facilities shows that the availability of obstetric and neonatal-related drugs is very low. More than 80% of existing PONED-PHC facilities provide less than 40% of the standard drugs list that should be available (Agency for Health Research and Development, 2011).

In the private sector, the system is self-funded. Drugs are supplied and priced according to the market, and anyone can buy prescribed or non-prescribed drugs in the private sector using OOP funding (World Bank, 2009b). In fact, the share of drugs dispensed through private pharmacies and drug stores is larger than through hospitals (World Bank, 2009b).

5.7 Rehabilitation/intermediate care

In accordance to MoH Decree No. 378/2008, medical rehabilitation is defined in Indonesia as services aiming to restore or improve the physical and functional ability of patients suffering disability due to illnesses. Medical rehabilitation services that are commonly available in Indonesia include physiotherapy, occupational therapy, speech therapy and orthotics/prosthetics. These services are offered as a part of more comprehensive services by hospitals, *puskesmas*, community-based

rehabilitation practices or stand-alone private practices. The availability of these services varies across the country, but is best in urban areas.

In order to provide medical rehabilitation services equitably to Indonesians, the MoH developed a strategy through hierarchical services in hospitals, health centres and in communities. This strategy was developed in accordance with current policies, standards and guidelines. Medical rehabilitation services in hospitals include specialist/subspecialist services, outreach and referral systems, with the aim of providing integrated and comprehensive patient services. Medical rehabilitation services at the *puskesmas* are intended to provide primary medical rehabilitation. They provide guidance to the public through community-based rehabilitation programmes (including to individuals with disabilities) and services in accordance with the guideline for medical rehabilitation services in *puskesmas*.

Since 1970, community-based rehabilitation (CBR) has been developed for communities to enable them to be more actively involved in efforts to address disability through rehabilitation, equalization of opportunities, and social integration of individuals with disabilities in all aspects of life and livelihood. The CBR is a simple form of rehabilitation undertaken through changing the behaviour of individuals with disabilities, families and communities to improve their quality of life. The aim is to make people more aware and optimally engaged in the empowerment of people with disabilities by using the resources available in the community. In 2015, there were 30 CBRs registered in the Indonesia CBR Alliance. *Puskesmas* or hospitals supervise the implementation of the programmes conducted by the CBRs according to the guidelines.

The National Narcotics Agency (BNN) runs four drug rehabilitation centres that provide medical detoxification along with the "Therapeutic Community" method. The biggest BNN rehabilitation centre is in Lido Sukabumi, West Java, which can accommodate 500 people. BNN rehabilitation centres are free of charge and equipped with good facilities, resulting in a long waiting lists for treatment. In addition to the BNN, the MoH has established a hospital in Jakarta specifically to provide comprehensive drug treatment services, including consultation, specialist clinics, medical detoxification, rehabilitation and methadone maintenance therapy. Almost all mental hospitals in Indonesia also offer medical detoxification and rehabilitation services. A few CBR centres provide detoxification and recovery programmes, using various methods.

5.8 Long-term care

The need for long-term care in Indonesia is small but increasing with the increasing numbers of older persons and the prevalence of chronic, mainly noncommunicable diseases. In Indonesia, the traditional concept of family or extended family members taking informal care of the elderly or disabled family members has started to shift with the changes in social values, the shift to nuclear family structures and increasing mobility of younger Indonesians in search of employment. As the need for long-term care grows, especially in urban areas, private providers have emerged to offer nursing and home care services to affluent households. Unfortunately, these types of services are not well documented. Additionally, local social offices at province, district and municipality level provide home nursing services to the elderly although the numbers are very limited. *Puskesmas* also have a public health nursing programme, which provides outreach services to the elderly at home, but the scale of these services is limited.

5.9 Services for informal carers

It is part of Indonesian culture that family members become informal carers of the elderly and other family members with special needs. It is also very common for family members to act as chaperones to ensure adherence of family members to routine medication regimens, such as those for TB, diabetes mellitus, hypertension and HIV/AIDS. However, training programmes for informal carers are very limited. Respite care for informal carers has not yet developed.

5.10 Palliative care

Palliative care is not well known in Indonesia, although it has been implemented there since the 1990s. Palliative care was first provided at Sutomo Hospital in Surabaya (East Java) in 1992 followed by Cipto Mangunkusomo Hospital (Jakarta), Dharmais Cancer Hospital (Jakarta), Wahidin Sudirohusodo Hospital (Makassar), Dr RS Sardjito Hospital (Yogyakarta) and Sanglah Hospital (Denpasar). The establishment of palliative care in those hospitals was as a response to the Minister of Health Decree No. 604/1989, followed by the Minister's Letter of Appeal in 1990 to all hospitals treating cancer patients asking them to form Hospital Cancer Teams. The development of palliative care in Indonesia has lagged behind other countries in ASEAN. Although the Indonesian Palliative Society as a national organization that embodies a variety of disciplines was established in 1999, the number of physicians, nurses

and other health-care professionals who have joined the organization is very limited. Initiated by the Indonesian Cancer Foundation, a few community-based palliative care services have been established in several cities in Indonesia to support cancer patients by reducing the pain they experience, prolonging life and improving the quality of life, while providing support to families.

5.11 Mental health care

Basic mental health services have been integrated into general health services in *puskesmas* and their networks, *pratama* clinics, general practitioners with the competence to provide mental health services, home care, and service facilities outside the health sector as well as CBR facilities. Until 1990, mental health services were undertaken through the introduction of psychiatry specialists into *Puskesmas* in several provinces. After 1990, mental health services have been implemented through general practitioners and nurses in *puskesmas* who have been trained on how to perform anamnesis and examination of patients with mental health problems. Mental health referral services are provided at mental hospitals, and mental health services are integrated into the general health services of general hospitals, primary clinics and the practice of mental health specialists.

Various types of psychotropic medications have been already listed in the National List of Essential Medicines and are available at various levels of health-care facilities. Preparation of the National List of Essential Medicines has been done with several classes of the new generation of psychotropic drugs that are more effective and have fewer side-effects, for *puskesmas* and public hospitals. However, some psychotropic drugs are not covered by the JKN programme so that patients who require these medications need to pay OOP. Prior to decentralization, the costs of care for people with mental health conditions were budgeted at the MoH through the mental hospitals. In the era of local autonomy, the ability of mental health professionals to advocate with local government decision-makers is decisive in obtaining funding for mental health services from the local government budget.

Mental health policies have undergone four major changes. First, the change from hospital-based to community-based services. Second, the provision of mental health services at all existing health-care facilities. Third, the services rely on ambulatory care rather than hospitalization. Fourth, mental health patients should be empowered. It is mandatory for

local government to have at least one mental health facility as well as community-based mental health services. The presence of psychiatric care that can be easily accessed by the public is expected to eliminate the use of traditional healers as an alternative for the treatment of mental health disorders.

Mental health is a multisectoral programme. The Mental Health Directorate of the MoH has responsibility to coordinate the implementation of mental health programmes at the central level. At the local level, the provincial and district/city health offices are responsible for coordination and guidance on the implementation of mental health programmes at the province and district/city levels. Community-based mental health organizations, such as Indonesian Schizophrenia Community Care, Bipolar Care Indonesia, Karitakas, Indonesian Anxiety Forum and the Indonesian Mental Health Association, also play a significant role in reducing stigma and discrimination against people with mental health disorders. One of the most important roles of these organizations is to reduce the numbers of deprived people. Although most of the organizations have been established by people whose family members have psychiatric disorders, they have the support of mental health professionals.

The House of Representatives recently approved a mental health law, in early July 2014. The new law mandates every province to have at least one mental health hospital. According to the MoH in 2013, there are eight provinces in Indonesia that do not yet have a mental hospital. Among the eight provinces, a total of five provinces do not even have a mental health professional or psychiatrist. Most of them are new provinces. The central government encourages local governments to build mental health hospitals in the provinces that do not have them yet. Indonesia still has a shortage of mental health specialists, with, currently, only about 700 psychiatrists. It is expected of every 10 000 people, there is one psychiatrist; it is estimated that for around 24 000 psychiatrists are required to serve the population of Indonesia.

5.12 Dental care

Dental care is underprovided and underutilized even though the 2010–2014 Strategic Plan of the MoH included a policy for the development of dental and oral health services. The elements of the strategic plan are: (1) promotion, prevention and basic dental health services in *puskesmas* and *puskemas pembantu*; (2) promotion, prevention and personal dental

care at hospitals; (3) promotion, prevention and dental health services in schools through the School Dental Health Services (UKGS) from kindergarten to high school that is coordinated in the School health Services (UKS); (4) community-based health efforts (UKBM) in the form of community dental health enterprises (UKGM); and (5) dental and oral health partnership with private institutions.

The public sector provides clinical dental care services at *puskesmas* and hospitals, including scaling, extraction and basic dental treatment, but services depend on the availability of dental health personnel and equipment. In 2012 it was reported that around 50% of *puskesmas* did not have a dentist, and the distribution of dentists is also heavily skewed towards urban areas. The public sector provides services to schoolchildren through the School Health Programme, including dental and oral health screening and education in tooth brushing. The JKN programme basic benefit package also finances basic and specialist dental health services.

The private sector provides a substantial part of all dental care treatment. Unlicensed dental practitioners (*ahli gigi*) provide much of this care, and they are estimated by MoH to number 75 000 compared with 35 000 licensed practitioners. Because of concerns over the quality of treatment provided by these practitioners, the government banned unlicensed dental practitioners in 2011. Nevertheless, the courts declared this law unconstitutional in 2013, so there is currently no legal constraint to their practice. Despite government provision of care, the overall provision of care is limited. Surveys indicate that most Indonesians (68.9%) who need dental treatment do not obtain it, and they reveal a large burden of untreated dental disease (Maharani, 2012). Most dental care use is concentrated in Indonesians of higher socioeconomic status, indicating that access is related to ability to pay, and the extent of inequality has persisted throughout the 2000s (Maharani and Rahardjo, 2012).

Implementation of the JKN on 1 January 2014 introduced the capitation payment model for dental services in the *puskesmas* and *pratama* clinics. The capitation payment model is relatively new to dentists who are accustomed to the fee-for-service payment model. The capitation for *pratama* clinics and *puskesmas* is quite different. The capitation payment is IDR 8000/person/month when the *pratama* clinic does not have a dentist, and 10 000/person/month when the clinic employs a dentist. This means that a dentist will obtain IDR 2000/person/month.

The capitation of IDR 2000/person/month will be enough for the dentist if the number of patients registered under the clinic is at least 10 000 participants. The government-set capitation for *puskesmas* with dentists is IDR 6000/person/month. According to Presidential Regulation No. 32 of 2014, about 60% of capitation funding in *puskesmas* is for health-care services and the rest is to support the operational costs of *puskesmas*. In accordance with Minister of Health Regulation No. 19 of 2014, the distribution of capitation fees to health and non-health personnel is determined by considering the personnel type and/or position and attendance.

Regarding referral for dental services, the government has established public hospitals with dental care facilities and academic dental hospitals as referral hospitals for further dental care. Payment for referral hospitals is based on INA-CBGs with all the existing service package calculations. However, the service package of INA-CBGs for the field of dentistry is very limited. For example, in a type B hospital, there is a package called "dental procedures" which costs IDR 139 000 (or USD 10.42 using January 2017 exchange rate), and includes all dental procedures, such as root canal treatment, extra-oral incision, etc. Therefore, INA-CBG tariffs need to be revised in accordance with the diagnostic and procedures in International Classification of Diseases, Ninth Revision, Clinical Modification, that are grouped into specialist actions.

5.13 Complementary and alternative medicine (CAM) and traditional medicine

Like other regional countries, Indonesia possesses its own tradition of indigenous medicine, commonly known as *jamu*, involving the use of herbal medicines. According to Susenas, more than a third of those who opted for self-medication use traditional or alternative medicines, such as *jamu*. The MoH recognizes the roles of traditional and alternative medicine, and in order to protect consumers and improve the quality of services, it requires traditional/alternative practitioners to register with health authorities. Registration is provided on the basis of an official assessment, which emphasizes the protection of patients' health. An exception applies for acupuncture, which requires a certification of competency from its professional association (Minister of Health, 2003). The MoH has registered more than 280 000 traditional or alternative medicine practitioners (MoH registry, 2012).

In 2007, the MoH launched Regulation No. 1109/2007 to legalize the implementation of alternative complementary medicine in health facilities. The scope of CAM in health facilities is based on biomedical science. The health practitioners who provide CAM should be registered and licensed. Doctors, dentists and other health professionals who perform CAM should have the necessary competence and authority in accordance with the standards set by the relevant professional organizations.

Regulation has also been introduced to provide standardization and quality assurance of traditional medicines. This focuses on standardization of raw materials and end-products, certification of good manufacturing practices, etc. This regulatory effort is managed by the National Food and Drugs Administration (BPOM).

In addition to modern medicines used by health professionals, the Indonesian people are also familiar with traditional treatments conducted by shamans (known as "Dukun"). Many people, especially those who live in rural and remote areas, prefer to go to Dukun for treatment rather than health professionals. As part of the national culture, the Dukun is believed to be able to cure the patient's illnesses, including chronic diseases such as cancer, heart diseases and renal failure. Traditional birth attendants (TBAs, or *Dukun bayi*) are also very popular. Since the TBAs do not have medical expertise, the MoH restricts their role to supporting mothers during delivery. Labour and delivery should only be managed by trained medical personnel. In order to maintain the presence of TBAs, the MoH developed a partnership programme between TBAs and midwives. Through the partnerships, the role of TBAs is mentoring pregnant women, accompanying them to the midwife for delivery, and taking care of newborns, as well as massaging mother and baby. However, due to limited numbers of midwives and health facilities in certain areas, in addition to the trust factor, many mothers still choose to give birth with the assistance of TBAs instead of midwives.

5.14 Health services for specific populations

There are no special services for specific populations in Indonesia. Most health-care services are provided in *puskesmas* as primary health facilities and hospital as referred health facilities. Health-care services for specific populations, such as sex workers and people living with HIV are provided in public health facilities.

6 Principal health reforms

Chapter summary

In the last decade, Indonesia has introduced a number of reforms affecting different aspects of the health system, while the health system has also been affected by multisectoral reforms of government and public administration.

Key multisectoral reforms include the delegation of authority for certain government functions from central to local governments, including responsibility for the management and provision of public health services; and the progressive introduction of greater autonomy in management of public service organizations, which include hospitals.

Reforms that focus specifically on the health sector include those to improve the quality of medical education; and the introduction of the national health insurance programme (JKN). Following nearly a decade of policy development, the JKN was introduced in 2014, with very significant implications for the management and delivery of health services.

Box 6.1 Major reforms

The first major reform was decentralization of government roles and responsibilities, which commenced in 1999. As mentioned in Section 2.4, decentralization has essentially changed the way the health system is organized.

The second major reform related to changes to management and governance for public service organizations (2003–2009). This reform provided greater autonomy for public health facilities as part of broader public sector management reforms.

The third area of reform was built around efforts to improve the quality of health professional education (2013).

The fourth major reform is on health financing. Starting out as a temporary social safety net (1999), it has now expanded to aim for universal health coverage (2014).

This chapter is divided into two parts. The first part describes and discusses some principal health reforms and/or reforms outside the health sector that have had a significant impact on the health sector in the last decade. The second part gives a short description of potential future reforms in the health sector.

6.1 Analysis of recent reforms

Recent reforms in the Indonesian health sector can be classified into two major groups. The first group comprises general public policy reforms that also have an impact on the health system. In this group, there are two reforms, namely the decentralization of the political system, which influences the health system, and the public management reform that provides additional autonomy in financial management to organizations which achieve the status of Public Service Agency (*Badan Layanan Umum/BLU*).

The second group of reforms covers specific health sector reforms that aim to change the health system. In this group are: (1) health financing reform; and (2) medical education reform.

The following section describes the aims, process and particularly the implementation and impact of reforms that have been undertaken in Indonesia. Not all of these reforms are actually health sector reforms. However, they have a fundamental impact on the health sector. As a system in transition, specific challenges in each area of reform will also be discussed.

6.1.1 Reforms outside the health sector: decentralization

Aims and background

In 1997, the Asian financial crisis severely hit Indonesia, halting economic growth, causing considerable economic dislocation, unemployment and poverty, and triggering a political transformation from the New Order regime to a more open, democratic and decentralized system.

As part of these political changes, Indonesia underwent a "Big Bang" decentralization reform, granting autonomy to local governments for all areas of government authority except a few that were explicitly assigned to the central government This vast authority was granted, not to provincial governments, but to local or district governments (Law No. 22/1999).

The impact of decentralization on the health sector was to make the health sector a local responsibility. Local government ownership, responsiveness to local needs, and, in turn, an increased budget allocation to health, were all expected to occur.

Process and content

Although decentralization was not a health sector reform, it had a tremendous impact on the national health system as the national government transferred the role of financing, planning and delivering health care directly to the district/municipality level. Consequently, the province lost its role in supervision of districts, and the districts have tended to bypass the province in order to obtain what they want directly from the central government.

But decentralization in Indonesia was much more of an administrative decentralization rather than a fiscal decentralization, causing difficulties in the health sector, as devolution of local public service responsibilities was inadequately matched to local revenues, while public accountability and strong legal institutions were not put in place (Green, 2005).

Under decentralization, local health managers became responsible for designing the way health services were delivered at the local level and targeted to meet local priority health needs, and for organizing and managing the local health services within their budget constraints. In order to do this, they needed an appropriate number and skill-mix of health workers while such workers remain affordable (Kolehmainen-Aitken, 2004). Transfers of staff from clinical services to administrative functions, or even staff holding dual functions, became common and affected the capacity of health-care institutions to provide quality care.

The main role of the province was to "coordinate and facilitate" programmes at district level. Thus, the head of the PHO was not the direct supervisor of the district health office, making coordination and monitoring between DHOs and PHOs difficult (UNDP, 2009).

On the other hand, central government seemed not to fully apply the decentralization principle in the sense that they still operated in the same way as they had previously in the pre-decentralization era. The MoH was still focused on central planning and budgeting. Limited central government guidelines resulted in poorly executed decentralized functions. Health, especially preventive and promotion programmes, were seen as a lesser priority by local governments.

Central government retained control of the allocation and distribution of financial resources, while district governments received a block grant,

which they could choose to allocate among different sectors, including health. Block grants were complemented by various mechanisms of direct financial transfers for specific purposes from the central government. Among these central government mechanisms the MoH increasingly used the central government budget in the form specific grants, such as operational grants (BOK), and vertical programmes, to ensure resources for national priority programmes.

After decentralization almost two thirds of the central government workforce was transferred to the regions and the regions had no option but to accept them (Heywood PF and Harahap NP, 2009). Furthermore, a number of larger provinces and districts were further divided into 'new' provinces and districts. On the other hand, the MoH still retained control of all issues related to hiring, paying and firing of permanent civil servants (*Pegawai Negeri Sipil*/PNS) working at the district level (Heywood & Harahap, 2009). The MoH also hires, pays and fires non-permanent staff/PTT (Heywood & Harahap, 2009). However, there are other contracted staff at the district level who are neither PNS nor PTT, and the MoH has little, if any, information about such staff with regard to their qualifications, how many there are, where they work, or their terms of contract (Heywood & Harahap, 2009).

By late 2001, the central government had transferred 239 provincial and 3933 district and city offices, more than 16 000 implementation units and about 2.1 million civil servants to the regions (World Bank, 2003).

Implementation issues

An important unforeseen result of decentralization was the creation of a fracture line between central and local actors. Prior to decentralization, local actors were required to report all aspects of the health system to the MoH: use of resources, health status, service delivery, etc. Although there might have been inaccuracies and delays in reporting, the central government still obtained a considerable amount of information. However, after decentralization, the district/municipal health offices are no longer obliged to maintain this reporting system. Thus the central government has more difficulties in building a picture of the health system as a whole (Heywood and Choi, 2010). The MoH cannot control the behaviour of local government. As Figure 2.1 shows, the MoH does not have direct authority over the PHOs and DHOs, both being under their local governments and, ultimately, the Ministry of Home Affairs. As a result, there is a lot of information that has not been passed on to the MoH.

A further complication has been the addition of direct local government elections (House of Representatives, 2004a). In a direct election system, the health sector becomes a political issue, as illustrated in the following examples (Trisnantoro et al., 2009). First, political attention is raised by promising free medical care at hospitals and *puskesmas*, attracting voters, despite the unavailability of human resources and/or financing. Second, appointments to positions of directors of city/district health offices may be made based on political support from the elected regent/mayor rather than competence. It is suspected that candidates linked to local political leaders have an advantage over technically and managerially competent leaders. Finally, decision-making in local government and local parliament concerning health matters is heavily influenced by political considerations and lobbying for special interests, especially in relation to budget and programmes.

Issues of local government capacity to undertake the new responsibilities and roles have also emerged. In the earlier years, rapid decentralization was not supported by timely and appropriate capacity development to enable the local level to accomplish the new responsibilities, especially among the newly created districts/municipalities (Kristiansen and Santoso, 2006).

One other important area was that of regulation. Many heads of local government health offices did not understand their role as regulators. It is widely recognized that the regulatory function is not well addressed by the MoH and local governments. The lack of regulation is an alarming situation. DHOs are seen as managers and providers of health services, rather than as regulators.

Understandably, planning skills were generally weak at the peripheral level in the early period of decentralization, a legacy of the highly centralized system (Kolehmainen-Aitken, 1998). When planning responsibilities were transferred to local managers without providing them with adequate skills, while at the same time databases frequently deteriorated, local (and national) planning suffered (Trisnantoro et al., 2009).

Another weakness is in regards to financial management capacity. Weak financial capacity has caused bottlenecks in transfers of national and local health funds for the delivery of health care, resulting in low overall health system performance (Simatupang, 2009). This is compounded by the late disbursement of health funding from the central government.

The planning process is lengthy leading to delays in disbursement of the annual budget and consequently delays in activities and programme commencement (Usui and Alisjahbana, 2003). Late disbursement reduces the capacity of local government to absorb the budget received close to the end of the budget year and uncertainty in local government cash flow management. Also, the high administrative burden to process disbursement has added time constraints to health workers who have a dual function to provide health care as well as administer funds.

The failure of central government to achieve the mandated allocation of 5% of national budget to health (as per Article 171 of Health Act No. 36/2009) has further contributed to insufficient resources in the health sector. It implies that there is still little commitment to health at the national level, and also indicates that there is a lack of communication between the MoH and the MoF.

Outcomes

Even though a large proportion of the health budget remains under central control, local government health spending has increased sharply with decentralization, reflecting the transfer of responsibility and authority from central government to the districts. The flexibility to decide how funds are used is one of the implications of the increased autonomy of local governments and it has brought a massive redistribution of resources across districts. As a result, the utilization of health services by the poor has increased, indicating net public resource transfers to the poor (Kruse et al., 2009).

Nonetheless, the increased local government funding for health is not distributed proportionally. After 15 years of decentralization policy it is clear that local governments pay less attention to preventive and promotive programmes and funding for these services has not increased. A recent study of BOK (Nurcahyani et al., 2014) shows that the preventive and promotive budget even decreased once funding from the national budget was provided. Local governments have the perception that promotion and preventive funding should come from the central government. Local governments tend to finance curative programmes through local government health insurance schemes.

However, another outcome of decentralization is the significant discrepancy in fiscal capacity between provinces and districts/municipalities. With the availability of local government shared-funds, some provinces and districts/municipalities suddenly

became "rich" in a short time, having a substantial amount of budget for relatively small populations. Local government fiscal capacity has become an important factor in the economic environment, alongside the community's economic activity. Research carried out on economic conditions in eight DHS1 provinces showed a significant variation in fiscal capacity (Trisnantoro et al., 2009) and its effect on the availability of funding for the health budget in these provinces, irrespective of their population size.

In addition, there is an uneven distribution of health services both in terms of facilities and available human resources among provinces and districts/municipalities. It is likely that decentralization has not improved the equity of the distribution of health services and perhaps even worsened it (Thabrany, 2006), thus increasing barriers to access. Prior to decentralization, new medical graduates, dentists, pharmacists and other health professionals were required to undertake a period of rural service, which helped to address equitable deployment of health personnel to the poor and remote districts (Emmerson, 1999). Now, under the decentralized arrangements, local governments have to compete to recruit their own health professionals and it is sometimes difficult for them to do so, due to lack of ability to provide attractive incentive packages (Thabrany, 2006). The maldistribution of the health workforce in Indonesia typically implies that the gap between the need for and the availability of the health workforce in remote areas and less developed regions is huge. Health workers tend to be reluctant to be assigned to and/or stay in remote areas and less developed regions due to lack of infrastructure, opportunities for continuing education, and transportation.[10] The common notion is that most health workers are attracted to work on the island of Java and major cities rather than stay in their original region/remote area.[11]

On the positive side, decentralization has also enabled the development of some local innovations in the health sector (Leisher and Nachuk, 2006). Examples include:

1. Some newly elected local government leaders have fulfilled their campaign promises by improving access to health care, e.g. a

10 Based on discussion with stakeholders at the "Health Workforces Education Reform" meeting on 29 April 2014 in Jakarta.

11 Based on discussion with stakeholders at the "Decentralization Policy Reform" meeting on 11 April 2014 in Yogyakarta.

non-targeted *Jamkesda in Jembrana* initiated by the newly elected regent in a district of Bali Province (Gaduh and Kuznezov, 2005).

2. Some local governments develop new initiatives that serve vulnerable groups such as women, children and the elderly, e.g. targeted performance-based contracts (TPC) also known as the vouchers for midwives scheme in Pemalang (Central Java) to increase access of the poor to midwifery services (Suk Mei Tan, 2005).
3. Some local governments have been able to work closer with the community to tackle local problems, e.g. Water and Sanitation for Low Income Communities (WSLIC -2) in Lumajang district (East Java) improves access to safe water supplies and high-quality sanitation services, with an emphasis on community participation by means of local facilitators, community construction and maintenance of water facilities (Suk Mei Tan, 2005).
4. A province-wide reform has been developed in special provinces, allowing innovation in the health sector that systematically addresses common challenges with province-wide measures, e.g. the Quality Board in Yogyakarta Province (Trisnantoro et al., 2009).

Decentralization has made these innovations possible in several ways. First, the districts' new power over finance and administration enabled local leaders to increase their own sources of income to pay for locally conceived reforms without relying on external donors. These sources of income are primarily taxes, user charges, and income from regional enterprises (ADB, 2010). Second, decentralization allowed reforms to be designed by local initiatives thus tailored to local needs and capacity, and in turn to improve the sense of ownership by the local community and enhance community participation. Decentralization also potentially improves good governance and accountability of local governments, encouraging them to seek ways to innovate and share these innovations.[12]

Future directions

The government revised the decentralization legislation in 2004 to address some of the problems of implementation of decentralization. Law No. 32/2004 regarding Local Government and Law No. 33/2004 regarding Fiscal Equalization between Central and Local Government tended to re-assert central government control over local government. With these

12 As mentioned in Chapter 2, local governments have their own associations, APEKSI (for municipalities) and APKASI (for districts). The annual meeting of local government associations (APEKSI and APKASI) provides a forum for the sharing of innovations.

new Laws, the PHOs have now assumed a supervisory role over the DHOs, in contrast to the authoritative and financial roles they used to have prior to decentralization. This tendency has continued with the revisions in Law No. 23/2014, which further defines the roles, responsibilities and accountabilities of the different levels of government. Greater emphasis on accountability of local government to central level also emerges from new provisions in the National Medium-Term Strategic Plan (RPJMN) 2015–2019. This plan further develops the notion of basic services, and defines five priority services for which local government must allocate budget as a priority, as shown in Table 6.1.

Table 6.1 Minimum basic services package

Basic right	Type of basic service
Legal identity	Services for legal identity and population administration (birth certificate, identity card, marriage certificate, divorce, family card)
Protection	Integrated centre for services and referral
Health	Basic health services and family planning
Education	Primary education (SD, SMP) and mid-level education (SMA)
Basic infrastructure	Housing, water and sanitation, electricity, transport, communication

Source: Ministry of National Planning Development, 2014d.

Improving basic services will be undertaken using the front line approach, i.e. an approach which emphasizes provision of basic services that are responsive to problems that occur in various basic service facilities, including feedback to the community as users of basic services.

In line with this policy, the Ministry of Health launched a new regulation in 2016 on minimum standard of services. This regulation is an implementation guideline of Law No.23/2014 particularly in health sector. The Minister of Health Regulation No. 43/2016 describes more clearly responsibilities of central, provincial and district/municipality on the fulfilment of the minimum basic services package. The minimum standard of services covers (MoH, 2016):

1. Standard antenatal services for every pregnant woman
2. Standard delivery services for every woman who delivers their babies
3. Standard health services for every newborn baby
4. Standard health services for every under 5 child

5. Standard health screening for every primary school aged child, and citizen from 15 and above
6. Standard health services for everyone with hypertension
7. Standard health services for everyone with diabetes mellitus
8. Standard health services for everyone with mental health disorders
9. Standard health services for everyone with TB, and
10. Standard HIV examinations for everyone with HIV risk infection (pregnant woman, TB patient, STD patient, transgender, drug users, and inmates)

Law No.23/2014 also affirms the requirement for local governments to prioritize their local budget and expenditures on the services mentioned in the Minister of Health Regulation No.43/2016. It is expected that by implementing this regulation, promotive and preventive part of the JKN will be covered. Hence the burden of curative cases in JKN could be controlled.

However, the central government needs to take into consideration the growing interregional disparities in terms of resources, services and health outcomes and develop a comprehensive strategy to address this (Thabrany, 2006). The objective of equity in achievement of health indicators across districts is not yet addressed properly in the decentralization policy. With a large, widespread area and population, and with the commencement of a universal health coverage system, the need for a reliable and integrated information system to support planning and decision-making process is becoming even more urgent (World Bank, 2010).

6.1.2 Reforms outside the health sector: public management reform

Aims and background

As the public sector organizations in Indonesia developed, it has become apparent that traditional public management approaches do not provide enough scope to run the evolving organizations, particularly in terms of financial management, resulting in generally low performance and low quality of service. This also applies to public hospitals.

Prior to reforms, all state-owned hospital revenue was submitted to the local government revenue (*Pendapatan Asli Daerah*/PAD) account. Being part of the PAD meant that budgets of state-owned hospitals and/or changes to them had to be approved by the local house of representatives (DPRD), a process that has been long deemed as bureaucratic, slow, rigid and prone to politicization. This is a hurdle hindering progress towards hospital management that is highly dynamic, and creates a system that

does not encourage efficiency. In fact, any under spending of budget in a given fiscal year could result in budget reduction in the next fiscal year.

Various and sometimes confusing forms of management for state-owned hospitals[13] have been tried – both for central hospitals (owned by central government) and for district/provincial hospitals (owned by local governments). These include: Technical Implementing Unit (*Unit Pelaksana Teknis Non Swadana*) as per Act No. 5/1974, Self-sufficient Technical Implementing Unit (*Unit Pelaksana Teknis Swadana*) as per Presidential Decree No. 38/1991, Hospitals as user of Non-Tax Revenue (*Penerimaan Negara Bukan Pajak/*PNBP) as per Act No. 20/1997 and Government Regulation No. 22/1997, Local Technical Institution (*Lembaga Teknis Daerah/*LTD) as per Presidential Decree No. 40/2001, State-owned Enterprise (*Badan Usaha Milik Daerah/*BUMD) as per Minister of Home Affairs Decree No. 1/2002, and Non-profit Public Service Company (*Perusahaan Jawatan*). Most of these forms of hospital management have been deemed problematic as they cannot solve the high inefficiency issues in human resources and operational management (Thabrany, 2005).

A new form of public hospital management was needed to tackle these issues. The terms *BLU* (Public Service Agency) and *BLUD* (local public service agency) have become very popular as a way forward among public hospital managers. The much-needed, ongoing reform is actually a public management reform relevant to all public service agencies but has affected the health sector in a positive way.

The aim of the reform is to transform state-owned hospitals from bureaucratic institutions into corporate-like organizations to improve their ability to respond to people's needs by reforming the financial management and the operational management.

Process and content

The national budget reform initiative (Act No. 17/2003) opened up the opportunity for public management reform. The reform itself was a shift from traditional budgeting to performance-based budgeting. The budget approach was crucial to improving the capacity of working units in the government to deliver more responsive public service, no longer to emphasize the input but rather output-oriented.

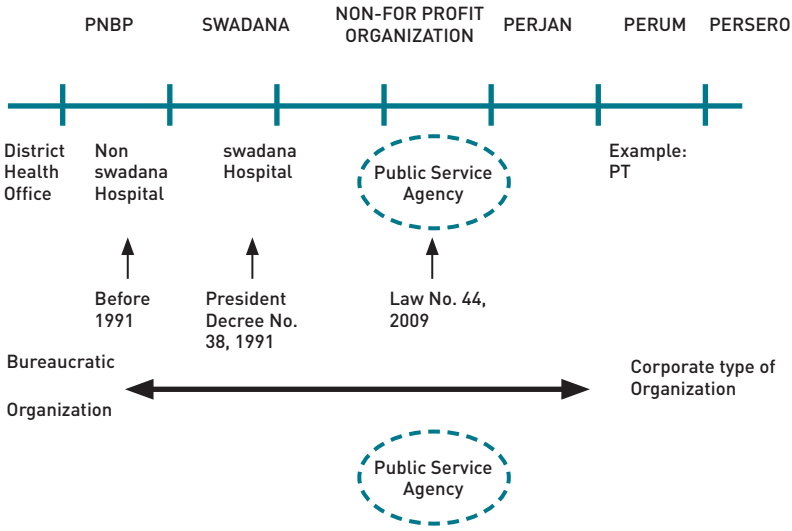
13 Hereinafter the term 'public hospital' or just 'hospital' will be used interchangeably, and in this section refers to State-owned hospitals.

Act No. 1/2004 of the National Treasury opened up a new way of implementing a performance-based system for government agencies. Articles No. 68 and 69 of the law state that government institutions with the main role and function of serving the public can implement a flexible finance management system that emphasizes productivity, efficiency and effectiveness. These institutions are called public service agencies (*Badan Layanan Umum*/BLU).

As stated in the law Act No. 1/2004, the definition of a BLU is an institution established to serve the public by providing goods and/or services that is non-profit, but that carries out activities based on the principles of efficiency and productivity on the basis of Government Regulation No. 23/2005. The BLU is expected to become a stepping stone in public sector financial management reform leading to improved public service as it provides more flexibility and independence in planning and financial management.

This is an extremely important reform as it means that the government is now encouraging a healthy business practice for government institutions (Government of Indonesia, 2005c). Accordingly, a local government unit that has the technical specifications in general public service has the potential to be managed as a Local BLU (BLUD) (Government of Indonesia, 2005d) provided they meet the requirements.

Figure 6.1 A continuum between bureaucratic institutions and state-owned enterprises



Source: Trisnantoro (2004).

There are three levels of requirements to qualify as BLU/BLUD (Ministry of Home Affairs, 2007c). The first level entails substantive requirements: (1) the public institution must provide services or goods for the community and receive payment for that; or (2) the public institution must manage a special region; or (3) the public institution must manage a special fund. The second level includes technical requirements: improvement of the hospital is feasible and the provider has a healthy financial performance. The third level consists of administrative documents: (1) commitment signed by the hospital director to improve its performance after BLUD status is awarded; (2) hospital governance; (3) Business Plan; (4) Minimum Service Standard (SPM) signed by both regent or mayor and hospital director; (5) Financial Statement; and (6) financial audit report or letter that states "available to be audited by public accountant".

Ever since the regulation was enacted, a growing number of state hospitals have been transforming themselves into BLU/BLUD. According to the latest case study in Indonesia, state hospitals that have BLUD status are now able to develop longer-term business plans that allow the expansion of their investment for better infrastructure and staffing as well as to develop cooperation with third parties such as universities, implying larger authority and responsibility to plan for and to fund for hospitals' development activities (Andayani et al., 2015). The study also shows that BLUD hospitals, due to the requirement set for BLUD qualifications, also apply a Minimum Service Standards that includes customer satisfaction indicators and internal and external auditors to improve hospitals' quality control and management. Therefore, BLUD implementation has started to show effect in hospital's capacity and accountability. However, there are challenges in BLU/BLUD implementation, including the challenging processes of switching from conservative government accounting standards to business standards and the political situation where local politicians often treat the health sector as a campaign platform to win the election, but need to be reminded that hospitals are not for profit, and their income should be used for health sector development.

The role of key national actors and interest groups

The actors in the BLU/BLUD reform are Ministry of Home Affairs (MoHA), local governments and hospitals. The MoHA produces the regulation and technical guidelines to implement BLU/BLUD. MoHA also conducts various training regarding requirements and preparations to become BLU/BLUD. The training is needed as local government units that will

become BLUD must be selected based on eligibility criteria, substance criteria, technical and administrative criteria.[14]

The local government has to show full support for its institutions that wish to become BLUD. One of the main changes when a government working unit becoming a BLUD is that the unit's revenue is not submitted to local government revenues (*Pendapatan Asli Daerah*/PAD). In some districts, traditionally the contribution of the revenue from health facilities to PAD is significant, between 34–60% (Dwicaksono A, Nurman A, Prasetya PY, 2012). The loss of a significant portion of the contribution to the PAD means that the local government will suffer a lower fiscal capacity. A request to become BLUD (usually a public hospital, and in some cases, *puskesmas*) is assessed by a team of assessors (established by the local governments). The results of the assessment are reported to the head of local government as a recommendation whether or not the unit is ready to become BLUD. Without the support from the local government, it is impossible for a hospital to become BLUD. Full support is also needed as local governments will have to produce different policies and procedures for BLUD.

Other actors, including universities and *Badan Pengawasan Keuangan dan Pembangunan*/BPKP (Financial and Development Monitoring Body), also take part in providing technical assistance. The universities are usually requested to provide technical assistance to local government working units (*Satuan Kerja Perangkat Daerah*/SKPD, for instance, hospitals or *puskesmas*) who have an interest in becoming BLUD and need help in the preparation process. BPKP is usually requested to provide technical assistance for the assessor team at local government level to help the team develop skills in assessing local government working units (SKPD) who propose to become BLUD (Ministry of Home Affairs, 2008).

BLUD has flexibilities that distinguish it from other local government working units, especially flexibilities in financial and operational management (Ministry of Home Affairs, 2007c). Thus, many operational regulations (e.g. Presidential Decrees regarding Procurement) are no longer applied to the BLUD hospitals. It also means that the local government has to produce operational regulations to replace the previous bureaucratic system to allow flexibilities to some extent, and to ensure that BLUD will be evaluated accordingly as part of an

14 The requirements include the availability of a sound strategic plan, business plan and financial plan.

accountability and transparency mechanism. A reform in one of the components in the system has an impact on other components as well.

Financially, the main change is in the use of revenue. Hospital's revenue comes from main activities (i.e. medical services), supporting activities (i.e. hospital business units) and government budget (for instance, APBD & APBN). The government budget is mainly allocated for civil servant salary and investment through government mechanisms. Non-government budget revenue may now be used to fund operational costs based on the hospital's annual budget plan. This flexibility means that hospitals can now create innovations or respond quickly to patients' needs and establish local-specific services.

With regard to human resource management, public hospitals were previously not allowed to recruit temporary or long-term staff. Hospitals have to submit their need for workforce to the Regional Staffing Board (*Badan Kepegawaian Daerah*) who conducts recruitment for all SKPD in the respective district/province. In practice, however, many new staff are deployed to the hospitals regardless of their competencies or the hospital's needs, and hospitals cannot refuse them. This practice increases the cost of running the hospital. Following the implementation of the BLU/BLUD, hospitals are able to recruit their own non-civil-servant staff, as long as they are able to pay the human resource (HR) cost. BLUD enables hospitals to meet their HR needs more easily and suitably. It also implies that the hospital management needs to think more seriously about their skill-mix need and ability to finance them.

Before the BLU/BLUD, the Board of Trustees (BOT) supervises the hospitals. The BOT consists of the Mayor or Regent (*Bupati*), Vice Major or Vice Regent (*Wakil Bupati*) and Regional Secretary. After becoming BLUD, some hospitals transform the BOT into a Board of Supervisors (BOS) with members who are Health Office and Finance Bureau staff, thus the supervisory team will have sound technical expertise and potentially can perform better supervision. The BOS monitors and evaluates the hospital based on the business plan and Minimum Service Standard achievement, instead of budget absorption. It also means that hospital management will have to acquire some technical and productive efficiency. For instance, this has resulted in many hospitals contracting out their non-core business (e.g. laundry, security and parking lot).

Implementation issues

There are some challenges and obstacles that hinder or slow down the implementation of BLU/BLUD. Some of these obstacles are specific to particular areas, while others are general challenges.

A study has shown that the implementation of BLUD in Java is better than outside of Java (Ministry of Home Affairs, 2007c). There are several identified challenges that might be the cause. First and foremost, the availability of suppliers including health workforces tend to more concentrated in Java. A case in point is specialist doctors. After decentralization, districts or municipalities with high fiscal capacity and population with greater financial capacity attract private health-care providers, and some argue that it has a positive association with specialist availability in that district/municipality (Meliala, 2014). Thus, hospitals in districts and municipalities in Java can easily recruit more specialists and innovate in opening new types of care and services relative to those outside Java.

Second, there are also general challenges. For instance, switching from government accounting standards to business accounting standards is a massive challenge for hospitals.[15] Some hospitals might not have an accountant and are not familiar with business accounting standards. In addition, the hospitals need to develop their own accounting system, information system, remuneration system, and so on, to gain most benefit from BLU/BLUD, as well as to make them accountable. All of these efforts require HR capacity but most importantly, behaviour change, neither of which can be accomplished overnight.

With regards to HR management, there is a challenge in the way performance is measured. The civil servant performance measurement system is no longer suitable for the new corporate style management system in BLUD hospitals. Hospitals have to develop their own performance system in place of, or in some cases, parallel to, the existing civil servant performance measurement system. Furthermore, hospitals must develop attractive remuneration and pay-for-performance systems and actually come up with the money to do so. This issue is indeed sensitive because there is no health professional payment standard that is applicable nationwide. Finally, the implementation of National Social

15 Previously, some hospitals basis accounting. In BLU/BLUD, they have to transform the accounting system to accrual basis. Only someone with accounting knowledge can do accrual accounting.

Security System (*Sistem Jaminan Sosial Nasional*/SJSN) will profoundly influence the way hospitals pay professional fees.

There is also a need for a change of expectations from other stakeholders. The local government has to play an essential monitoring and oversight role (through BOS), a role that can only be carried out if the local government has the capacity to fully comprehend BLU/BLUD system. The local House of Representatives (DPRD) has to understand that they cannot use the same perspective and measures to evaluate BLUD as it now has become an entirely different public management system. This particular issue emerged from a study of five hospitals converting to BLUD status in Indonesia, where local governments tended to continue to treat the hospitals as budgetary units, despite their BLUD status. The authors noted that local government needs to understand and accept that hospital revenues are no longer part of PAD. Local government needs to refrain from treating the hospital and health care as political turf. These are some serious challenges that have yet to be tackled systematically. Thus, some districts/municipalities are far better in implementing BLUD than other districts/municipalities (Andayani et al., 2015).

Outcomes

A preliminary report shows that BLUD has provided the flexibility to manage HRs and financial resources in the hospital more efficiently and has been able to promote innovations in services and quality improvement (Trisnantoro et al., 2009). However, the area of purchasing, financing and health workforce planning and recruitment still leave room for improvement.[16]

A number of local governments are also transforming *puskesmas* as BLUD, especially *puskesmas* with inpatient services. Local governments seem to recognize BLUD as a way to improve services in the face of lack of resources. It seems that BLUD has been able to transcend the traditional relation between local government and its implementing unit, and the traditionally sensitive issue of contribution to government local revenue (*Pendapatan Asli Daerah*).

In addition, BLU has gained a firm legal foundation by formally making its way into the health sector act. In 2009, the Government of Indonesia issued Hospital Act No. 44/2009 that stated that BLU/BLUD is the

16 Based on discussion with stakeholders at "Hospital Organization reform" meeting on 23 April 2014 in Yogyakarta.

preferred form for public hospital. It is clear that the new Hospital Act has balanced the business-oriented services and the social responsibility of health-care organizations in a new way, and that BLU/BLUD is here to stay. The hospital as a health-care institution is also framed in a clear legal framework instead of the previous confusion of a variety of forms. Consequently BLU/BLUD has given a clearer direction towards better governance of public service institutions.

This is another example of how a non-health sector reform, when it is done correctly, has the potential to positively transform the way health service is delivered, although the impact on the health system performance as a whole remains to be seen.

6.1.3 Medical education reform

Aims and background

Currently, medical education operates in a market-based system. Moreover, medical school entrance favours the upper classes and high school graduates from major cities. The residency training for specialist and subspecialist doctors operates outside the standards for health workforce employment. Residents are regarded as students and have no position in the medical profession at teaching hospitals. Residents are not paid for the medical services they provide. The residency training has limited regulation and there is little, if any, government influences.

Medical schools face two distinct challenges. The first challenge is for them to be able to improve the skills and competencies of their graduates to be able to face competition in the era of globalized health care (AIPKI, 2013). The second is to equip graduates with the necessary competencies to fill the vacant posts in the remote and less developed provinces especially in the universal health coverage era (*Jaminan Kesehatan Nasional*/JKN). At the moment, the medical education system has limited influence in addressing the problem of maldistribution of medical doctors and specialists.

The Medical Education Act No. 20/2013 aims to regulate the quality of medical education from enrolment to graduation and beyond. In addition, the new Act aims to: (1) reduce the problem of deployment to remote and less developed areas; (2) increase government financing to support the quality of education and finance medical students from remote and less developed areas; (3) regulate the residency training; (4) increase the quality and number of medical education teachers; and (5) create a new

specialist called 'primary doctor' in support of JKN. Thus a systematic approach to medical education requires transformative learning (i.e. curriculum reform) and interdependent education (i.e. institutional reform).[17]

Process and content

Some of the new initiatives in the Medical Education Act are:

- An enforcement of quotas in medical school enrollment.
- A transformation of curriculum towards competency-based curriculum (KBK).
- The introduction of a new specialty i.e. primary doctor. The primary doctor programme takes two years post completion of graduation and internship. Primary doctors will be the gatekeepers in the JKN system.
- A mandatory teaching hospital primarily for each Faculty of Medicine.
- A mandatory competency-based test as part of the medical education system. The test assesses *knowledge, skills* and *attitude*, using a computer-based test (CBT) and objective structured clinical examination (OSCE). In contrast to the previous competency test (done since 2007 in Indonesia), the test is conducted for those who have finished their professional education, as an exit exam (Meirina, 2014).
- An internship programme post-graduation. The internship is a one-year assignment, supervised by a supervisor doctor, and regarded as work experience.

The Ministry of Education and Culture (MoEC) is a key player in medical education reform. MoEC will have to produce various operational regulations and decrees to implement the Medical Education Act.

The MoH as a 'user' also plays an important role in accommodating the Medical Education Act initiatives, for instance in administering internship programmes and in producing regulations regarding the new 'primary doctor' according to the Medical Education Act and National Social Security System Act.

17 Based on discussion with stakeholders on "Health Workforce Education Reform" meeting on 29 April 2014 in Jakarta.

KKI has an important role with regards to identifying and standardizing core competencies of the medical profession, particularly, the new 'primary doctor' specialty, as well as the standards for medical professional education. The collegium and professional associations play a key role in maintaining and enforcing the standards. They are also crucial in determining the balance between the demand and supply of specialist doctors in different regions in Indonesia and not taking advantage of the situation to put up barriers to entry. Medical education institutions have to adjust accordingly to the Medical Education Act, for example, their enrolment system, curriculum, and so on.

Implementation issues

There are some issues related to the implementation of the new Act.

The first is regarding primary doctors. The primary doctor programme is only offered in universities with the highest rank of accreditation. Lower ranked accredited universities could only offer the programme in collaboration with the universities with the highest rank (House of Representatives, 2012). At the moment, of the 73 universities that have Faculties of Medicine, only 16 have the "A" accreditation status, the rest have "B" accreditation, and 23 of them have only "C" accreditation status (Media Indonesia, 2014). This means that the gate keeping system under JKN will not be functioning well, as the number of primary doctors will still be very limited in the near future. Furthermore, the role and function of a general practitioner in a clinical setting is now very vague. The MoH and BPJS need to establish a transitional strategy to bridge this gap. Local health offices and local health providers (including the private sector) will also need to invest in primary doctor training.

The second is with regards to internship. Internship is compulsory for graduates from universities that have applied the competency-based curriculum according to KKI standard.[18] It is not part of the education system, but part of the competency improvement system (Indonesian Medical Council, 2010a). Although internship is regarded as 'work experience' by the Law, in practice, interns do not receive any salary either from the government or from the health facilities where they are assigned. This contradiction can demotivate interns and will add to the perceived 'cost' of becoming a medical professional. Local health facilities and local governments might need to consider a reward mechanism for interns.

18 See more about internship in Section 4.2.3 Training on Health Workers.

The third issue is about the competency-based test (*Ujian Kompetensi Dokter Indonesia*/UKDI) (Ministry of Education and Culture, 2014). Passing the UKDI is part of the requirement to obtain registration and license to practise medicine. As the competency-based test is an exit exam which is part of the medical education profession system (Directorate General of Higher Education, 2013a), the cost is added to the total cost of medical education. This means that the cost of medical education will be slightly higher, depending on whether one passes the test the first time or require retaking. Retaking the test is not uncommon. Some have to retake the test several times (AIPKI, 2013) even up to 20 times (Media Indonesia, 2014). So far, out of 73 universities that have Faculties of Medicine, only 45 universities have processed their graduates through the UKDI (Sindo, 2013). Reportedly, the average percentage of passing the UKDI is only 70% (ISMKI, 2014). The backlog of re-takers will slow down the process of moving the medical profession from the education system into the health sector. The passing rate in turn also has implications for the quota of enrolment.

The new Act introduces a quota system to take into consideration the demand for the medical profession in Indonesia. The Directorate General of Higher Education sets a maximum quota of enrolment into each Faculty of Medicine based on the accreditation status and percentage of passing the UKDI (Directorate General of Higher Education, 2013b). An "A" accredited university could only enrol a maximum of 200 students, a "B" accredited university could only enrol a maximum of 100 students, and while a "C" accredited university could only enrol a maximum of 50 students. If an "A" accredited university only has 70% passing rate, it means that they could only enrol 70% of the maximum quota for the next academic year (Media Indonesia, 2014). The system tries to limit the quantity of students while improving the quality of graduates, and encouraging the medical profession educational institutions to maximize their effort in achieving the best quality education.

As with the Higher Education Act No. 12 of 2012, the Medical Education Act acknowledges the principle that recognizes the need to meet the demand for specialties and medical professions in some underserved areas. For instance, it acknowledges the scholarship programme. This would be an opportunity for students from underserved areas to apply for PPDS programme, for instance, or use the PPDS-BK programme. This calls for active participation from the local government to assess their needs and facilitate the scholarship initiative. As the Act also

mandates a standardized tuition cost (*Uang Kuliah Tunggal*/UKT) for the medical profession and specialty programme (*Programme Pendidikan Dokter Spesialis*/PPDS) (Ministry of Education and Culture, 2013), the government can easily calculate the number of scholarships they can offer based on the operation grant that the university receives (*Bantuan Operasional Perguruan Tinggi Negeri*/BOPTN) (Jawa Pos National Network, 2014). However, with the limited number of eligible graduates from these underserved areas, those who can apply to specialist training (PPDS) will be even more limited, which in turn will not meet the urgent need for specialty service in hospitals in these areas.

Outcomes

As a new Act, the Medical Education reform is still in its preliminary stage of implementation. Thus, it might be too early to assess how far the objectives have been achieved. It requires further reforms in the medical professional institutions themselves. It also requires adjustment at the local level, i.e. the local governments, local health offices, local health facilities, the private sector and the community, to perceive the changes that the reform initiates and act upon these changes.

However, it seems unlikely that these reforms will resolve the urgent need to increase the ratio of doctors per population any time soon. Most universities in underserved areas have low accreditation status and low passing grades.[19] It means that a huge number of graduates in these areas will be unable to get their registration letter (*Surat Tanda Regisrasi*/STR) and their license (*Surat Ijin Praktek*/SIP) to practise medicine, while the number of new enrolments will become even more limited. The supply of medical doctors in these areas is not increasing despite the increase in number of medical education institutions.

6.1.4 Health finance reform

Aims and background

In the last 20 years, reform in the area of health financing has been very dynamic, moving from various targeted programmes towards universal coverage. The initial financing reform attempt in the late 1990s aimed to provide financial protection for the poor as a response to the economic crisis that hit Asia in late 1998. Afterwards, in 2004 it was transformed

19 Out of 16 universities with "A" accreditation status, 11 are concentrated in Java and three in Sumatra, while only 1 is found in each of Sulawesi and Nusa Tenggara. HPEQ project component 3 is supposed to help the 'lower' accredited institutions to achieve a higher accreditation status.

into a social health insurance scheme, and in 2008, it was improved and expanded further. Later in 2011, another financial protection scheme was introduced specifically to achieve the MDGs. And finally, a move towards universal health coverage was initiated in 2014.

Process and content

Indonesia first introduced the health card (*kartu sehat*) programme before the Social Safety Net for Health (*Jaringan Pengaman Sosial-Bidang Kesehatan*/JPS-BK) in 1998–2001. The programme was intended to protect poor households (*keluarga miskin* or *gakin*) (World Bank, 2012b) from catastrophic illness payments after the economic crisis. JPS-Gakin provided capitation grants directly to providers including village level midwives, *puskesmas*, and hospitals with third class wards to enable free curative, preventive, outpatient, inpatient and mother-and-child care to cardholders (World Bank, 2008b).

JPS-BK was expanded into health social insurance for the poor (*Asuransi Kesehatan Masyarakat Miskin/Askeskin*) in 2004 (Sparrow et al., 2010). The *Askeskin* programme reimbursed providers in two ways: (i) a capitation payment provided to *puskesmas* based on the number of registered poor; and (ii) fee-for-service payments for third-class wards in hospitals reimbursed through PT Askes (a State-owned insurer) (Sparrow et al., 2010). The scheme was available at all public hospitals, and although it was initially planned to cover private health services, only a small number of private health-care providers accepted *Askeskin* insurance (Sparrow et al., 2010).

In 2008, *Askeskin* was transformed into *Jaminan Kesehatan Masyarakat* or *Jamkesmas* (Minister of Health, 2010b). *Jamkesmas* was a tax-based fee waiver scheme managed by the MoH. The fund was disbursed to the health facilities based on capitation (for *puskesmas*) and on claims submitted, verified and reimbursed using INA-DRG (Indonesian Diagnosis-Related Group) package cost for hospitals (World Bank, 2012b); later in 2010 it was known as INA-CBGs (Indonesian case mix-based groups) (Dwicaksono A, Nurman A, Prasetya PY, 2012). In 2011, the *puskesmas* were also paid based on fee-for-service basis to improve data collection on the utilization of primary care services (Harimurti et al., 2013). *Jamkesmas* was targeted at poor and vulnerable households, and it waived fees for almost unlimited use of available health-care services in *puskesmas* and third class wards in government hospitals and some contracted private hospitals. Funding was allocated by the

central government based on a capitation per month times the number of targeted poor and near-poor (Harimurti et al., 2013).

In the meantime, many district governments established district-based insurance schemes (typically called *Jamkesda*) to cover the near-poor population, or those not included in *Jamkesmas* (Dwicaksono A, Nurman A, Prasetya PY, 2012). These schemes took a variety of forms. Some *Jamkesda* were targeted insurance schemes covering an additional population of near-poor in the local area that were not included in the *Jamkesmas* quota; some were health-care cost subsidy (non-targeted) schemes in the form of a fee waiver for people using locally issued certificate of disadvantage (*surat keterangan tidak mampu*/SKTM); other schemes were universal health care (free-for-all) covering all residents of the respective district/municipality (Dwicaksono A, Nurman A, Prasetya PY, 2012). As at 2014, 63 to 79 million people were still listed as beneficiaries in more than 460 *Jamkesda* schemes across Indonesia (Thabrany et al., 2014).

In 2011, the MoH introduced a programme further targeting delivery care, prenatal and postnatal consultations, termed *Jaminan Persalinan* or *Jampersal* (Minister of Health, 2011d). The *Jampersal* programme targeted pregnant women and postpartum mothers, as well as newborns (0–28 days) who were currently uninsured. The payment for normal delivery and prenatal care used capitation, while payment for special delivery cases was determined by the INA-CBGs (Minister of Health, 2011d).

The most recent development in financial reform commenced in 2014. Act No. 40 of 2004 regarding the National Social Security System (*Sistem Jaminan Sosial Nasional*/SJSN) and Act No. 24 of 2011 regarding the Social Security Management Agency (*Badan Penyelenggara Jaminan Sosial*/BPJS) transform the health financing system in terms of its nature, administration and coverage of existing health insurance. The SJSN establishes the national social security system, including the provision of universal coverage for health (*Jaminan Kesehatan Nasional*/JKN) based on the mandatory social insurance system and equity principles (MoH, 2013c). According to the abovementioned acts, the existing health insurance company, PT Askes, will be transformed to become the social security managing agency for health (*Badan Penyelenggara Jaminan Sosial Kesehatan*/BPJS-K) (Joedadibrata, 2012a). BPJS-K has a role in administering the JKN, starting from administration of membership, collection of premiums (from the community and from the government

budget), management of the fund and of payments to providers nationwide directly. BPJS-K is supervised by the National Social Security Council (*Dewan Jaminan Sosial Nasional/*DJSN) (MoH, 2013d).

The JKN introduces a fundamental difference from the previous *Jamkesmas* and *Jamkesda* in shifting from tax-funded fee waiver schemes for poor people, to a premium-based mandatory health insurance system (President of Indonesia, 2013c). The JKN is a health financing reform that introduces the need to address the three pillars of health financing, i.e. revenue collection, pooling and purchasing (Kutzin J, 2008). The SJSN Act states that the mutual fund will come from contributions in proportion to the level of income/salary that will be pooled to finance provisions when needed (TIM SJSN, 2004). Starting in 2014, governments gradually submit members of *Jamkesmas* and *Jamkesda* to enter the BPJS-K. Employers also gradually enrol their employees in the BPJS-K. Particularly in regard to *Jamkesda*, the JKN programme targets the integration of all existing *Jamkesda* programmes into the BPJS by the end of 2016. The same goes for the other existing insurance schemes, i.e. *Askes* (civil servants), *Asabri* (military/police), *Jamsostek* (formal labour) and *Taspen* (pensioner). For each of them, there is a compulsory premium. For those classed as poor and unable to pay a premium, the central government makes a contribution equivalent to their premium (PBI) directly to the fund (Government of Indonesia, 2012b).

Actors

According to the regulations (President of Indonesia, 2013b; President of Indonesia, 2013c), the key actors in the JKN are the MoH and the BPJS-K, and their roles are established by these regulations. However, the actors in the JKN are actually all stakeholders in the health sector, including the Ministry of Home Affairs, the MoF, local governments, health-care providers, professional associations, health professional education institutions and the community.

The most prominent actor is the MoH. The MoH is responsible for ensuring the provision of services that are equitable, accessible and that meet the quality standards in order to enable JKN implementation. Related to this, the MoH is also responsible for ensuring the availability of the necessary medical equipment and supplies, drugs and other supporting components of health services. The MoH also is responsible for regulation of the tariffs for services, the system for cost containment and quality improvement, as well overall monitoring in conjunction with the DJSN.

The Ministry of Home Affairs, as well as the MoF, has the authority and responsibility to regulate the public sector financial management part of health funding, including accountability and transparency aspects. For instance, both ministries are the key actors in premium collection for JKN members that are funded by government budgets (APBN and APBD). Most importantly, the Ministry of Home Affairs has the authority and responsibility to encourage the local governments to commit to allocating 10% of their local budget to the health sector (House of Representatives, 2009c) and to pay closer attention to health sector development in general, including intersectoral efforts at local level (Ministry of Home Affairs, 2013a). The Ministry of Home Affairs also is one of the key stakeholders in any effort to improve resources at the local level.

Aside from ensuring an adequate level of health funding, local governments play a key role in the operation of various components that support the implementation of the JKN (Ministry of Home Affairs, 2013a). For instance, they need to map the availability of the gatekeepers, both in the public and private sectors, i.e. *puskesmas*, primary clinics, private practices and other primary care level facilities. They also need to map the availability (and unavailability) of the necessary skill-mix, equipment and other resources at different health facilities; appoint the primary referral institution, and in some cases, provide regionalization of referral nodes (for instance, in remote areas or archipelagos) accordingly; issue various local policies and regulations to ensure a smooth transition from *Jamkesda* to JKN; and so on. Local governments should also play a role in providing the necessary regulation, guidelines and monitoring to the implementation of the JKN at the local level.

The other main actors are the BPJS-K and the DJSN. The DJSN has to monitor and oversee the BPJS-K. The BPJS-K has to administer the JKN, including its membership, collect premiums (from the community and from the government), contract providers and make direct payments to providers. The BPJS-K also has to coordinate with BPJS-Manpower and other insurance providers for patients with road traffic injuries or who suffer occupational accidents, as well as any top-up health insurance providers. The BPJS-K is even required to take responsibility if its members' medical needs are not fulfilled due to unavailability of services in any given area, by providing financial compensation, sending the necessary health workforce, or providing an alternative health facility.

The BPJS-K also needs to maintain and intensify its communications with health-care providers and professional associations, specifically regarding the benefit packages, payment mechanisms, contracts, etc. In the early stages of JKN implementation, some have complained that this aspect has been neglected (Yuniar, 2014). Health-care providers and professional associations will need to provide ongoing feedback on the level of services, utilization as well as the cost of the JKN, even suggesting the necessary improvements.

In the JKN, even education institutions play an important role. Considering the need to improve the availability and quality of the health workforce in the JKN system, the education institutions bear the responsibility for assisting local level service providers by providing an adequate number of various health workers that meet the required standards. They could also contribute to providing additional training to the existing health workforce in order to facilitate a seamless referral system.

Last, but definitely not least, the community is a key actor in successful operation of the JKN. A transformation from a tax-based fee waiver system to compulsory premium-based financing is a major transformation that requires all parties to be willing to participate and contribute. For a country of the size of Indonesia, with a large and widespread population, and low levels of awareness and understanding of the concept of health insurance, the sociocultural aspect of the JKN is important. The community will also play a role as a watchdog for the system, providing the government with information on operation of the JKN in practice.

Implementation issues

One major obstacle is supply-side constraints. There continues to be significant disparity in health workforce, facilities and equipment between regions, which implies that equality in access to health services remains a challenge in universal coverage. The supply-side constraint goes beyond shortages in overall numbers. Rural and remote areas are highly disadvantaged. Not only do they have fewer numbers of health facilities and health workers, but they also have difficulties with the retention of doctors. In general, the supply side still lags behind the demand side, and the central government needs to ensure a better investment in the health workforce, facilities and equipment for less-developed regions to ensure equity in access to services. Sadly,

existing special funding for these regions is usually earmarked for activities rather than investment (Minister of Health, 2010a; House of Representatives, 2014a).

Another major obstacle is the limited financial support from government for investment in health. As Chapter 3 has shown, Indonesia has long suffered from insufficient public expenditure on health. According to the National Health Account report, Indonesia spent only 3.1% of GDP on health in 2012, and public spending only accounted for 39.2% of THE (WHO, 2014). Currently, there is no policy commitment to increase funding. In fact, the Government of Indonesia announced in May 2014 a reduction in public spending including a budget cut to the MoH (Commission IX of the House of Representatives, 2014). At the same time, only a small number of local governments have proved to be able to allocate the expected 10% of local budget to health funding (Ministry of Home Affairs, 2013a).

In addition, lack of investment for preventive and promotive measures is a continuing problem. In order to successfully meet the national health goals, the government needs to strengthen their commitment to preventive and promotion measures, to avoid high burden of health financing in the future.

Managerial issues

The JKN faces challenges in reaching and engaging with workers in the informal sector who are expected to voluntarily make contributions to the insurance fund (Joedadibrata, 2012b). Historically, Indonesia has a large informal sector with the majority of them in the rural areas. A preliminary study has warned that the JKN will face difficulties in ensuring that workers in the informal sector pay their contributions without clear mechanisms for collection and socialization (Arifianto, 2004).

The institutional setting also poses another challenge to the JKN. According to Government Regulation No. 38 of 2007, local governments are allowed to manage their own insurance schemes, resulting in a huge number of *Jamkesda* schemes. However, according to SJSN Act No. 40 of 2004 and Act No. 14 of 2011 on the Social Security Managing Agency (BPJS), social health insurance is now managed as a single-pool fund. According to the Act, BPJS-K has the authority to pool and manage all the premium funds including from the local government schemes (*Jamkesda*). The government (including local governments) must

gradually submit the current members of *Jamkesmas* and *Jamkesda* to BPJS-K. Nevertheless, there is a great variety among *Jamkesda* in terms of level of funding 'capitation' and coverage, depending on local government policies. Making the transition to a unified JKN and pooling all these varieties and resources will be challenging.

Regarding targeting, one lesson has been learnt from the experience of *Jamkesmas* and *Jamkesda*. Presumably, PBI mostly consists of *Jamkesmas* and *Jamkesda* members and additional eligible people. However, given the experience of missed targets in *Jamkesmas*, it might be worth questioning whether there is a need to improve the verification process of PBI at the local level systematically. The local government might also benefit by avoiding 'double dipping', or in this case, paying a premium for PBI who have already been paid by central government. Members of other predecessor programmes, such as *Jampersal* and *Programme Keluarga Harapan* (a conditional cash transfer scheme), should also be taken into consideration. In summary, to avoid missed targeting of PBI, a rigorous database and better coordination between local governments and central government, and also among central government ministries, is crucial.

Technical issues

Other necessary elements to support an effective and efficient JKN also remain questionable. For example, HTAs, cost containment strategies and health information systems have become more crucial in the JKN, and yet progress on these elements remains slow. As everyone is free to choose their provider, any given hospital will need to be able to access the main databank of JKN membership, as well as an integrated primary care databank; a complex and daunting task to tackle for a fragmented health system, as is the case in Indonesia. Ultimately, the government also needs a sound and integrated health information system that captures both the supply and demand aspects of health care, health workforce and health facilities in both public and private sectors, to fully ensure seamless and equitable access to health services by populations in any given region at any given time.[20]

With the existing limitations of the public sector supply side, clearly the JKN will not succeed if it relies solely on the public sector. The JKN

20 Based on discussion with stakeholders at "Future Scenario of Indonesia Health System" meeting on 7 May 2014 in Jakarta.

is more likely call for further collaboration with private health-care providers. The government needs a new set of skills to interact better with the private sector as well as an incentive to attract and keep them in the system. Competition over quality and cost will also drive the behaviour of providers, including private providers, calling for close monitoring from the government, something that traditionally has been challenging for Indonesia. *Jamkesmas* and *Jamkesda* provide experience in contracting public and private providers through the publically funded scheme, although there is little evidence that the contract mechanisms have used reimbursement or payment policies strategically to drive improvements in quality or efficiency. This might be a valuable lesson for the JKN, to try to link the JKN with quality improvement, not just for the private sector but also for the public sector.

Furthermore, there is a risk of fraud. Indonesia is not free from fraud, and currently, there is no system for prevention and prosecution of fraud. Use of BPJS-K funds through claims by hospitals can be aggravated by the phenomenon of fraud, which in turn will further reduce equity. Lack of fraud prevention mechanisms in JKN is a justified concern. More to the point, an overall accountable JKN system is needed. The people need to see measures to ensure public reporting on performance and avoid corruption, particularly now that the system is going to collect funding from the community.

Outcomes

There has been no result yet on monitoring and evaluating of the financial reform. The JKN has recently begun to operate and understandably there is high media coverage regarding various problems in its early stages of implementation. Some of the complaints are related to lack of socialization, the process of registration, fraud, adverse selection,[21] and so on. The JKN also highlights even more certain persistent challenges that are rooted in other components of the health system, namely health workforce availability and distribution, inequity of services, fragmented system and financing, the unintegrated health information system, lack of coordination and lack of monitoring capacity, among others.[22] In the first year of the implementation of the JKN, the Health Policy Network in Indonesia

21 Based on discussion with stakeholders at "Health Financial Reform" on 17 April 2014 in Jakarta.

22 Based on discussion with stakeholders at "Future Scenario for Indonesia Health System" on 7 May 2014 in Jakarta.

organized a study on policy monitoring. The result in the first semester of 2014 produced a scenario analysis for JKN implementation. In this analysis, there is a risk of worsening inequity in health in Indonesia. The result will be discussed in Chapter 7.

Evidently, the JKN alone will not and cannot be expected to solve these issues. Health financing reform is not a panacea for a health system. Nevertheless, the JKN can potentially create the momentum to move towards coordinated policies and strategies to achieve national health system goals. No country in the world has achieved universal coverage. Even countries that have succeeded in achieving *universal financial protection* are still underperforming in delivering *effective coverage* (Kutzin J, 2008). However, the JKN has shed light on a more equitable distribution of the burden of funding the system. Now the country needs to move on and make the necessary adjustments so that the health system can function in a way that provides quality, efficient and equitable services while at the same time providing sustainable financial protection to the people.

6.2 Future developments

There are a number of areas of debate in terms of policy challenges and potential future reform. These include the use of telemedicine, health workforce distribution and international recruitment, sub-national level strengthening and other regulation pertaining to health, as described in the following sub-sections.

6.2.1 Use of telemedicine

The geographical condition of Indonesia, coupled with difficulties in transportation, insufficient numbers and distribution of health workforce and lack of investment in construction of more facilities might mean that some remote and very remote areas will always be disadvantaged in terms of availability of services. Task shifting has been a difficult option to pursue due to lack of legislative support (Indonesian Medical Council, 2010b). Telemedicine is a plausible solution to the need for service provision in remote and very remote areas (MoH, 2012c). A telemedicine network would enable patients in remote areas to have access to reliable medical consultations, and at the same time health professionals in remote areas can also be supported through the use of telemedicine technology. Some districts have introduced telemedicine initiatives locally (Sutjiredjeki et al., 2009), while in the private sector, various stand-alone

telemedicine initiatives have also been established (Kartika, 2014; Irawan, 2005).

In 2012, the MoH initiated a pilot project for teleradiology and tele-ECG (Director General of Medical Services, 2013). The central node is TjiptoMangunkusumo Central Hospital (for teleradiology), connected with a primary health centre and a clinic in DKI Jakarta and eight hospitals in remote areas; while for tele-ECG, the central node is National Cardiology Centre/Harapan Kita Hospital, connected with 19 health facilities across Indonesia (Directorate of Health Services, 2014a).

Some early challenges for telemedicine that have been identified in Indonesia are infrastructure readiness, human resources factors and limited product options (MoH, 2013b). Internet connection coverage, especially in the eastern part of Indonesia, is very limited and has inadequate bandwidth connection which requires an immense investment to expand. There is also an indication of limited awareness and knowledge of the technology, which implies that more training is needed. Both factors will require the government to invest heavily in infrastructure and human resources. Considering the high cost that this will incur, the government might need to consider making the infrastructure and training available for all sectors, instead of just the health sector. Networking with the private sector is an option yet to be explored. Moreover, in Indonesia the technology is fairly product-driven, i.e. not based on needs, but rather on "what we can do with the product". Hence, more strategic thinking towards developing the necessary technology locally is vital. Lastly, with decentralization and the implementation of the JKN in mind, it seems that more coordination of policies at central and local government levels will be one of the prerequisites for expanding telemedicine. Although the challenges are many, telemedicine can be a potential solution for remote and very remote areas of Indonesia.

6.2.2 Distribution of the health workforce

Despite the increasing number of new graduates from health professional education institutions, the distribution is highly concentrated in particular regions. This has been a concern for some time. Now, more than ever, in order to support the implementation of universal health coverage, one of the major concerns of the government is to ensure that there is an adequate number of health workers, especially doctors, distributed across all regions of Indonesia. The initiative to mobilize health workers, in this case doctors, to work in remote and very remote areas consists

of many strategies that are not new but rather a different approach from those undertaken previously.

Following decentralization, the previous policy of mandatory rural service as a contract employee doctor (PTT) was replaced with voluntary appointment as a PTT, but with the potential of becoming a permanent civil servant (PNS) for doctors willing to be deployed to remote/very remote areas for five years (President of Indonesia, 2007a). However, even with increased incentives, the majority of PTT still prefer remote over very remote areas. It seems that the general condition of very remote areas remains one of many significant factors in determining the interest of the health workforce.

One of the possible solutions is enforcement of the mandatory responsibilities (*tugas wajib*) of local government as defined in the revised law on decentralization (No. 23/2014). Using their authority, provincial governments could undertake temporary redistribution of the workforce between districts/municipalities within provinces with large workforce discrepancies. Such an assertion of provincial authority would require willingness to collaborate from district/municipal governments and from local professional associations.

Another solution is centralized recruitment. The MoH offers 3000 vacancies for civil servant candidates (*Calon Pegawai Negeri Sipil/*CPNS) to be deployed to very remote areas (Ministry of Home Affairs, 2013b). The challenge is to offer an attractive remuneration package, coupled with cross-sector approach to improve the condition and basic infrastructure in very remote areas.

The requirement for internship in the new Medical Education Law opens the opportunity to make better use of interns under the Programme Internship Dokter Indonesia/PIDI who are required to undertake a one-year internship (see Section 4.2.1). Historically in Indonesia interns are not considered as part of the "staff" of the *puskesmas/*hospital. Thus, they do not have access to financial reward. In the future, it may be worthwhile to assess the possibility of local regulations that enable interns to be provided with some kind of financial reward to encourage them to accept postings to remote or very remote areas.

Contracting out might be another option, particularly to provide a specialist service in remote areas. Although not a new concept in hospitals, traditionally in Indonesia contracting out is conducted for non-clinical

services only. A pilot for contracting out of clinical services has been conducted in Nusa Tenggara Timur (NTT) since 2010.[23] In principle, the pilot introduced a "sister hospital" network between nine major hospitals (public and private) in Java, Bali and Makassar with 11 public hospitals in NTT as a response to the immediate need for a functional CEONC team in public hospitals in NTT (AIPMNH, 2014). The NTT public hospital "contracted out" the clinical services to a team of specialist or senior resident doctors (ob-gyn, paediatric and anaesthetic) and paramedics to their "sister" hospital for a period of time. Although it is a team-based contractual relation, the pilot is built around the spirit of partnership, hence the term "sister hospital". During the contract period, the team work together with the host hospital to improve their capacity through internship, training, performance and management leadership. They also assist the local *puskesmas* staff to develop a better referral system. The programme is also accompanied by specialist training of medical doctors from the NTT hospital at their "sister" hospital, funded by the local government.

So far, the pilot has shown positive results in improving clinical and management skills in maternal and neonatal cases in hospitals, as well as the developing the referral system, starting from the community to facility-based referral. Some challenges include the need to adapt to different organizational cultures and the meticulous work required for such systemic change. The support of local governments is crucial, particularly in investing in specialist training for local medical doctors and providing the necessary equipment upgrades and supplies alongside the sister hospital programme, among others. The local governments also have to commit to supporting an exit strategy once the pilot is complete (CHPM, 2013; CHPM, 2014b; CHPM, 2014a).

This is a foreign-funded pilot, and the central government has not scale it up in other provinces. However, contracting out could be an alternative for local governments, in particular those which need immediate response to the lack of service delivery in remote areas. The local government can be the initiator and actively pursue this opportunity by collaborating with other partners. For instance, the BPJS-K is required by law to provide compensation or provide an alternative service if their members cannot receive the necessary treatment for their illness in their areas. Local governments that are lacking the fiscal capacity to do their own

23 The pilot is funded by Australia-Indonesia Partnership in Maternal and Neonatal Health (AIPMNH), AusAID.

contracting out might need to approach the BPJS-K with this initiative. The potential to develop a similar team-based contracting out combined with medical specialist training for another field of service could be developed.

6.2.3 International mobilization of health workforce

In 2015, the Association of Southeast Asian Nations (ASEAN) established the ASEAN Economic Community (AEC). This means that the ASEAN Framework Agreement on Services (AFAS) will also be gradually implemented. In the health sector there are three Mutual Recognition Arrangements (MRA) that have been signed. One is the MRA on medical practitioners (signed in 2009) – which means that doctors registered in any one ASEAN country will be given reciprocal recognition in other ASEAN member countries – and the MRA on nursing (signed in 2006) and dentistry (signed in 2009). The Health-care Services Sectoral Working Group (HSSWG) (ASEAN, 2014c) has created committees for each of these MRAs, namely the ASEAN Joint Coordinating Committee on Medicine (AJCCM) (ASEAN, 2014b; ASEAN, 2014a), the ASEAN Joint Coordinating Committee on Nursing (AJCCN) (ASEAN, 2014c; ASEAN, 2014b), and the ASEAN Joint Coordinating Committee on Dentistry (AJCCD) (ASEAN, 2014a; ASEAN, 2014c).

The MRA aims to facilitate mobility, and increase capacity-building and the exchange of information. However, this global trend of health-care mobility is moving closer to home while at the same time Indonesia is still struggling with internal challenges such as distribution and quality of health workforce. The challenge is for policy-makers in Indonesia to address both issues at the same time.

The AFAS recognized four modes of supply, namely:

1. Cross-border supply (Mode 1), e.g. a doctor in Singapore performs a telediagnosis for a patient in Sabah.
2. Consumption abroad (Mode 2), e.g. Indonesians purchase health-care services in a hospital in Thailand.
3. Commercial presence (Mode 3), e.g. Gleneagles group opens a subsidiary hospital in Indonesia.
4. Presence of national person (Mode 4), e.g. Philippine nurses work in Brunei.

Although Modes 1 and 2 have virtually no limitations already, there are still some limitations in regard to Modes 3 and 4. The AFAS called for

liberalization of such limitations gradually by 2015 (ASEAN Secretariat, 2009).

One of the key features of the AFAS is removing/minimizing restrictions for the supply of services by foreigners. However, the MRAs do not stipulate unrestricted free flow of foreign professionals, as relevant national regulations and market demand still apply. Therefore, any "limitation" is discussed among member countries and has to be agreed upon. For instance, with regard to Mode 3, the government has set a limit to foreign direct investment in several sectors (President of Indonesia, 2014). In the health sector, for instance, there is a ceiling for the percentage of foreign direct investment in clinics and hospitals, and the type of clinics and hospitals is limited. The government continues to regularly update the list of 'open for investment' and 'restricted for investment' sectors, depending on the recommendation by the technical ministries.[24] With regard to Mode 4, some barriers to entry still exist for the foreign health HRs, namely: fluency in Bahasa Indonesia, a higher income tax for foreign nurses, the intended person must reside in Indonesia for a specified period of years, and they can only practice in the eastern part of Indonesia (Indonesian Medical Council, 2009; Indonesian Medical Council, 2009a; Minister of Health, 2010d; Minister of Health, 2011e; Minister of Health, 2011k; Indonesian Medical Council, 2009b).

The MoH, in particular the Agency for Development and Empowerment of Human resources for Health (*Badan Pengembangan dan Pemberdayaan Sumber Daya Manusia Kesehatan/*BPPSDMK) has a role in mapping any international health profession and coordinating policies that regulate foreign health workers. The BPPSDMK also has to map and monitor the Indonesian health workforce working abroad. Coordination has to take place vertically, e.g. between central and local governments, as well as horizontally, e.g. among collegiums, professional associations and health-care providers. The MoH acknowledges the presence of foreign health workers for several purposes, i.e. the health service purpose, the transfer of technology purpose and the social service purpose. Any domestic health facility or institution that would like to recruit foreign health workforce for these purposes needs to obtain a recommendation from the Ministry.

24 The next new list is scheduled to be published in 2016.

The Ministry of Manpower and Transmigration regulates the mobility of foreign workers and the protection of their rights, but also regulation and protection of Indonesian workers who work abroad. Local employers who would like to hire a foreign health workforce need to obtain a licence (*Ijin Memperkerjakan Tenaga Asing/*IMTA) and permission (*Rencana Penggunaan Tenaga Kerja Asing/*RPTKA) from the Ministry (Ministry of Manpower and Transmigration, 2014). In turn, the foreign health workers must also process their residency permits (*Kartu Ijin Tinggal Terbatas/*KITAS) at the immigration office, and after three years they have to process a permanent residency permit (*Kartu Ijin Tinggal Tetap/*KITAP).

The KKI has the authority to process or deny the application of registration letters (*Surat Tanda Registrasi/*STR) from international health workers and to determine the prerequisites for registration, for example that the applicant must have equivalent education, pass a competency test conducted by the relevant collegium, and undergo an adaptation programme. The Minister of Education examines the curriculum of graduates from international health professional educational institutions to assess equivalence with the Indonesian curriculum. The KKI also coordinates with local health offices regarding licensing at the local level (after the applicant receives an STR) and monitor the foreign health workforce should there be any issues of disciplinary/non-ethical behaviour (that could result in revocation of an STR). The KKI has joined the ASEAN Medical Disciplinary Board (MDB) with regard to the latter. The KKI and the collegiums also play a role in improving the competence of the Indonesian health workforce in the face of competition and global demand. Professional associations and collegiums conduct the necessary competency tests, adaptation programmes and provide ethics clearance. They, along with the MoH, are members of the Joint Committee, and thus also bound to share information with regard to the AFAS.

In particular, the Joint Committee in each country is responsible for the exchange of information regarding any procedures, licensing/registration regulations, core competencies, profiles and databases of professionals, institutions, infrastructures and systems, as well as domestic regulations related to licensing/registration. The Joint Committee also works together in developing core competencies and equivalences, planning for capacity-building programmes and formulating annual programmes and other initiatives related to the implementation of the AFAS. The information should be available on the Joint Committee website and accessible to all.

The first and foremost impact of incoming health professionals from ASEAN would be higher competition for quality of care. One thing needs to be borne in mind by policy-makers: the policy should not be to "protect" the domestic market but rather to encourage the domestic supply and suppliers to seize the opportunity to compete globally and increase their competitive edge. This is a particular challenge for collegiums and professional associations to continuously improve the competence of the local/domestic health workforce. It might also imply that health professional educational institutions need to adapt their curriculums according to this need. In the meantime, the quality of services in all regions of Indonesia should not be neglected or suffer. For instance, while some universities focus on improving the competencies in services that respond to local needs and to meet local health development objectives, other universities could focus on developing competencies to compete in the global health-care market. In the near future, there is also a need to plan for a common curriculum and common examination as well as establishing an ASEAN board of health professions so that standards of future trainees in different countries are comparable. This can be a challenge as the curriculum should take into consideration the diversity of the countries in socioeconomic development and available resources.

Despite the growing number of registered foreign health workers in the KKI, some challenges have been identified regarding the implementation of the MRA, including differences in available technology (with regard to transfer of technology), largely unregulated social services, lack of coordination between the KKI and collegiums/professional associations, as well as lack of monitoring and supervision. All key national actors should take responsibility according to their authorities and capacities for working together to overcome these challenges. Better coordination between key actors, better policy enforcement and strengthening of the monitoring function has to take place soon.

6.2.4 Strengthening the role of provincial and district health offices

The current reforms in Indonesia bring another issue to the table, which is the role of the health office. The hospital financial autonomy reform (BLUD), for instance, needs the support of health offices (*Dinas Kesehatan*) as stewards and regulators of the health system. However, in practice, the capacity to undertake the stewardship function is weak, with only a few provinces actively playing this role (Trisnantoro, 2003). Moreover, there is no clear strategy from the central government on the stewardship role

of *Dinas Kesehatan*. The crucial role of the stewardship function is one of the main discussions within the framework of amending Government Regulation No. 38 of 2007, and Government Regulation No. 41 of 2007.

The key question is whether local health offices should focus on the regulatory function, or whether they should play a dual role of regulator and manager of services provision. At the moment, there seems to be a fracture line between the hospital (as the spearhead of curative services) and the health office and *puskesmas* and their networks (as the spearheads of public health), as both report separately to the mayor or regent (*bupati*), and the local health offices have no authority over local hospitals. Furthermore, health office directors seem to be unable to exercise the regulatory function towards hospitals because hospital directors are of the same rank. On the other hand, if the local health office is to play a dual role, with hospitals reporting to the health office, hospitals become the operational technical units of the local health office, which negates the very nature of BLUD and autonomy for public hospital managers.

At the same time, the newly existing BPJS-K also requires the local health offices to take on a stronger stewardship role. Ironically, the legislation (Parliament of Indonesia, 2004; President of Indonesia, 2013b; President of Indonesia, 2013c; Parliament of Indonesia, 2011) relating to the National Social Security System and Social Security Agency, makes little reference to the role and function of local health office. This has stimulated the debate for strengthening the regulatory function of health offices and avoiding a dual role.

At the national level there has been a proposal to update the current Government Regulation No. 41/2007 on Local Government Organizations (Government of Indonesia, 2007). The plan would include the reorganization of hospitals to be under the direct management of the provincial/district health office. This has led to a debate on whether hospitals should remain semi-autonomous institutions that report directly to the local government or become technical service units under provincial/district health offices. Adopting the latter option would shift the role of health offices to become both regulators and providers of health-care services, which would not support the agenda of strengthening health offices' role as the provincial/district-level regulating institution. This option was finally manifested in Law No. 23/2014 on Local Government. Clause No. 209 of Law No. 23/2014

eliminates the district hospital nomenclature as one of the provincial and district level institutions. Such a development has led to the uncertainty of the status of district hospitals (House of Representatives, 2014b).

With regard to Law 23/2014, there are ongoing debates around the effect of the Law as concerns the functions of provincial and district governments. According to the Law, provincial government would have greater authority, including the power to cancel district regulations. This implies an effort to shift the decentralization of power from district level to province level. Law No. 23/2014 also stipulates that the three health subsystems functions would be regulated solely at the national level, i.e. financing, regulation, management and information systems, as well as health research and development. Financing for curative care, for example, is now governed by the central level through JKN implementation and local government will no longer has the authority to run its *Jamkesda* (local insurance) scheme. The effect of Law No. 23/2014 on health information systems has also sparked debate, as the health offices now have less authority to monitor health provisions or programmes through health information data. This has particularly important impact on the JKN, where the health office lacks the authority to monitor JKN implementation in both *puskesmas* and hospitals because information and data are submitted directly to the central government (House of Representatives, 2014b).

Meanwhile, the new Law No. 6/2014 on Villages also aims to empower village-level institutions (House of Representatives, 2014a). One such effort is through the large fund disbursement directly from national to village level, which would also shift the governing power from district level to village level. In addition to this, the new National Strategic Planning document for 2015–2019 (RPJMN 2015–2019) states that five basic services, which include health services, should be developed at the local level through basic public service facilities and with the empowerment of the people through community feedback and community participation (Ministry of National Development Planning, 2015a). This would potentially affect many public health efforts, including for *puskesmas* and *posyandu,* that could have benefit financially from the implementation of the village fund scheme.

Despite these recent changes, there are several arguments that still support the strengthening of regulatory functions of the health office. First of all, the health sector needs a strong regulatory function to provide

oversight to the overall system. The community must be protected from: (1) low quality health-care providers; (2) incompetent health workforce; (3) irresponsible traditional and alternative medicine; (4) inadequate financial protection and fraud; (5) counterfeit drugs and harmful pharmaceutical practice; (6) unregulated beauty salons and slimming centres that are performing clinical treatments; and (7) sale of food and drinks that lack nutritional value. Therefore, this function should remain in the government and in this instance, as a responsibility of the local health office.

Also, the universal concept of health system organization calls for a strong institution with stewardship/governance/leadership function (WHO, 2000; WHO, 2007). Again, the argument is to protect the community as health care is considered to be high risk. Based on good governance principles, the health system requires transparency, accountability and effectiveness, which can only be achieved when there is a separation of the functions of provision of services from regulation between government agencies. The government should play a *"steering"* role rather than a *"rowing"* role. This suggests that if the government would like to play a dual role, i.e. regulation and provision, there should be a separate entity to play each role.

Thus, future reform should include policies to strengthen the health offices to enable them to exercise their regulatory role. The separation of functions should mean that the regulatory function (health offices) is separated from the provision function (hospitals). The position of public hospitals should be clear. Hospitals should be autonomous in terms of organization, but responsible to the health office in relation to health outcomes. A policy reform should address the barrier related to level/echelon (health office directors seem to be unable to exercise the regulatory function towards hospitals because hospital directors are of the same rank) to enable the health office to undertake its regulatory function. In addition, the health offices should be enabled to oversee the JKN and BPJS-K in their respective areas.

6.2.5 More legislation

There are several new pieces of legislation on health that are in the pipeline. One of them is the Nursing Act. The draft of the Act was submitted in 1994 and has been amended several times but still has not been passed as law (House of Representatives, 2013a). Some suspect that the medical profession has an interest in delaying the enactment

of the Act due to the fear of the nursing profession claiming some medical/clinical tasks (Jawa Pos National Network, 2013). The draft of the Act sets out rules on nursing education, registration and licensing process, nursing practice, and professional associations and nursing collegium. The proposed Nursing Act recognizes the different levels of professional nurses, i.e. nurse, nurse specialist and nurse consultant. The draft also includes the establishment of a Nursing Council that will govern nursing practice, produce the certificate of competence and be mandated to process nursing registration, including foreign nurses. When the draft is enacted as law, the nursing service in Indonesia will have a clearer framework of rules and regulations regarding the required competencies and authorities.

The enactment of the new Mental Health Act in 2014 (Irianto, 2014) was long awaited. According to the new legislation, all public staff, including the executive branch, the legislative branch, the judicative branch, as well as public servants such as doctors, teachers and law enforcement officers have to undertake a test to assess their mental health status.

The draft of the Act was submitted in 2010 but there was a long delay in the process of enactment. As mentioned in Section 5.11, mental health was seemingly not a high priority issue in Indonesia. The prevalence of mild mental disorders such as anxiety and depression is 6%, while prevalence for psychosis and schizophrenia is 1.7 per 1000 (NIHRD, 2013a). With mental health funding only accounting for 2% of the total MoH budget, it is not surprising that not all *puskesmas* are capable of providing mental health services and that referral services are only available at 33 *puskesmas* in 26 provinces and 16 private hospitals (Ali, 2014). With the new legislation, the focus of future strategy and treatment in mental health in Indonesia will shift from curative/rehabilitative to preventive/promotive and away from merely facility-based services to a community-based approach.

So far, this chapter has shown that although reforms and legislation have in many cases the best of intentions, implementation is not necessarily easy. Many of the classic challenges involve or are related to limited funding and limited resources, inequality between regions, a fragmented system, and weak enforcement and monitoring. Planning for reform and the enactment of reform legislation is a time-consuming and an expensive process. Future reforms and legislation will need to take into account the persistent challenging factors if they are going to be more than "just another document".

7 Assessment of the health system

Chapter summary

Health is clearly stated as one of the important objectives in the Indonesian Constitution and is also well defined in the MoH National Strategic Plan.

In terms of financial protection and equity in health financing, Indonesia is still struggling. Even though JKN coverage is steadily increasing, OOP is above average. Catastrophic spending remains at a high level with many workers in the informal sector not yet insured. Implementation of the single risk pooling mechanism (JKN) poses several risks to equity in health-care financing and service utilization. As all funds and risks are collected in a single pool, provinces or districts with limited health infrastructure and supply-side readiness and lower health-care utilization might receive less government subsidy than well-developed areas.

Information on user experience is limited in both the public and private sectors. Requirements for informed consent are regulated but there is no national charter to describe the rights of patients in choice of provider, privacy or information. The ratio of health workers to population has improved over time, but disparities between provinces remain large.

Nevertheless, health outcomes have improved significantly. Life expectancy has increased over the last 30 years and infant mortality and under-five mortality rates have declined rapidly. However, there has been less progress on other important health outcomes such as maternal mortality.

Both total and public spending on health as a proportion of GDP have been low and increasing slowly, including for public health measures. There is a need to evaluate the current UHC programme regulation on payments or claim caps at the hospital level.

There is room for improvement in the area of transparency and accountability, although shifts to democratization and decentralization are working to increase the accountability of public services. Public

participation in the planning process has been facilitated, but detailed planning and budgeting processes at the ministry level remain closed to external stakeholders.

7.1 Stated objectives of the health system

Act No. 36 of 2009 stated that health is a human right and one of the social welfare objectives as referred to in the Constitution of Republic of Indonesia of 1945 and the philosophical foundation 'Pancasila'. The Act also mentioned that health development aims to improve the awareness, willingness and ability of everyone to attain healthy living as an investment for productive human resource development, both socially and economically. Thus, every activity for improving the level of health of the people should align with principles of non-discrimination, participation, protection and sustainability for Indonesian HR development and national competitiveness. Furthermore, to implement part of the act number 36/2009, a Presidential Decree Number 72/2012 on the national health system was instituted. This decree regulates management and administration of health efforts and services from the central level up to the district/municipality level (President of Indonesia, 2012b).

Meanwhile, the MoH in 2010 launched the National Strategic Plan for the Health Sector 2010–2014 that mentioned six health system objectives, which are: (1) Improving the involvement of communities, the private sector and civil society in health development through national and global collaboration; (2) improving health services' accessibility, equitability, affordability, quality and fairness, as well as evidence-based health services, mainly for promotive and preventive efforts; (3) improving health financing, in particular to establish nationwide social health insurance; (4) improving the development and empowerment of equitable and qualified human resources for health; (5) improving the availability, equity, and affordability of drugs and medical equipment, as well as ensuring safety/effectiveness, efficacy and quality of pharmaceutical products, medical equipment and food; and (6) improving accountable, transparent, efficient and effective health system management for strengthening health system decentralization (Minister of Health, 2010k).

There are several indicators that mark the achievement of objective 1. One notable programme is 'Desa Siaga' (Vigilant Village) which aims to increase the awareness and participation of communities in regard to the risks and barriers associated with pregnancy and childbirth. It has been further expanded as the 'Desa Siaga Aktif' (active Vigilant Vilage)

since 2010 to engage communities in supporting the provision of basic health care, including staff at the village health posts who are trained by health workers at the community level for disease surveillance and disaster preparedness, including schemes for village ambulances.

This community-led initiative has extended hygiene and sanitation, child-growth monitoring, and nutrition awareness services closer to communities, while mobilizing community resources. Despite these achievements, there are still limited data available to analyse the involvement of the private sector in health. In urban areas, the private sector is estimated to be the major provider of secondary health care (Ministry of National Development Planning, 2014h). However, clear policies on how the future public–private partnership will work need to be developed.

Progress has been made on the achievement of objective 2. The national hospital accreditation agency (KARS) was set up within the MoH in 1995 and re-launched recently as an independent legal entity. This agency is the main vehicle for improving hospital quality and safety in Indonesia. In 2012, development of *puskesmas* accreditation began within the MoH. Designated commissions for patient safety and HTA also started to operate in 2012 and 2014, respectively. Although efforts in the area of curative health have shown good progress, promotive and preventive strategies and interventions are still limited. The new social health insurance scheme is only managing private health efforts, and it takes a large amount of budget, while the public health efforts that consist of promotive and preventive interventions remain left behind.

National concerns are to improve equity, accessibility and affordability of services for the poor as stated in objective 3. Since 2004, Indonesia has enshrined in law the principle that every citizen has the right to social insurance. The government has implemented these provisions by establishing the social security scheme in a stepwise manner. Previous programmes, such as Jamkesmas, were substantially designed for the poor and near-poor, while for the formal workers there were Askes (insurance for government employees) and Jamsostek (insurance for labourers) programmes. In January 2014, the government launched a national social health insurance programme (JKN) that integrates all the previous social health insurance schemes. The JKN is intended to prevent coverage gaps by covering all Indonesians under this single payer health system. However, this new scheme needs further expansion, particularly to the informal sector, which remains difficult to reach, in order to achieve UHC by 2019.

Regulation of health-care professions is one of the major achievements in attaining objective 4. The Indonesian Medical Council (KKI) was established in 2004. The council has responsibility to register medical doctors and dentists and supervise medical practices through the Indonesian Medical Disciplinary Board (MKDKI), which decides on and imposes sanctions for malpractice and other actions related to the medical code of ethics. However, reform and improvement of the quality efforts against nurse and midwife education are not yet in place. The recent health sector review document stated that only half of schools are accredited (Ministry of National Development Planning, 2014c). These gaps remain to be closed during the next (2015–2019) health strategic plan.

With regard to objective 5, Indonesia has achieved several notable milestones. A ministerial decree on the national formulary was endorsed in 2013. This national formulary is used as the basis for medicines of the JKN. A computerized procurement system has also been developed and used, called e-Catalogue. This system manages not only procurement of medicines but medical devices and consumables as well. Despite the above achievements some challenges and gaps remain. The availability of essential medicines at the primary health facility level remains low (Ministry of National Development Planning, 2014f).

Lastly, regarding objective 6, which relates to health system management, there have been no significant achievements. Transparency, accountability and efficiency remain major challenges. Even though the law on financial autonomy (BLUD) status for health facilities has been developed, roles and responsibilities for monitoring and evaluation between central and local governments remain unclear (Ministry of National Development Planning, 2014e).

As the deadline (2015) for achieving the MDGs approached, United Nations Secretary-General Ban Ki Moon presented an award to the President of Indonesia for the achievement of the TB control programme in Indonesia. The United Nations was optimistic that when the achievement of the MDGs is reviewed, Indonesia will have achieved the TB targets. Malaria control also has made good progress, while as noted in Chapter 1, progress in reducing child and maternal mortality has been slow and insufficient to achieve the MDG targets. Considerable regional inequalities also persist. HIV prevalence is not declining, but significant progress has been made in expanding access to antiretroviral treatment (Ministry of National Development Planning, 2012b).

Table 7.1 The Government of Indonesia's health sector objectives, 2010–2014

Health systems objectives	Policies developed	To be developed
1. Improve community and private sector involvement in health development through national and global collaboration.	Desa Siaga (Vigilant Village); Village health post ; UKBM (community-based health efforts)	Strengthening posyandu system; Expansion of public-private partnerships in health financing
2. Increase accessibility, affordability, quality, equity and evidence-based health services, in particular promotive and preventive health strategies.	Hospital accreditation	*Puskesmas* accreditation; Develop an integrated plan for quality in health-care
3. Improve health financing; establish nationwide universal social health insurance.	JKN and associated regulations; BOK established to fund *puskesmas* operations	Expansion to informal sector
4. Improve the development and empowerment of equitable and highly qualified human resources for health.	Establishment of KKI and registration	Improving quality and performance of health workers
5. Increase the availability, accessibility and affordability of drugs and health equipment; and improve the safety, usefulness and quality of drugs, health equipment and food.	Endorsement of the national formulary for JKN	Guidance and regulation on HTAs; GMP certifications
6. Improve accountability, transparency, efficiency and effectiveness of health system management to strengthen decentralized health systems.	Health Law 2009; Hospital Law 2009; BLUD status for health facilities	Revision of Law 32/2004 on decentralization; Revision of Health Minister Regulation no.741/2008 on minimum standard of services

Source: Ministry of National Development Planning (2014b).

Recently the Ministry of National Development Planning (Bappenas) has released the national medium-term strategic plan for 2015-2019 (RPJMN 2015-2019). In line with that, the Ministry of Health has also produced the national strategic plan for 2015-2019 (MoH, 2015c). Within the new health national strategic plan, as a continuation of the six health sector

objectives for 2010-2014 there are twelve new health sector objectives for 2015-2019, which are:

1. Improve the access of the health of mothers, children, adolescents and the elderly. This objective is not a continuation of the previous medium term health objectives as the Government of Indonesia is now using a life-cycle approach instead of diseases;
2. Improve the nutritional status of the community. Nutrition was not specifically mentioned on the previous medium term health objectives. However, this is a very good objective to tackle unfinished problem of nutrition in Indonesia. As reported by Bappenas, child underweight and stunting remain a problem in the last six years, while adult overweight is becoming more prominent (Bappenas, 2014e);
3. Control diseases and improve environmental health;
4. Increase access to quality basic health services;
5. Increase access to quality referral health services;
6. Fulfil the requirements of pharmaceuticals and medical equipment;
7. Ensure the safety of food and drugs;
8. Ensure adequate recruitment and quality of human resources for health;
9. Improve health promotion and increase community empowerment. This is a continuation of the objective 2 on the previous medium term health objectives. As progress on promotive and preventive measures are still a weak point on the previous medium term plan, it is very important to include this objective;
10. Improve management, research and development, and information systems;
11. Expand national health insurance scheme (JKN) (MoH, 2015c);
12. Develop and increase the effectiveness of health financing. Health financing policies and health insurance scheme has been implemented since 2014. Expansion of this scheme becomes the focus for the next five years. Objectives 11 and 12 are continuation of objective 3 on the previous medium term plan.

7.2 Financial protection and equity in financing

7.2.1 Financial protection

The concept of coverage and fairness in health-care financing is that households without (full) health insurance coverage face the risks of incurring large medical care expenditures and reducing their level of welfare (WHO, 2000). Health insurance provides financial protection,

and so can prevent impoverishment. A key indicator is the level of OOP spending on medical expenses. Significant OOP spending on health can cause a catastrophic health payment for a household and lead to impoverishment.

Compared to other countries around the world, the level of OOP spending on health in Indonesia is above average. However, as Indonesia is increasing the number of people covered by the new JKN, the level of OOP health expenses for those insured is falling.

There are still high levels of catastrophic spending, which in fact rose between 2007 and 2012 (around 1.3% of households nationally in 2012), though this is shifting more to the higher income quintiles given its relationship to higher utilization and payments for hospital care. In 2012, 80% of OOP health expenses for households experiencing catastrophic expenditure were for hospital care versus 20% of OOP health expenses for other households, a huge difference.

Some evidence suggests more efforts will be needed. For example, insurance programmes with a comprehensive benefit may still fail to protect consumers due to (i) shifting patients to more expensive treatments and drugs not covered under the benefit package, and (ii) consumers not being educated on coverage and being forced to pay at the point of service for services and inputs.

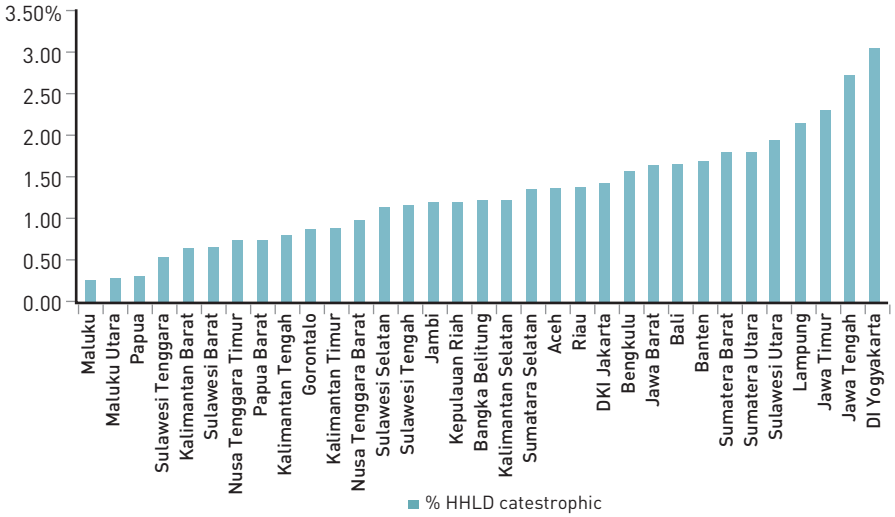
However, substantial proportions of poor and the near-poor remain uninsured. Citing World Bank data (Harimurti et al., 2013), the UNICO case study estimated that only 40% of the poor and near-poor were insured. Many of the uninsured in this group are informal sector workers that are especially difficult to reach. A small number have signed up under the new JKN, but the number is extremely small and concerns mostly the very sick.

At a deeper level, rates of catastrophic expenditure on health (high OOP expenditure resulting in impoverishment or high risk of impoverishment) remain relatively high in Indonesia nationally compared with many other low-to-middle income countries. Overall, fewer than 2% of households across the country are likely to have experienced catastrophic spending on health according to the 2012 Susenas. Perhaps more surprising are the provinces in which the greatest incidence of catastrophic health expenditure is occurring (see Figure 7.1).

Provinces that might be perceived as on the whole better off have higher rates of catastrophic expenditure, with Yogyakarta, Central Java and East Java having rates of over 2%.

However, it is also clear that the provinces in which OOP spending on health is higher and in which catastrophic health expenditure is higher are also those with easier access to hospital care.

Figure 7.1 Percentage of households experiencing catastrophic levels of health expenditure by province of Indonesia



Source: Ministry of National Development Planning (2014b).

This paints a clear picture not so much of health-care needs, but of distance to hospitals that determine hospital utilization and, therefore, the OOP expenditure that may be incurred. Reasonable protection from OOP payments may be provided for members of social health insurance schemes but access for the poor to hospital care remains a significant problem. This raises the issue of equity in regard to who benefits from financial coverage from health care whereby people in the poorest and more remote are less likely to use hospital care due to lower geographical access.

7.2.2 Equity in financing

Sources of public revenue for the health system come from general taxes and non-tax revenue collected by the central and district governments, loans, as well as grants to the government. The revenue is managed by the central government, provincial governments, district governments, social security schemes and others and channelled through government

budgets. The social security funds have been merged under the BPJS since January 2014.

Prior to the introduction of the JKN in 2014, redistribution of resources was largely the result of public subsidies being directed to the poor through the various schemes to protect the poor from health-care costs, such as *Askeskin* (2004 to 2007) and Jamkesmas (2007 to 2013). A second element is the extent to which public subsidy was preferentially allocated to eastern and poorer regions of Indonesia, rather than central and better-off regions.

Analysis of the relative distribution of public health-care financing/subsidy is undertaken by calculation of the Kakwani index. The Kakwani index is a measure of the progressivity of a social intervention; it is also used to examine health-care issues such as equity in health-care expenditures. The Kakwani progressivity index is the difference between the Gini coefficient for incomes and the concentration index for OOP spending. Its values range from -2 (indicating severe regressivity) to +1 (indicating strong progressivity). A more negative index value (nominally more regressive) indicates a higher proportion of allocation to the poor, which means better subsidies for the poor (considered overall as progressive) (De Maio, 2007).

Historically, the principal source of regressiveness in Indonesia's overall health financing system resulted from payments for hospital care. In 2006, the World Bank estimated that subsidies to hospitals accounted for 40% of all health spending, noting that this benefits the better-off economic quintiles (the highest income quintile captures 38% of this public spending, compared to 13% for the lowest income quintile, given the relatively low access of the poor to hospital care) (World Bank, 2008b). Moreover, this imbalance is longstanding; using Susenas data the World Bank found little change between 1985 and 2005. At the primary care level, public subsidies accrue more equally across economic quintiles. This too may be considered regressive given that public subsidies are generally intended to redress market imbalances that favour the non-poor.

During the period 2001 to 2007, the extent of health budget allocation for the poor improved. This is shown by the Kakwani index becoming negative for both inpatient and outpatient services, indicating that quantitatively the subsidy provided by health service in the public sector leads to inequality reduction. Possibly this is encouraged by additional funding from the government sector as a social health insurance budget, which is increasing year by year (Table 7.2).

Analysis for geographical comparison shows that the better-off cluster (Java, Bali and Sumatra) had better indexes meaning that, in this region, the inpatient care subsidy tends to be more equal between the poor and the rich. Meanwhile, the worse-off cluster (Papua, Maluku and Nusa Tenggara) has wider gaps between the poor and the rich, and the rich have received more subsidy.

Table 7.2 Kakwani indexes of public health-care subsidy – Indonesia

	Year	Hospital inpatient care	Hospital outpatient care	Hospital health care	Non-hospital health care	Total health care
Kakwani index	2001	0.1752	0.0880	0.2854	(0.3153)	0.3142
Robust SE		0.0248	0.0187	0.0511	0.0044	0.0047
Kakwani index	2004	0.0532	0.0631	0.2574	(0.3543)	0.2141
Robust SE		0.0226	0.0162	0.0533	0.0046	0.0068
Kakwani index	2007	(0.1517)	(0.1891)	(0.1831)	(0.3678)	(0.1794)
Robust SE		0.0150	0.0139	0.0118	0.0069	0.0071

Sources: Van Doorslaer et al. (2007); CHSM-GMU, Equitap project, 2013, data processed.

With the introduction of the JKN in 2014, contributions from the government and from fund members are pooled. In 2014, the pooling of funds or revenue collection mostly came from the MoH (IDR 47.5 trillion), health-related ministries (IDR 13.5 trillion) and direct-to-district fund transfer (IDR 6.5 trillion). In addition to government subsidies in the form of premium payments, a small fraction of revenue collection came from nonsubsidized independent members, or payment from individuals who pay premiums from their own pocket (non-PBI mandiri). The revenue collection from this latter type of JKN member is only IDR 2.24 trillion.

Implementation of a single risk pooling mechanism in Indonesia has resulted in several risks in terms of equity in health-care financing and utilization. First, as all funds and risks are collected into a single pool, and there is a risk that provinces or districts with limited health infrastructure and supply-side readiness and lower health-care utilization compared to well-developed areas will receive less government subsidy. A recent study on JKN monitoring and evaluation (Trisnantoro et al., 2015a) showed that provinces such as East Nusa Tenggara and Papua have a very limited number of medical specialists and that most high-cost treatments are virtually inaccessible in these areas. In contrast, JKN members in provinces in Java Island enjoy the full benefit of the

Box 7.1 JKN case study in Ngada and Sumba Timur districts, East Nusa Tenggara Province

Background: The case study on JKN monitoring and evaluation was conducted in two districts in East Nusa Tenggara Province, i.e. Ngada and Sumba Timur districts. The study aimed to monitor and evaluate BPJS fund disbursement in NTT Province, which has limited health facilities and workers. The study assessed payments for primary care services and hospital claims. In order to assess equity in health financing under the JKN scheme, the study differentiated between subsidized and nonsubsidized members' payments and fund utilization.

Revenue collection: In 2014, subsidized members (central government budget) contributed IDR 12.4 billion (61.5%) and IDR 34.5 billion (57.9%) out of the total BPJS funds in Ngada and Sumba Timur districts respectively. Nonsubsidized members in Ngada and Sumba Timur districts contributed IDR 7.79–8.82 billion and IDR 25.1–25.6 billion.

Fund pooling: There was larger BPJS funding from subsidized members compared to nonsubsidized members. In the case study of Ngada and Sumba Timur districts, the number of subsidized members and the amount of their premium contributions were greater than for nonsubsidized members. However, the data showed that the number of claims for nonsubsidized members was greater than for subsidized members. This shows that the BPJS pooling mechanism is not ideal. There is also an indication of adverse selection in the nonsubsidized members group, because nonsubsidized BPJS members tend to be those who are prone to sickness or who are already sick.

Purchasing and payment:

Payment to a primary health facility

In 2014, primary health facilities received capitation fund allocations. Ngada and Sumba Timur districts allocated IDR 4.41 billion and IDR 14.58 billion for primary health facilities capitation payments, respectively. Fund utilization of non-capitation funds contributed IDR 0.27 billion for Ngada district and IDR 1.07 billion for Sumba Timur district.

Payment to a referral health facility (hospital)

In 2014, INA-CBG claims for inpatient services in Ngada district amounted to IDR 7.68 billion and in Sumba Timur district to IDR 14.65 billion. The total of INA-CBG claims from non-subsidized members for first- and second-class hospital wards amounted to half of the total INA CBGs claims by members.

Left-over funds:

In 2014, the total of premiums from JKN members in Ngada district was approximately IDR 20–21 billion. A total of IDR 12.4 billion are used for payments in primary and referral health facilities. Thus, not all BPJS members' contributions are used for health services. There are funds called left-over funds. The total of such left-over funds in Ngada district is IDR 7.8 billion (38.8%). In Sumba Timur district the approximate total of BPJS members' premiums is IDR 59–60 billion. The total of the payments for health facilities is IDR 30.3 billion. There were left-over funds of IDR 29 billion (49%) in 2014 (Trisnantoro et al., 2015b). Due to the single pool system in the BPJS, the left-over funds may be used by other provinces which have better health-care facilities.

insurance scheme, as access to modern and sophisticated treatment is widely available. Second, there are risks of adverse selection among nonsubsidized and subsidized members of the JKN programme. This is because nonsubsidized members tend to be those who are already sick or currently in treatment for chronic diseases, while subsidized members are all poor and near-poor population who may – like any other normal population distribution – have lower prevalence of diseases. The concerns regarding adverse selection were supported by the findings from the same study (Trisnantoro et al., 2015a), which showed that by November 2014 there was very high utilization among the nonsubsidized members with a claims ratio of up to 1300% (see Box 7.1).

The health system reform has had a positive impact on financial protection and equity in financing. With the new JKN scheme, the level of OOP spending among the insured population is decreasing. Equity in financing is improving as is shown on the Kakwani indexes of public health-care subsidy in Indonesia. However, the single risk pooling mechanism also has negative effects as mentioned in a recent study on the JKN (Trisnantoro et al., 2016).

7.3 User experience and equity of access to health care

7.3.1 User experience

Evaluation of patients' experiences is conducted inconsistently, and little information is available. Individual providers especially in the private sector sometimes conduct patient satisfaction surveys. Private providers maintain institutional complaint registers and compliment mechanisms. Some districts also maintain registers of complaints about public services.

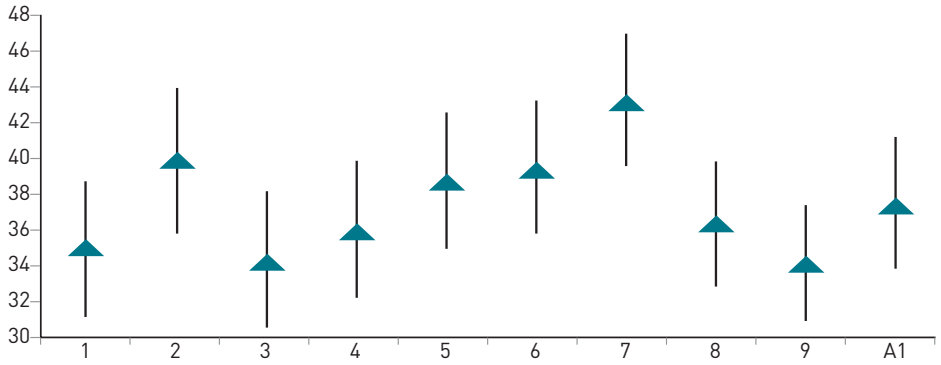
In the 2007 IFLS key informant survey, almost 90% of respondents indicated that health services were "adequate" or "somewhat adequate" in their village/town (less than 10% responded "not adequate" or "far from adequate").[25] Over 70% of the same key informant respondents said that the state of health services was "better" or "much better" compared with 2000 (about 10% said health services were "worse" or

25 Key informants were: school principals/senior teachers; health professionals; youth activists; religious leaders; local political party activists; and local business leaders. Key informants may not adequately represent the experiences of the bottom 40% and it is not entirely clear if the responses apply to adequacy of access or adequacy of clinical quality or adequacy of interpersonal aspects of care (the literature on quality of care is mixed on the extent to which users views on clinical aspects of quality have any validity).

"much worse" compared with 2000) in their village/town[26] (Ministry of National Development Planning, 2014h). A more recent survey of patients' satisfaction with hospital care in nine central hospitals demonstrates considerable variation, although generally low levels of satisfaction, as can be seen in Figure 7.2 (Ministry of National Development Planning, 2014h).

Another study on the health-care purchasing mechanisms in Indonesia shows that the current policies on the JKN are not yet sufficient to enable monitoring of health services' quality. The implementation of the JKN service entitlements has not yet been based on the needs, preferences and priorities of citizens (Trisnantoro et al., 2016).

Figure 7.2 Patient satisfaction, normal delivery, nine hospitals (hospital average scores ranged from 34% to 43%)



Source: HAPIE baseline study (USAID, 2014b).

There is no national charter to describe the rights of patients to choice, privacy or information. However, rights to Informed consent are regulated (Law No. 20/2004 and ministerial decree No. 290/2008). The TB patients' association is the only entity to have issued a patient charter for TB care (in 2009).

To promote awareness and help institutions to be more responsive to the public, national guidance from the MoH is needed. Publishing leaflets, patient survey tools and advice to institutions on providing information and protecting dignity and privacy are some ways to carry out such promotion.[27]

26 In IFLS East 2012, 80% of key informants thought that health services were "adequate" or "somewhat adequate", and 70% thought that health services had improved since 2007.

27 Further information on patient rights, patient choice, and complaints could be seen in Section 2.9.

Hospital accreditation regulation in Indonesia has included patient satisfaction surveys as one of the requirements for the management aspect of hospitals. However, the manner in which this survey is conducted as well as the way in which the feedback is taken into account in hospital policies is not yet clear. Patient satisfaction surveys remain 'checklists' without further efforts at analysis. A hospital monitoring agency (Badan Pengawas Rumah Sakit) has been established at the central, provincial as well as local levels. This agency will monitor the management and performance of hospitals in Indonesia. Despite the good intentions of this move, at the implementation level control measures from the agency remain limited.

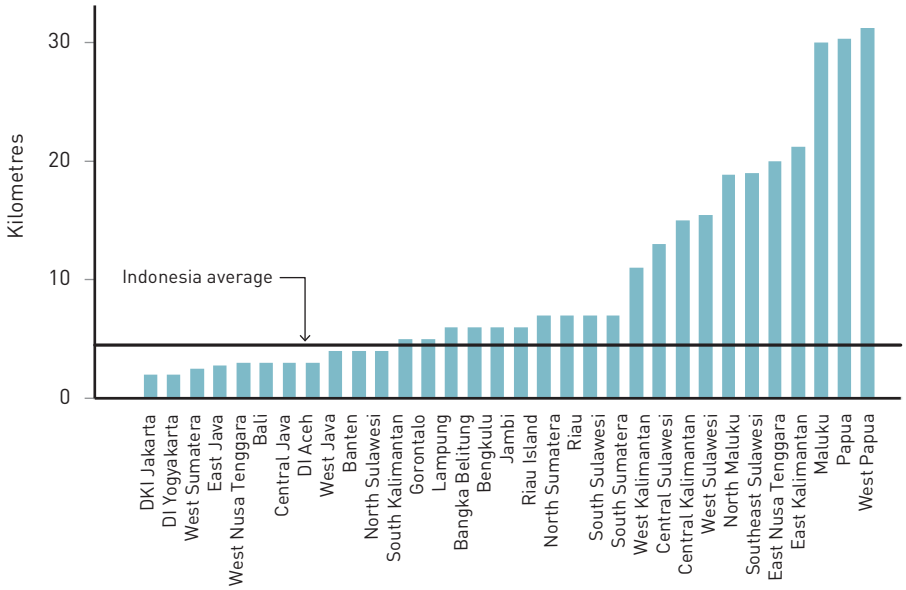
7.3.2 Equity of access to health care

(a) Geographical access disparities

Considerable variation in access among different regions of Indonesia can be deduced from the extent of the variations of households' travel time to health-care facilities as shown in Riskesdas 2013. The shortest travel time to government hospitals was 16–30 minutes, which was reported by 34.4% of households, while 18.5% of households needed more than 60 minutes to reach government hospitals. Travel time to reach private hospitals was almost the same as travel time to reach government hospitals. For access to private hospitals, 16–30 minutes of time travel was mentioned by 37.7% of households, while 12.4% needed more than 60 minutes (NIHRD, 2013).

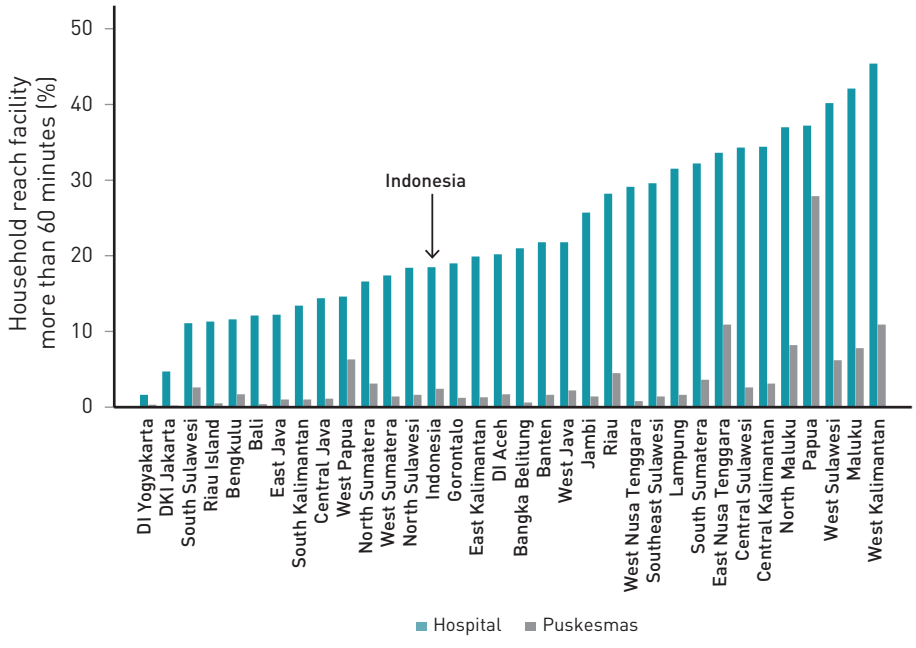
The average distance to a health facility in Indonesia is only 5 km, as shown in Figure 7.3. However, eastern provinces such as West Papua, Papua and Maluku have average distances of more than 30 km. This wide variation is correlated with the time taken to reach public health facilities. *Riskesdas* 2013 shows that while on average over 18% of Indonesians took more than one hour to reach a public hospital, over 40% of people in Maluku, West Sulawesi, and West Kalimantan faced this barrier. *Puskesmas* are more accessible than public hospitals, as shown in Figure 7.4. Even so, the populations of several provinces in the eastern regions face longer travel time to reach *puskesmas* (in Papua 27.9%, East Nusa Tenggara 10.9%, and in West Kalimantan 10.9% of people have travel times of more than 60 minutes) (Ministry of National Development Planning, 2014h). This probably contributes to higher morbidity and mortality rates and inefficient use of potentially productive time by beneficiaries as well as accompanying family members (Schoeps et al., 2011).

Figure 7.3 Median distance to nearest health facility by province of Indonesia, 2011



Source: Ministry of National Development Planning (2014)

Figure 7.4 Time to reach nearest public hospital and *puskesmas* by province of Indonesia, 2013



Source: Riskesdas, 2013.

(b) Health worker distribution disparities

The ratio of health worker to population has improved over time. This rapid increase in the ratio of health workers to the overall population is mostly the result of investment from the private sector in medical schools. About 60% of the medical schools in Indonesia are private. However, disparities between provinces are still large. Out of 33 provinces in the country, only three have at least one physician per 1000 population. Specialist physicians are mostly only available in urban areas. Despite the high number of nurses who have graduated from private schools, there are significant shortages of nurses in public hospitals and *puskesmas* (Ministry of National Development Planning, 2014h).

(c) Utilization disparities

Utilization rates of both outpatient and inpatient services have risen over the period 2004–2012, and disparities between the average and bottom 40% have been reduced. As shown in Table 7.3, utilization of outpatient services occurs mostly at private facilities (almost two thirds), while inpatient utilization rates have improved to the same level both nationally and among the bottom 40% of the population. The number of caesarean sections has risen significantly, from 4% to 12% of all deliveries in 2002 and 2012, respectively. This is within the WHO recommended rates of 10–15% (Ministry of National Development Planning, 2014h).

In conclusion, despite the major reform to the health system, equity of access to health care remains low. In the area of geographical access, health worker distribution and utilization, disparities still exist. This shows that the current JKN scheme by a single payer (BPJS Kesehatan) has not yet been effective in overcoming the problem. There has to be a better solution for making the current JKN scheme increase equity of access.

Table 7.3 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%

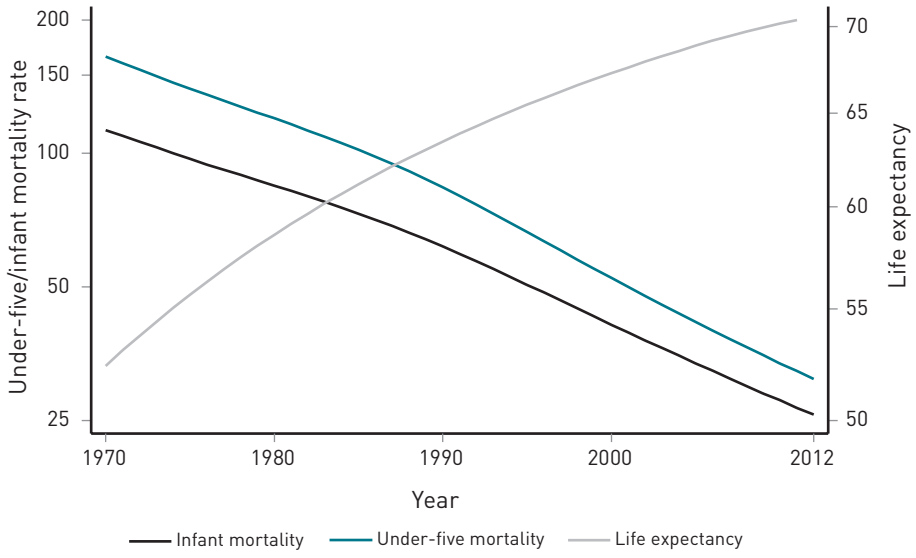
Source: Susenas (Central Bureau of Statistics, 2004; Central Bureau of Statistics, 2005; Central Bureau of Statistics, 2006; Central Bureau of Statistics, 2007; Central Bureau of Statistics, 2009; Central Bureau of Statistics, 2010b; Central Bureau of Statistics, 2011b; Central Bureau of Statistics, 2012).

7.4. Health outcomes, health service outcomes and quality of care

7.4.1. Population health

Indonesia's health status has progress significantly over the past decades. Life expectancy has increased to 71 years in 2012, from 63 years in 1990. The infant mortality rate has declined from 62 per 1000 live births to 26 per 1000 live births in 1990 and 2012, respectively. The under-five mortality rate has also decreased from 85 per 1000 live births to 31 per 1000 live births in 1990 and 2012, respectively (see Table 1.3). Following substantial progress in the 1990s, the reduction in these figures in the last 10 years has been minimal, mainly due to stagnation in the reduction of neonatal deaths. Neonatal deaths will need to be reduced in order to resume the decline in infant and under-five deaths, so this area will need particular focus and effort over the next five years (Ministry of National Development Planning, 2014h). If current trends continue, Indonesia is projected to meet the child health related MDG, which calls for a two thirds reduction in under-five mortality between 1990 and 2015 (UNSD, 2014).

Figure 7.5 Key population health outcomes in Indonesia, 1970–2012



Note: y-scale logged.
Source: WDI.

However, there has been less progress on other important health indicators, such as maternal mortality. Notably, in 2010 the maternal

mortality ratio was 210 deaths per 100 000 live births, while the government has set a target of 102 maternal deaths in 2015. In addition, there is considerable variation between districts and regions in health status.

Data on mortality and morbidity demonstrate that Indonesia is well advanced in the epidemiological transition, and facing a double burden of diseases, both communicable and noncommunicable. Data from the Global Burden of Disease Study 2010 (GBD, 2010) show that stroke is the leading cause of death (19.5%) while deaths caused by all communicable diseases are also still high (16.4%) (see Section 1.4 for further information).

Major risk factors include malnutrition and obesity, persistent high fertility, smoking, high blood pressure and air pollution. The prevalence of malnutrition in women and children remains stubbornly high and the 2014 National Medium-term Development Plan (RPJMN) targets will not be met. In 2013, 37.2% of children aged less than five years were stunted, 19.6% were underweight, 12.1% were wasted and 11.9% were overweight. There has been no progress in reducing child underweight or stunting in the last six years. This is a serious concern as these undernourished children are more likely to suffer serious illness, and less able to learn at school, earn income as adults and contribute to the economy (Ministry of National Development Planning, 2014h).

At the same time, the number of adults who are obese is rising at an alarming rate and affects more women than men. The percentage of obese women more than doubled from 13.9% to 32.9% between 2007 and 2013. In adult men, the prevalence of obesity increased from 13.9% to 19.7% between 2007 and 2013. Overweight is found in all wealth quintiles, in both children and adults, and is no longer an issue for the upper wealth quintiles alone. This has led to the substantial increase in the prevalence of NCDs associated with obesity (Ministry of National Development Planning, 2014h).

Over the past decade the total fertility rate (TFR) has stalled at 2.6 (0.5 higher than replacement level fertility). Fertility in 2012 was barely different from the level in 2002, in contrast to the rest of the region. This means that the total population is growing more rapidly than had been expected, the school-age population is growing and the challenges in providing for the health-care needs of the population are also increasing (Ministry of National Development Planning, 2014h). The family planning

programme in Indonesia needs to be revitalized. Effective collaboration and coordination between the MoH, the BKKBN (National Population and Family Planning Board) and the private sector need to be established. The family planning programme does not fit correctly with the current JKN social health insurance scheme, since the capitation system at the primary health care provider serves as a disincentive for increasing contraceptive prevalence rates. Significant numbers of contraceptive users (72%) are paying OOP to private sectors providers as mentioned in the recent health sector review (Ministry of National Development Planning, 2014a).

Indonesia has one of the highest male smoker rates in the world (64.9%) (NIHRD, 2013). Rates among the poor are higher, so there is a disproportionate effect on their health. Smoking can also affect the risk of TB infection. Apart from direct increased costs to the health sector, there are also considerable indirect costs to the economy of the country through premature death. In Indonesia, tobacco use is highly associated with a number of chronic diseases including cancer, lung diseases and cardiovascular diseases (Ministry of National Development Planning, 2014h). On average Indonesian smokers spend 11% of their income on tobacco. This is a high burden on family economies. Raising the price of tobacco is a very important tool for preventing premature deaths and disability.

7.4.2. Health service outcomes and quality of care

While anecdotally quality of care is considered poor, there are few sources of data. Quality of antenatal care (ANC) was measured in the IFLS and IFLS East surveys. As Table 7.4 demonstrates, quality scores on vignettes in both public and private services were low.

Table 7.4 Quality of ANC services score based on vignette responses

ANC vignette	*Puskesmas*		Private clinics	
	Urban	Rural	Urban	Rural
Java–Bali (2007)	34.8%	34.1%	21.4%	21.4%
Sumatra (2007)	33.8%	27.6%	21.1%	21.9%
IFLS East provinces (2012)	38.9%	33.3%	20.4%	18.5%

Sources: IFLS (Strauss et al., 2009) and IFLS East (Sikoki et al., 2014).

Although the national routine childhood immunization coverage is improving, less than 80% of *puskesmas* in eastern provinces such as Papua, West Papua and Maluku reported the availability of the measles,

DPT, polio and BCG vaccines. This shows poor service readiness for routine childhood immunization (Ministry of National Development Planning, 2014h). Furthermore, service readiness at private clinics in eastern provinces is also poor. Table 7.5 shows that the availability of key vaccines at private clinics in those provinces is below 10%.

Table 7.5 Availability of key vaccines at private clinics

Facility survey	Availability of vaccines			
	Measles	DPT	Polio	BCG
IFLS	23.4%	24.8%	25.5%	22.6%
IFLS East	9.7%	9.7%	9.7%	9.7%

Sources: IFLS (Strauss et al., 2009) and IFLS East (Sikoki et al., 2014).

The quality of child curative services was also found to be low in the IFLS (Table 7.6). Private providers are generally lower quality than public providers at *puskesmas*.

Table 7.6 Quality of child curative services score based on vignette responses

Child health vignette	*Puskesmas*		Private clinics	
	Urban	Rural	Urban	Rural
Java–Bali (2007)	38.6%	37.8%	33.5%	34.5%
Sumatra (2007)	32.9%	35.3	30.1%	30.9%
IFLS East provinces (2012)	43.4	38.1	31.7%	31.9%

Sources: IFLS (Strauss et al., 2009) and IFLS East (Sikoki et al., 2014).

Capacity to provide quality care for NCD management particularly diabetes is also limited. IFLS data show that only 54% of all *puskesmas* are able to test blood glucose, and only 47% reported the ability to test urine. The capacity of *puskesmas* to undertake diagnostic testing also varies among urban and rural areas and across provinces. Urban capacity was higher than rural, unsurprisingly. Again the eastern provinces have lower capacity compared with the western provinces. This creates a concern that where the prevalence of diabetes was high, diagnostic capacity was weak. For example, in Gorontalo and North Sulawesi, where the urban prevalence of diabetes among those above 15 years of age was estimated at around 8%, the proportion of *puskesmas* able to conduct diagnostics was reportedly less than 20%. Only in Yogyakarta and East Java provinces was there a high (more than 75%) diagnostic capacity among *puskesmas* for diabetes. Rural *puskesmas* and private providers' capacity for diabetes diagnosis and testing to high standards was generally low (Ministry of National Development Planning, 2014h).

Table 7.7 Quality of diabetes services score based on vignette responses

Diabetes vignette	*Puskesmas*		Private clinics	
	Urban	Rural	Urban	Rural
Java–Bali (2007)	25.3%	18.4%	14.3%	9.2%
Sumatra (2007)	14.2%	10.6%	6.7%	4.8%
IFLS East provinces (2012)	34.2%	19.2%	16.6%	6.7%

Sources: IFLS and IFLS East.

Despite the poor performance in service readiness and quality of care, the Government of Indonesia has established policies on quality and safety of health care. National strategies on quality and safety have been developed in a wide range of legislation and directives (see Table 7.8). Some policies have also been developed by local governments.

Table 7.8 Examples of policy documents on quality and safety

Medical practice	Law 29/2004
Accreditation medical laboratory	HM 298 /2008
Compulsory hospital accreditation	Law 44/2009
Accreditation linked to licensing	HM 147/2010
Hospital medical committee functions	HM 755/2011
Safety of patients in hospital	HM 1691/2011
Medical Practice guidelines PHC	HM 5/2014

HM = Health Minister Regulation.
Source: Indonesia Health Sector Review 2014, Quality and Safety of Health-care (Ministry of National Development Planning, 2014g).

Regulations and directives relate to many dimensions of health-care quality. The national hospital accreditation agency (KARS) was set up within the MoH in 1995 and re-launched recently as an independent legal entity. This agency is the main vehicle for improving hospital quality and safety in Indonesia. In 2012, development of *puskesmas* accreditation commenced within the MoH. Designated commissions for patient safety and HTA also started to operate in 2012 and 2014, respectively. In general, government remains the main agent; however, civil society, the private sector and professional institutions are also included as partners in the formulation of policies and guidelines (Ministry of National Development Planning, 2014h).

Although a number of regulations and directives have been developed, implementation as well as monitoring and evaluation of their impact

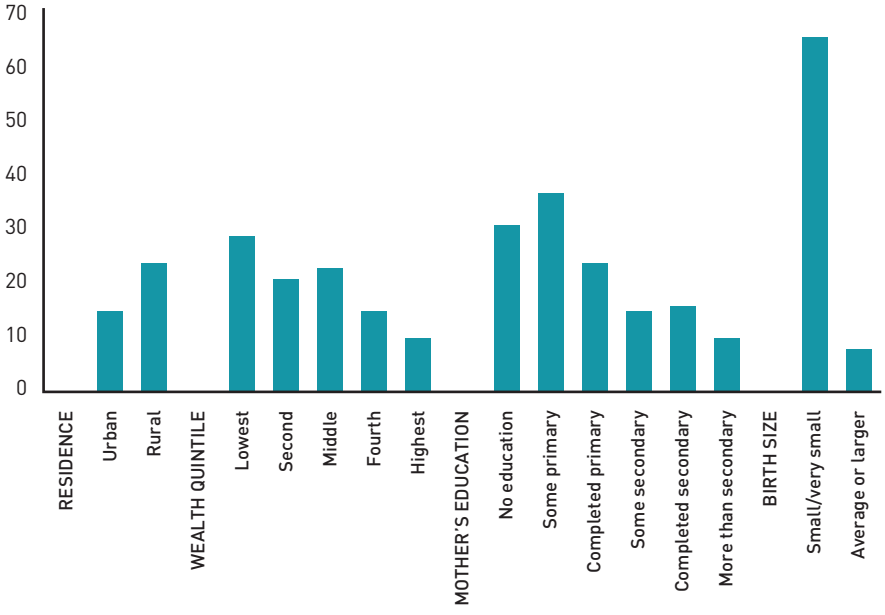
remain weak. These legislative instruments do not clearly define roles and relationships between units, agencies, or even between national, provincial, district and facility levels. Dissemination and mapping of functions into an operational form are needed. Furthermore, accountability and reporting structures could be clarified (Ministry of National Development Planning, 2014h).

7.4.3. Equity of outcomes

Despite the improvement in life expectancy from 63 to 70.1 years for the years 1990 and 2012, respectively, there are significant differences between provinces and geographical regions in Indonesia. The lowest life expectancy estimate in 2012 was at 62.8 years in West Sulawesi Province compared with the highest at 74.3 years in Yogyakarta province, located on the central island of Java (Ministry of National Development Planning et al., 2013).

There remain large inequalities within the country: for instance, infant mortality in some provinces is two to three times higher than in other provinces. Infant and child mortality rates among the poorest wealth quintile of households are more than double those in the richest. In

Figure 7.6 Neonatal mortality (per 1000 live births) by various characteristics



Source: Indonesia DHS, 2012 (Central Bureau of Statistics et al., 2013).

2012, neonatal mortality rates ranged from 12 per 1000 live births in East Kalimantan to 37 in North Maluku province. The variation is not only between islands, but also within islands. Disparities in infant mortality rates among provinces are wide. They range from 21 per 1000 live births to 74 per 1000 live births in East Kalimantan and West Papua, respectively. The under-five child mortality rate also varies widely among provinces, ranging from 28 per 1000 live births to 115 per 1000 live births in Riau Islands and Papua respectively. Disparities in child mortality measures are also obvious by wealth quintiles, mother's education level and residence. The rates are higher among the poor, the least educated and in rural areas (see Figure 7.6 for details).

There is also wide variation in the prevalence of stunting within Indonesia. According to *Riskesdas* 2013 data, 20 out of 33 provinces (61%) in Indonesia had a rate of stunting among children aged 0–5 years old that exceeded the national average (Ministry of National Development Planning, 2014h).

7.5. Health system efficiency

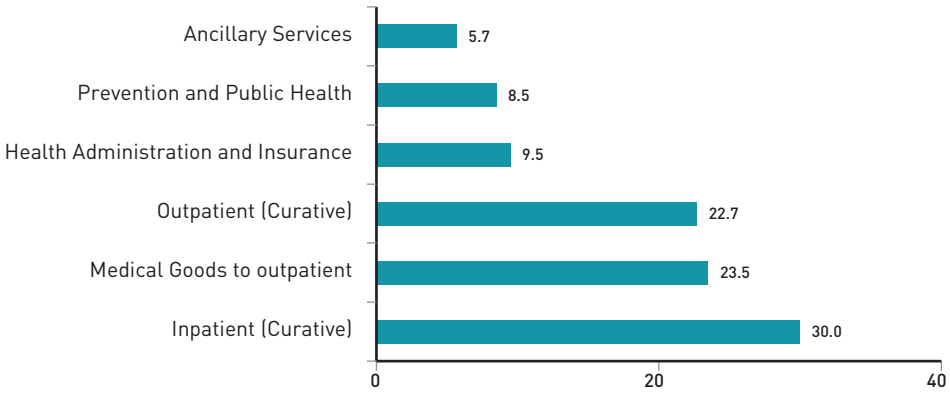
7.5.1. Allocative efficiency

Two measures of allocative efficiency in health are the amount a society spends on health programmes and services compared to other spending, and how health sector resources are allocated across the system in the production of health and health-care. On the first measure, both total and public spending on health in Indonesia as a proportion of GDP have been low and are increasing only slowly. For each indicator (total spending 3.1% of GDP, public spending 1.2% of GDP), Indonesia's spending on health in 2013 was much lower in comparison with the average of Organisation for Economic Co-operation and Development (OECD) countries (World Bank, 2015b). Coupled with the evidence of inadequate supply of services and significant barriers to access by the poor, the low level of public expenditure effort is a major source of allocative inefficiency (see Chapter 3, *Health financing*).

On the second measure, the share of expenditure allocated to preventive care versus curative care is typically the starting point for assessing allocative efficiency. However, the lack of comprehensive programmatic budgeting in the public sector makes this difficult to assess in Indonesia, with the NHA statistics themselves subject to some estimation.

Indonesia's expenditure on public health and prevention measures is very low. The proportion of health expenditure spent on the provision of public health and prevention was only 8.5%. It is even smaller than health administration and insurance spending (9.5%). The largest proportion of health expenditure was for inpatient curative care (30%), while the smallest share was spent on ancillary services (5.7%). Figure 7.7 shows the distribution of health expenditure by functions in 2011 (Ministry of National Development Planning, 2014b).

Figure 7.7 Health expenditure by function (%), 2011



Source: Ministry of National Development Planning (2013); MoH et al. (2013).

When these estimates are compared with spending patterns in regional countries, the allocation of spending to curative and hospital services is comparable to other countries, such as Malaysia and Sri Lanka, while the proportion spent on preventive services (8.5%) is somewhat higher than the typical levels of 4–6% seen in these countries (Jeong and Rannan-Eliya, 2010). Whether these patterns represent allocative inefficiencies or other inefficiencies is difficult to assess.

7.5.2. Technical efficiency

Limited data prevent a comprehensive and systematic assessment of technical efficiency in Indonesia's health system, or of whether the system obtains good value for the money invested. In particular, reliable health service data have not been routinely generated in the public sector, let alone in the private, and almost no representative efficiency studies have been conducted of the hospital sector (World Bank, 2008b). Nevertheless, there is diverse evidence indicative of considerable levels of technical inefficiency, implying substantial potential to improve performance even at current levels of spending. Such evidence suggests

that health facilities often operate at low levels of efficiency; that health personnel are often absent; and that medicines are not efficiently used or purchased. These and other factors probably contribute to a large variation in the performance of individual districts, even when provided the same level of inputs (Harimurti et al., 2013).

In the hospital sector, the MoH reports lengths of stay in government hospitals as averaging six days, which is not high and is comparable to those reported in countries in the region such as Bangladesh, Brunei Darussalam, Malaysia and Thailand (WHO, 2012b). However, overall occupancy rates are low, ranging between 55% and 65% in most recent years (Ministry of National Development Planning, 2014h), indicating suboptimal use of hospital inpatient facilities. Health workers, physicians in particular are also often absent from public health facilities. One cross-country study (Chaudhury et al., 2006), which made unannounced visits to public sector health centres to record whether staff were present, found that 40% of staff were missing in Indonesia.

In the context of the recent UHC programme implementation, there is a need to evaluate the current regulation on payments or claim caps at the hospital level. Unlike many other countries that have been implementing social health insurance, Indonesia has not implemented a regulation on types of health services and budget ceilings for the reimbursable costs for JKN beneficiaries. Instead, all types of health-care services can be covered by the JKN with no payment cap. This may in the future jeopardize the sustainability and cost control of the UHC programme. This theory is supported by BPJS data that as of end of 2014 and not accounting for capitation and non-capitation claims, BPJS Kesehatan experienced a deficit of IDR 5.6 trillion, due to the high hospital claims rate.

In the area of medicines, considerable evidence suggests that Indonesians do not obtain value for money. Unbranded generics account for only a small share of all medicines sold (10–11% of sales in 2007), despite government efforts at public education of physicians, patients and the public to inform them about the advantages of generics. Branded generics represent the largest share of all medicines sold, but these typically cost more than six times the international reference price (Hawkins et al., 2009). Poor prescribing practices are also prevalent. Studies of limited scope have found, for instance, that 42% of antibiotic prescriptions written in two hospitals were unnecessary (Hadi et al.,

2008), and a 1999 study reported that over 70% of patients at health centres were given antibiotics and over 60% of patients were given injections, one of the highest rates in the world (Arustiyono, 1999).

In conclusion, health system efficiency in Indonesia is still needs to be improved. The allocation of public health and preventive measures needs to be significantly increased, as during the last five years the proportion is low. Technical efficiency within the health system in Indonesia is difficult to assess comprehensively, since there are very limited reliable data.

7.6 Transparency and accountability

Transparency and accountability in Indonesia's health system are weakly developed, although the shifts to democratization and decentralization are working to increase accountability of public sector services to the people. Development of health policies has involved NGOs, professional organizations, international organizations and other partners. Public participation in the national planning process is facilitated through the *musrenbang* mechanism (see Section 2.5 *Planning* and Section 2.9 *Patient empowerment* for further information). However, detailed planning and budgeting processes at the ministry level remain closed to external stakeholders. At the national level, Parliament has increased its ability to monitor the actions of the Ministry of Health and hold senior officials to account. However, the fragmentation of responsibilities within the public sector and limited availability of information and rights to access information substantially constrain the effectiveness of accountability mechanisms. In particular, the lack of detail in budget reports hinders effective accountability in regard to government spending at both national and district levels.

Health providers are accountable for the safety of patients as defined in Minister of Health Regulation No. 1691/2011 but there is no national charter to describe the rights of patients to choice, privacy or information (see Chapter 2.9 *Patient empowerment* for details of patient rights, patient choice, and complaints). There is only one specific patient charter for TB care, which was issued by the patients' association.

There is a regulation (from 2010) that defines performance accountability for government institutions, including a requirement to publish an annual report. However, this information is hard to understand and often the results are not widely disseminated. Another example is the accountability of medical committees for clinical care in hospital, which

is defined in the Minister of Health Regulation No. 755/2011. Again, implementation and monitoring of this regulation are very poor.

Laws on decentralization were intended to increase freedom for districts to allocate central government funds in the health sector as well as to increase the role of local revenue generation. Although funding for the provision of basic services at the district level should be allocated in local budgets (APBD), in reality it depends on the decision-makers of public policies and programmes at the district level. In fact, health is not always a priority for every district.

As Indonesia embarks on the new UHC programme, some issues surrounding fraud practices in the implementation of the insurance system have arisen. An example is the up-coding by hospitals in order to receive larger claims payments from the BPJS (the managing agency for Indonesian national health insurance). Another potential fraud practice that has emerged since the implementation of the JKN is the inappropriate readmission of patients, in which some hospitals avoid high costs by readmitting patients so that new claims can be submitted to the BPJS. The new regulation on fraud prevention in the UHC context (Minister of Health Regulation No. 36 of 2015) (Minister of Health, 2015) specifically underlines the role of DHOs in preventing fraud by issuing local regulations and forming fraud prevention teams at the district level. Therefore, DHOs play an important role in ensuring the accountability and good practices of the UHC programme.

As for transparency, the MoH regulation also states that the community could report suspicions of fraud at both primary and referral levels to their local DHO. However, a recent study in three provinces in Indonesia by Hendrartini et al. (in press) found that most respondents had limited knowledge of the implementation of the JKN and its accountability in the use of funds and the benefits of coverage. In addition, the same study found that quality has not been the main accountability parameter in implementation of the UHC programme, where payment patterns of capitation and hospital claims were made without considering the quality and output of the services.

8 Conclusions

8.1 Key findings

Indonesia's health status has improved significantly over recent decades. Life expectancy has increased to 71 years in 2012, from 63 years in 1990. The infant mortality rate has declined from 62 per 1000 live births in 1990 to 26 per 1000 live births in 2012. The under-five mortality rate has also decreased from 85 per 1000 live births in 1990 to 31 per 1000 live births in 2012. However, there has been less progress on other important health indicators, such as maternal mortality. Notably, in 2010 the maternal mortality ratio was 210 deaths per 100 000 live births, while the government has set a target of 102 maternal deaths in 2015.

The country is, notably, in the midst of large long-term social and economic transitions which are shaping its health and health system challenges, among which are the following: (1) the working-age population is increasing relative to the rest of the population, while the proportion of the elderly is also increasing; (2) economic growth is enabling Indonesia to emerge as a middle-income economy; (3) the political and social landscapes have been in transition from authoritarianism to democracy, along with decentralization reforms; and (4) disparities between the more rapidly developing central areas of Java–Bali and large cities, and the poorer areas of eastern Indonesia and rural and remote areas, have persisted and even increased.

As a result, Indonesia confronts the double burden of persistent problems of maternal and child health, undernutrition and communicable diseases, particularly in rural and remote areas, while the prevalence of noncommunicable disease and associated risk factors is increasing in urban and more wealthy areas.

Indonesia has a well-developed and extensive network of public health facilities, which reach from community level through to district, provincial and national level hospitals. However low levels of government spending over past decades have resulted in poor quality of health infrastructure, shortages of personnel and low levels of utilization. This has contributed

to the growing development of private sector facilities and increasing use of the private sector, and resulted in a complex and mixed public–private health system.

Following the economic downturns of the late 1990s, governments at all levels became more sensitive to the impacts of poor health and barriers to utilization of health services on social welfare, particularly for the poor. This has resulted in gradually increasing investment by government in health services, particularly through various programmes to provide financial protection to the poor, and culminating in the introduction of a universal health insurance scheme in 2014. While these investments have been associated with an increase in public financing for health, the focus on the health insurance mechanism has led to funding principally addressing curative services, and to relative neglect and underfunding of public health services, health promotion and preventive programmes.

Increased government and private funding has resulted in an increase in health infrastructure, including primary and referral health facilities, in the last two decades. However, the ratio of both hospital beds and *puskesmas* to population remains below WHO standards and lags behind neighbouring countries. In addition, there are varying conditions and quality of services found in facilities, resulting in geographical disparities between regions. Human resources for health have also grown in the last two decades, with increases in health worker to population ratios. However, the physician to population ratio is still lower than the internationally recommended figure and geographical disparities persist as well. There is also a pronounced shortage of nurses and midwives at both hospital and *puskesmas* level, despite the increase in absolute numbers.

The introduction of extensive devolution of powers and forms of authority from central government to provincial and district governments has created a complex and challenging operating environment for health service policy-makers and managers. On the one hand, the national government has created a strong and well-developed legislative and regulatory framework; on the other hand, this has resulted in a fragmented and complex management and financing system, with multiple specific funding streams, each with its own management requirements.

Within the health sector, regulations were in place to clarify the division of responsibilities between national and sub-national government

particularly to fulfil the minimum standard of services for health. Furthermore, budget from local or sub-national government are directed to be prioritized for health service provision and recently also to support the success of JKN or the national health insurance programme. The set of new regulations on power distribution implies that Indonesia's decentralization process is still evolving.

The establishment of the national health insurance programme (JKN) in 2014 represents a new level of commitment by the government to the health sector, and creates new opportunities to address long-standing low levels of public funding. But it also brings new challenges in developing the organizational and administrative capacities to manage a scheme covering a population of 250 million.

8.2 Lessons learnt from health system changes

Indonesia has also introduced reforms to various aspects of the health system, while the health system has also been affected by reforms to government and public administration that are multisectoral. Key multisectoral reforms include the delegation of authority for certain government functions from central to local governments, including responsibility for the management and provision of public health services; and the progressive introduction of greater autonomy in management for public service organizations, which include hospitals. Reforms that focus specifically on the health sector include reforms to improve the quality of medical education, and the introduction of the national health insurance programme (JKN). Following nearly a decade of policy development, the JKN was introduced in 2014, with very significant implications for the management and delivery of health services.

An important lesson that is still being learnt is how to manage an integrated national health system in a decentralized environment. In particular, how to align priorities and plans at subnational level with national level priorities, when the subnational levels have autonomy to determine their own priorities, and when there is considerable variation in the health needs and system capacities among the different geographical regions of Indonesia. The vertical programmes and national level control established prior to decentralization achieved considerable success in addressing key population health issues through a focus on primary care (*puskesmas*) and priority vertical programmes (e.g. maternal and child health, family planning).

However, an unforeseen consequence of decentralization in 2001 was the creation of a fracture line between the central and local actors. Prior to decentralization, local actors were directly under the control of central actors for all aspects of the health system. However, after decentralization, the district/municipal health offices are responsible to local governments, with technical support and supervision from the central level agencies.

Issues of local governments' capacity to undertake their new responsibilities and roles have also emerged. In earlier years, rapid decentralization was not supported by timely and appropriate capacity development at the local level to enable them to meet their new responsibilities, especially as regards the newly created districts/municipalities. Many heads of local government health offices, in particular, did not understand their role as regulators. Planning skills were also generally weak at the peripheral level in the early period of decentralization. When planning responsibilities were transferred to local managers without providing them with adequate skills, while at the same time databases frequently deteriorated, local (and national) planning suffered.

A particular issue for the maintenance of an integrated system was the breakdown of the integrated health information system, with lower levels of the system (district and provinces) no longer obliged to report regularly to the national level. Thus the central government has more difficulties in building a picture of the health system as a whole, and in comparing the performance and needs of different units within the system.

However, at the same time, decentralization has provided opportunities for local governments to demonstrate their commitment to the specific health needs of their communities, and encouraged and enabled them to use their own resources to increase health workforce numbers, improve facilities, and develop programmes specific to local needs. The popularity of local area specific insurance schemes (*Jamkesda*) is one example of local area initiatives. Furthermore, a variety of other local area innovations have arisen and subsequently been disseminated nationally, such as the *Desa Siaga* programme.

8.3 Remaining challenges

One major implementation challenge currently being addressed is to establish the institutions, systems and procedures necessary for

the effective and efficient operation of the national health insurance programme (JKN). In general, the supply side is still largely lagging behind the demand side, particularly in poorer and more distant regions, and the central government needs to ensure a better investment in the health workforce, facilities and equipment in less developed regions to ensure equity in access to services. Other necessary elements to support an effective and efficient JKN also present challenges. For example, HTAs, cost containment strategies and health information systems have become more crucial in JKN, and yet progress on these elements remains slow.

Furthermore, there is a risk of fraud. Indonesia is not free from fraud, and currently, there is no system for the prevention and prosecution of fraud. Use of BPJS-K funds through claims by hospitals can be aggravated by the phenomenon of fraud, which in turn will further reduce equity. Lack of fraud prevention mechanisms in the JKN is a justified concern. More to the point, an overall accountable JKN system is needed. The Indonesian people need to see measures to ensure public reporting on performance and avoid corruption, particularly now that the system is going to collect funding from the community.

The JKN also highlights some even more persistent challenges that are rooted in other components of the health system, namely health workforce availability and distribution, inequity of services, a fragmented system and fragmented financing, unintegrated health information systems, lack of coordination and lack of monitoring capacity, among others.

A second set of challenges is the need for the health system in Indonesia to re-orient towards the changing epidemiological landscape. The existing health facilities have been designed to address acute diseases/conditions. The increasing burden of noncommunicable diseases highlights the need to develop capacity to deliver care for chronic conditions that require long-term interactions between health providers and patients. There is thus an urgent need to build up capacity for patient-centred long-term and palliative care.

The central government needs to take into consideration the growing interregional disparities in terms of resources, services and health outcomes and develop a comprehensive strategy to address these disparities. The objective of equity in achievement of health indicators across districts has not yet been addressed properly in the

decentralization policy. With a large, widespread area and population, and with the commencement of a universal health coverage system, the need for a reliable and integrated information system to support the planning and decision-making process is becoming even more urgent.

With the existing limitation of public sector supply side, clearly the JKN will not succeed if it relies solely on the public sector. The JKN will more likely call for further collaboration with private health-care providers. The government needs a new set of skills to interact better with the private sector as well as an incentive to attract and keep them in the system. Competition for quality and costs will also drive the behaviour of providers including private providers, calling for close monitoring from the government, something that traditionally has been challenging for Indonesia.

8.4 Future prospects

Given the complexity of health challenges in Indonesia, health financing reform is not a panacea for its health system. The JKN alone will not and cannot be expected to solve the long list of health issues facing the country. Notwithstanding, the JKN provides a momentum to move towards more coordinated policies and strategies to achieve national health system goals, as well as towards a more equitable distribution of the burden of funding the system. Thus, the government needs to take stock of this momentum and make the necessary adjustments so that the health system can be more responsive to the ongoing epidemiological transition and function in a way that provides quality, efficient and equitable services while at the same time providing sustainable financial protection to the people.

In doing so, Indonesia has the opportunity to harness the prospects of continuing economic growth and the shift towards middle-income status, and the demographic dividend arising from the large proportion of relatively young people in the population, to obtain the resources needed to invest in health. The progressive transition to more stable and democratic government, and the development of a better aligned decentralized division of authority and responsibility, provides a basis for Indonesia to build the governance, regulatory and oversight systems which can ensure that investments benefit the whole community, and reduce waste and inefficiency.

9 Appendices

9.1 References

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9.2 Further reading

Indonesia Health Sector Review papers: http://aiphss.org/category /reportreview/:

1. Kosen S, Suryati T, Indriasih EL, Abikusno N, et al. (2014). "Burden of Disease and Changing Demand for Services". Jakarta: Bappenas.
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7. Tandon A, Pambudi ES, Kosen S, Dorkin D, Marzoeki P (2014). "Supply Side Readiness for Universal Health Coverage". Jakarta: Bappenas.
8. Shaw C, Indriani D (2014). "Quality and Safety". Jakarta: Bappenas.
9. Hidayat B, Langenbrunner J, Muirhead D, Nugroho D (2014). "Health Financing". Jakarta: Bappenas.

Indonesia Health Profile 2004–2014:
http://www.depkes.go.id/folder/view/01/structure-publikasi-data-pusat-data-dan-informasi.html

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9.3 Useful web sites

- Indonesia Health Policy (Kebijakan Kesehatan Indonesia); http://www.kebijakankesehatanindonesia.net
- Indonesia Ministry of Health Data Center (Pusat Data dan Informasi): http://www.depkes.go.id/folder/view/01/structure-publikasi-data-pusat-data-dan-informasi.html
- Indonesia Universal Health Coverage (Jaminan Kesehatan Nasional): http://www.jkn.kemkes.go.id
- Indonesia Ministry of Health Human Resource for Health Development and Empowerment Unit (BPPSDMK): http://www.bppsdmk.depkes.go.id
- Indonesia Ministry of Health Institute for Research & Development (Litbangkes): http://www.litbang.kemkes.go.id
- Indonesia Hospital Accreditation Committee (KARS): www.kars.or.id
- Indonesia Indonesian Medical Council (KKI): www.kki.or.id
- Indonesia Central Bureau of Statistics (BPS): www.bps.go.id
- Indonesia National Planning and Development Coordination Bureau (Bappenas): www.bappenas.go.id
- World Health Organization Indonesia: www.who.int/country/idn/en
- World Bank Indonesia: www.worldbank.org/en/country/indonesia

9.4 HiT methodology and production process

HiTs are produced by country experts in collaboration with an external editor and the Secretariat of the Asia Pacific Observatory based in the WHO Regional Office for South-East Asia in New Delhi, India.

HiTs are based on a template developed by the European Observatory on Health Systems and Policies that, revised periodically, provides detailed guidelines and specific questions, definitions, suggestions for data

sources and examples needed to compile reviews. While the template offers a comprehensive set of questions, it is intended to be used in a flexible way to allow authors and editors to adapt it to their particular national context. The template has been adapted for use in the Asia Pacific region and is available online at: http://www.wpro.who.int/asia_pacific_observatory/hits/template/en/

Authors draw on multiple data sources for the compilation of HiTs, ranging from national statistics, national and regional policy documents to published literature. Data are drawn from information collected by national statistical bureaux and health ministries. Furthermore, international data sources may be incorporated, such as the World Development Indicators of the World Bank. In addition to the information and data provided by the country experts, WHO supplies quantitative data in the form of a set of standard comparative figures for each country, drawing on Global Health Observatory (GHO) data and Global Health Expenditure Database. HiT authors are encouraged to discuss the data in the text in detail, including the standard figures prepared by the Observatory staff, especially if there are concerns about discrepancies between the data available from different sources.

The quality of HiTs is of real importance since they inform policy-making and meta-analysis. HiTs are subject to wide consultation throughout the writing and editing process, which involves multiple iterations. They are then subject to:

- A rigorous review process consisting of three stages. Initially, the text of the HiT is checked, reviewed and approved by the Asia Pacific Observatory Secretariat. It is then sent for review to at least three independent experts, and their comments and amendments are incorporated into the text, and modifications are made accordingly. The text is then submitted to the relevant ministry of health, or appropriate authority, and policy-makers within those bodies to check for factual errors.

- There are further efforts to ensure quality while the report is finalized that focus on copy-editing and proofreading.

- HiTs are disseminated (hard copies, electronic publication, translations and launches). The editor supports the authors throughout the production process and, in close consultation with the authors, ensures that all stages of the process are taken forward as effectively as possible.

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Asia Pacific Observatory on Health Systems and Policies (APO) Publications

Health System in Transition (HiT) Review (14 countries)

The Fiji Islands (2011)

The Philippines (2011)

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Malaysia (2013)

New Zealand (2014)

Lao People's Democratic Republic (2014)

The Republic of the Union of Myanmar (2014)

Solomon Islands (2015)

The Kingdom of Cambodia (2015)

Bangladesh (2015)

Republic of Korea (2015)

The Kingdom of Thailand (2015)

The Kingdom of Tonga (2015)

People's Republic of China (2015)

HiT Policy Notes (3 countries)

The Republic of the Union of Myanmar (2015)

- #1 What are the challenges facing Myanmar in progressing towards Universal Health Coverage?
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The Kingdom of Cambodia (2016)
Increasing equity in Health service access and financing: health strategy, policy achievements and new challenges

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The challenge of extending universal coverage to non-poor informal workers in low and middle-income countries in Asia (2015)

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