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**Medicines in Health Systems: Advancing access, affordability  
and appropriate use**

**Chapter 3 - Annex 3**

# Medicines in Universal Health Care Coverage

## Case Study of the Indonesian Government-Financed Universal Health Coverage Program for the Poor and Near-Poor (Jamkesmas)

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## Chapter 3

### Case Study of the Indonesian Government-Financed Universal Health Coverage Program for the Poor and Near-Poor (Jamkesmas)

This case study examines the pharmaceutical management policies of the Jamkesmas health insurance scheme which is directed at the poor and near-poor population of Indonesia. With over 76 million beneficiaries in 2012, the Jamkesmas program is the largest health insurance scheme in Indonesia covering one-third of the nation's population. The pharmaceutical policies within this insurance scheme will serve as an important case study of how Indonesia promotes cost-effective use of medicine.

With regard to the selection of medicines, the Jamkesmas program has a specific **formulary** that is updated every two years (1). Beneficiaries are only entitled to generic medicines from this specific formulary which comprise 90% of the 630 medicines formulation in 2010 (1). In addition, **bulk purchasing** exists where local governments, through District and Provincial Pharmacy Installations, procure medicines through an open tender system which are distributed to local community health centers. In 2013, the medicines procurement in the public sector -- including Jamkesmas -- used an electronic procurement system (2). Furthermore, a policy for **medicine pricing** exists at the national level where the price of generic medicine is analyzed through costing methods and the price publically disseminated by the Ministry of Health (3). As most medicines provided under Jamkesmas program are dispensed in public health facilities where medicines have been procured by the government through public resources, there are **no co-payments** for beneficiaries and no reimbursement of facilities by the government. The Jamkesmas program also has a clear policy on **preferred prescriber and dispensing network**. Although the Jamkesmas network is primarily made up of public facilities such as community health centers (puskesmas) and public hospitals, select private hospitals that have a Memorandum of Understanding (MoU) with the MoH can also enroll Jamkesmas patients. In addition, provision of services to Jamkesmas patients through private providers is sometimes mandated by local governments (4). The Jamkesmas program reimburses hospitals based on diagnostic-related groups (DRGs) for Jamkesmas coverage and uses the same DRG rate for public and private hospitals. Community health centers are reimbursed based on fee-for-service for medical services, excluding medicines as they have already been purchased through government resources. Several utilization management strategies directed to providers have been implemented to varying degrees in Indonesia, including **Standard Treatment Guidelines (STGs)** for specific primary and secondary care, **separation of prescribing and dispensing**, and **specific disease management programs** (5). Indonesia has a rich collection of household surveys that are routinely implemented throughout the country as part of its national **Information Systems**. The various surveys implemented in Indonesia have the potential to assess access to healthcare services, measure health impacts, and determine rates of financial protection, however, it's not clear whether a national plan has been developed to systematically use these surveys to evaluate the Jamkesmas program and monitor price of medicines.

The pharmaceutical strategies and policies found within Jamkesmas are intended to promote cost-effective use of medicines. However, partial and incomplete implementation of various pharmaceutical policies, coupled with underlying health systems issues such as low investments in health and the low numbers of trained health workers, highlights the on-going challenges of the Indonesian pharmaceutical sector. Jamkesmas pharmaceutical strategies tries to address the issues associated with equitable, appropriate, and affordable costs of medicines. However, no causal inference can be associated between specific Jamkesmas pharmaceutical management strategies and the current challenges of the Indonesian pharmaceutical sector as there have been no studies that explore the cause and effect of specific pharmaceutical strategies and policies in Indonesia.

**Equitable access** to medicines is an important issue in Indonesia. Common complaints by Jamkesmas beneficiaries often include long wait times and complex administrative requirements that result in barriers to access (4). Furthermore, the latest health facility surveys indicate high level of medicine stock outs in community health centers. Among the close to 9,000 surveyed health centers, only 15% had more than 80% of the essential general medicines (6). In addition, there is a lack of qualified doctors and specialists in Indonesia. These shortages are more acute in rural parts of the country where health facilities cover geographically remote, difficulty, and sparsely populated areas (7).

**Appropriate use** of medicines is another issue Indonesia faces where antibiotic overuse is a problem both for health care providers and patients (2,8,9). Policies associated with Standard Treatment Guidelines (STG) and disease management programs need to be strengthened in order to promote appropriate use of medicines.

The **affordable cost** of medicines is addressed through several pharmaceutical selection and procurement strategies. Jamkesmas has an annual operating budget based on an estimated government contribution rate of about US\$8 per person per year, which totals to about a quarter of the central government's annual health budget. Medicine expenditure has not been factored into this premium. Jamkesmas government contributions do not reflect the actual cost of care with actuarial studies estimating that the true costs at least three to four times higher than the existing rate of \$8USD per person per year (10). The majority of pharmaceutical spending coming from out-of-pocket expenditure. Indonesia spends around US\$12 per person per year on medicines which is one-third to one-half of the level in Malaysia and Thailand and two-thirds of the level in the Philippines (11). Such low rate of pharmaceutical spending is indicative of underutilization and barriers to **equitable access** of appropriate and effective medicines.

When looking at the pharmaceutical policies of the Jamkesmas health insurance scheme, several aspects are important to note in this case study. Several pharmaceutical management strategies are incorporated into the Jamkesmas program, however, this is undermined by the underlying "supply-side constraints". With low investments in health -- total health expenditure of 2.7% of GDP in 2011 (12) -- there are challenges for primary health facilities to provide adequate services to those in need. Increased health investments coupled with efficiency measures will need to be made if Indonesia wants to successfully achieve universal health coverage. In addition, the current incentive of increased patient volume (4) for private health facilities who participate in the Jamkesmas network provider does not seem realistic to increase overall private sector participation, which is necessary

given the human resource constraints in Indonesia. Beyond the assurance that Jamkesmas beneficiaries will increase patient volume, there is no differentiation between the reimbursement rates of public versus private hospitals. If the actual costs of services is greater than the government DRG reimbursement rate, private hospitals have the potential to lose money when joining the Jamkesmas network. Suboptimal reimbursement rates seem to be a problem in both the public and the private sector. A potential consequence may be that private facilities will opt out of the scheme, however, the impact on public facilities is more implicit rationing and stock-outs.

## POTENTIAL HEALTH SYSTEM CONSEQUENCE

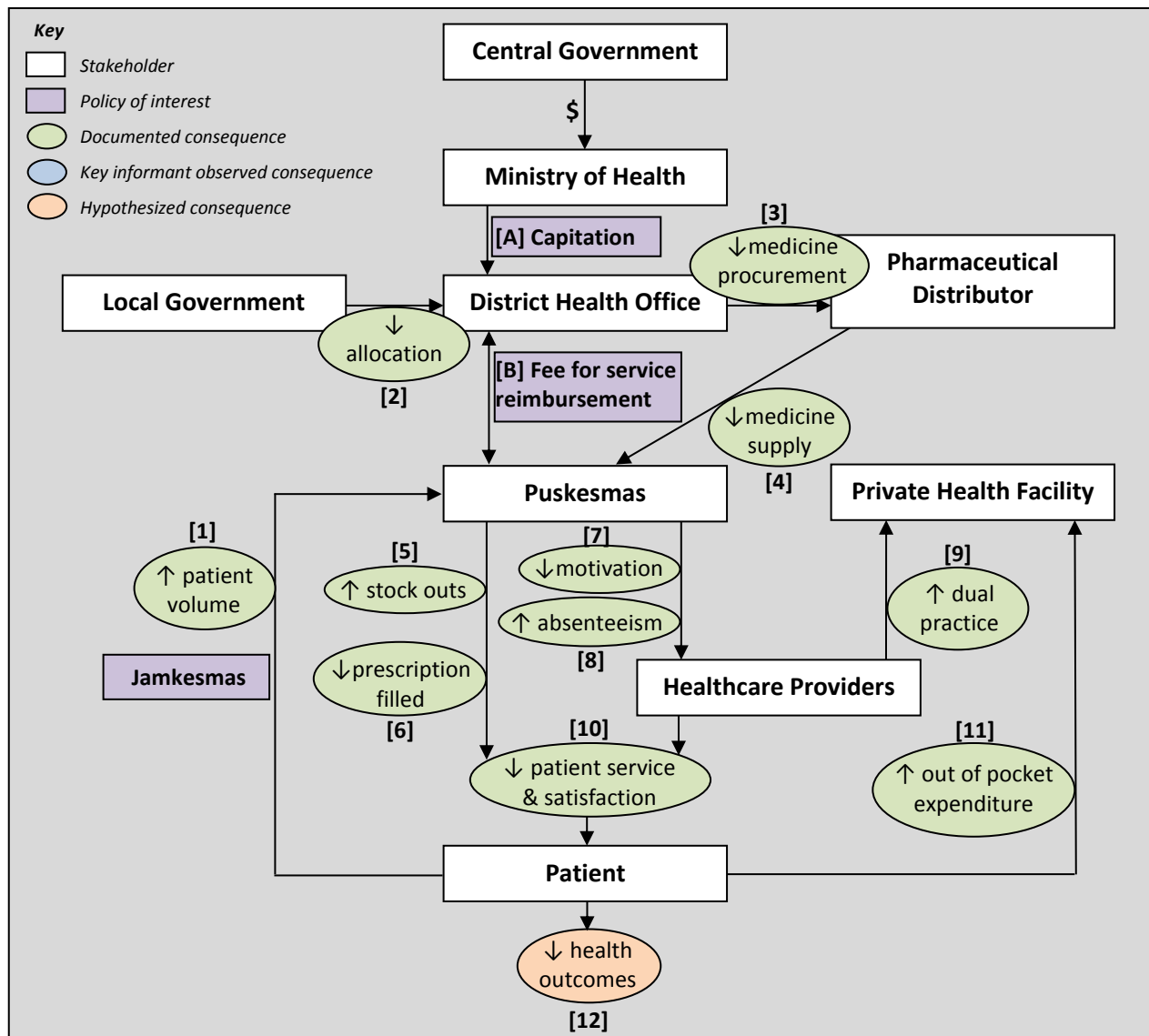
Jamkesmas beneficiaries have no co-payments under this health insurance program and are entitled to generic medicines listed in the Jamkesmas-specific formulary. Medicines are purchased through public resources -- both from budget transfers from the Central Government and Local Government revenues -- and dispensed within public health facilities free of cost to Jamkesmas beneficiaries. As the Jamkesmas program is designed to promote health coverage among the poor and near-poor, community health centers (puskesmas) are the primary health facilities that will see increased volume of patients due to the scale-up of this insurance scheme [1]. As a result, identifying the potential health system consequences of the contracting and payment mechanisms under the Jamkesmas program is of relevance for policy makers and health system analysts (Figure X.1).

The District Health Office (DHO) receives a set amount of Jamkesmas funds from the Central Government based on a **capitation payment [A]** of Rp 1,000 (\$0.10 USD) for medical services per person per month multiplied by the estimated poor and near-poor population of that district (4). As stated in the MoH technical guideline, funds from the Jamkesmas capitation cannot be used to buy medicines as other sources of Central Government budget transfers have already been allocated for health expenditures such as medicines (13). As of 2011, DHO reimburses puskesmas based on **fee-for-service [B]** for medical services, excluding medicines. The intended goal of this capitation payment mechanism is to control health expenditure cost within the Central Government and to avoid over utilization of medical services and medicines. The Jamkesmas budget consumes approximately a quarter of the annual Central Government health budget (4) so the rationale for this policy is well intentioned. The capitation is designed to limit central government contribution while encouraging local government health care expenditure. However, the current Jamkesmas capitation payment to DHOs could potentially result in severe underfunding when fee-for-service reimbursements from the puskesmas exceed DHO capitated funding total. In turn, this could lead to shortages in essential health services and medicines.

With capitation-based funding from the Central Government to support Jamkesmas beneficiaries, there is a potential unintended consequence that local governments will **reduce health allocations [2]** to their District Health Office (14). The support from Jamkesmas funding, which can be a sizable amount, creates a false perception of a sufficient local health budget. As a result, local governments may decide to reduce their budget allocation towards health in order to focus on other priorities deemed more important. This is the opposite intention of the Jamkesmas capitation which was intended to increase the health budget of local governments. Since Jamkesmas funds cannot be used to buy medicines, it becomes even more important that DHOs have sufficient resources to buy medicines. A cash-strapped DHO will respond by **reducing procurements of medications [3]** resulting in **reductions in the supply of essential medicines [4]**, **increased stock-outs [5]**, and **reduced number of prescriptions filled [6]** at the puskesmas. The latest health facility survey indicates that only around 60% of puskesmas both in rural and urban areas fulfilled 60-79% availability of essential medicines and that only 15% had 80% of

essential medicines (6)<sup>1</sup>. In addition, a financially constrained puskesmas will have limited means to provide incentive for health care workers leading to potential consequences such as **lack of motivation, increased absenteeism, and high proportion of dual-practice** (6,7). In turn, a puskesmas with limited health personnel and shortages of essential medicines can lead to long waiting times and **poor patient services and decreased satisfaction by patients [10]** (7). Jamkesmas beneficiaries unable to get care and medicine from a puskesmas will be forced to utilize the private sector for their healthcare needs where **increases in out of pocket expenditure [11]** are often observed (4). Specific to the pharmaceutical sector, public expenditure on medicines in Indonesia was as low as 17% in 2011 which means that the majority (83%) was private out-of-pocket expenditure (2). Jamkesmas beneficiaries unable to pay for health care in the private sector – and unable to receive quality care in the public sector – **could potentially result in poor patient health outcomes [12]**.

Figure X.1: Potential Health System Consequences of Jamkesmas Reimbursement Policies for Puskesmas



<sup>1</sup> 80% availability of essential medicines is the recommended standard



Capitation-based payments are designed to control costs and promote efficiency, however, they can also create a perverse incentive to enroll healthier patients, under-provide services and tests, and limit the provision of drugs. Success of capitation payment system relies on how the capitation rate is computed (whether it provides sufficient budget to health services) and how its use is monitored (performance indicators). As the Jamkesmas program is supported through central government taxes, capitation rates are not based on rigorous actuarial calculations and does not reimburse for the full cost of services (4). When capitation levels are not set at a level that provides sustainable resources to DHO, a cascade of supply-side consequences takes place which impact the puskesmas and overall provision of health care. The situation is made worse when Jamkesmas based capitation, which excludes medicines, creates the unintended consequence of reduced local government allocations which creates an overall stagnation of health funds amidst growing demand for health care and medicine. In a decentralized country such as Indonesia where regulations are set by the Central Government but implementation and enforcement are the responsibilities of the local government, it becomes important that health priorities are shared by both Central and local government officials in order to ensure sufficient resources to achieve local and national health goals.

## CASE STUDY

### Introduction

This case study examines the Jamkesmas insurance scheme which is directed at the poor and near-poor population of Indonesia.

### Country Background

Located in Southeast Asia, Indonesia is the fourth most populous country in the world with a population of 242 million of which 54% is urban (12). Indonesia has a GNI per capita of \$3,716 (PPP terms, constant 2005 International \$), a Human Development Index rank of 124 out of 187 (twelve places behind Philippines, four places ahead of Vietnam), adult literacy rate of 92%, and life expectancy at birth of 69.4 years (15). Although classified as a lower middle income country, approximately half (46%) of the population lives on less than \$2 a day at 2005 international prices (12).

Indonesia has one of the lowest levels of total health expenditure in the region at 2.7% of GDP in 2011. A sizable proportion of health care expenditure comes from out-of-pocket (OOP): (50%) of total expenditure in health and 76% of private health expenditure in the country. In addition, the number of hospitals and hospital beds have barely kept up with the population growth. In 2010, Indonesia had 2.5 beds per 1,000 population compared to 4.8 beds per 1,000 population in the East Asia and Pacific region (12). Furthermore, Indonesia also faces a shortage of healthcare workers. Indonesia had 21 doctors per 100,000, which is low compared to countries with similar income levels - Philippines with 58 while Malaysia had 70 doctors per 100,000 population (16).

### Pharmaceutical Sector

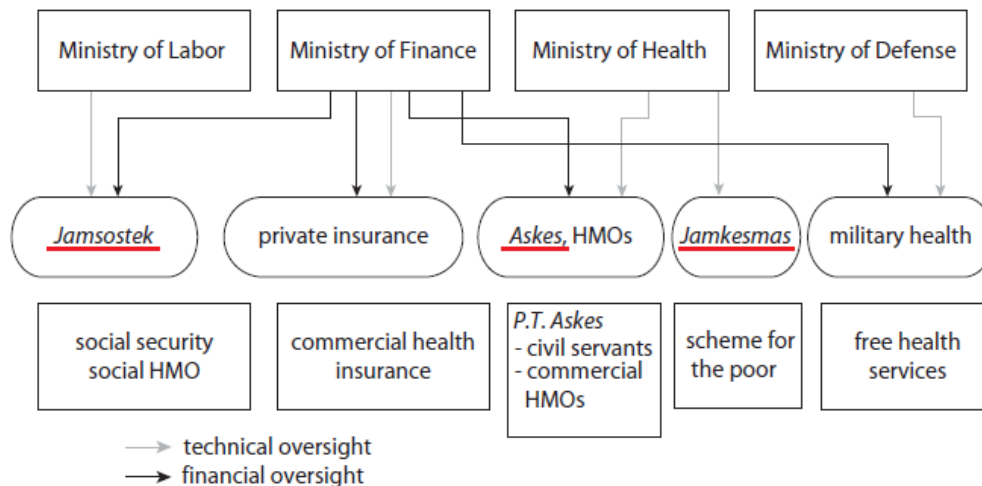
Spending on pharmaceuticals and vaccines is estimated to be a third of health care spending in Indonesia, which translates to approximately \$12 USD per capita per year (11). A great majority of this expenditure is out-of-pocket payments. Indonesians are paying more than necessary as the largest share of medicines sold are branded generics which are priced higher than international reference prices (11).

The quality of medicines appears to be high due to enforcement of Good Manufacturing Practices, however, regulation of retail pharmacies, medicine stores, and informal sellers remains a challenge in Indonesia (11). A unique aspect of the Indonesian pharmaceutical market is the high rates of illegal sales of prescription medicines by unlicensed vendors and health workers; less than half of the shares of medicines in Indonesia are dispensed by hospitals, health centers, pharmacies, and other licensed outlets (11). Pharmaceutical policy-making and management is a considerable challenge in a decentralized government such as Indonesia where regulations are set nationally, but implementation and enforcement remain the responsibility of local districts and cities (11).

## Jamkesmas Program

A brief overview of the current health insurance system in Indonesia is presented in Figure X.2. The Jamkesmas program is a result of a 2004 legislative commitment (Law No. 40/2004) to attain universal health coverage (UHC) in Indonesia (17). The program was started in 2005 as the Askeskin program for the poor but was later expanded to include the near-poor in 2007 and renamed as Jamkesmas. The Jamkesmas program in 2012 has over 76 million beneficiaries – a third of the national population – and is the largest health insurance scheme in Indonesia (4). Two other social health insurance schemes exist in Indonesia: Askes is targeted to civil servants and has 17 million beneficiaries while Jamsostek has enrolled 5 million employees in the private sector (4). Combined, the three social health insurance programs cover 40% of the Indonesian population. In 2011, the government enacted the Badan Penyelenggara Jaminan Sosial (BPJS) law (Law No. 24/2011) which will unite all social health insurance programs under one not-for-profit administrator in 2014 (17). Funds across the different social health insurance schemes will eventually be pooled and the benefit packages standardized.

**Figure X.2: Current Indonesian Health Insurance Scheme (18)**



A recent World Bank report states that the Jamkesmas program is designed with “good intentions” but is “performing well below its potential” (4). The report noted several positive aspects of the program, including: increased health coverage among poor and near-poor households, increased outpatient and inpatient utilization rates, decreased rates of catastrophic payments, and an overall positive perception of the program among enrolled participants. The report concludes, that the program does have a few issues that are important to note, such as: high level of miss-targeting among the non-poor beneficiaries, low level of community awareness of benefits, regional inconsistencies in the availability of the basic benefit package, and poor accountability of the program (4).

## Findings

### Description of Medicines Benefit Package and Pharmaceutical Management

In the following section, we will describe the main features of the medicines benefit package and pharmaceutical management of the Jamkesmas scheme using the Faden et al framework (19).

#### Selection

In regards to pharmaceutical selection strategies directed at both consumers and providers, a policy exists to create a Jamkesmas specific **formulary** that is updated every 2 years (20). Compared to the other social health insurance schemes in Indonesia (Askes, Jamsostek), Jamkesmas has a unique formulary and reimbursement policy (4). Jamkesmas beneficiaries are only entitled to get coverage for medicines from this specific formulary and receive generic version of medications (4). The 2010 Jamkesmas formulary includes 630 medicines formulation, which is approximately 70% of the 2008 National List of Essential Medicines.<sup>2</sup>

As the Jamkesmas program does not allow for co-payments, a policy for **beneficiary cost-sharing** does not exist. In general (not specific to the Jamkesmas scheme), the Government encourages policies supporting **generic substitution** as a way to reduce drug costs. There is no generic substitution in Jamkesmas except for pharmacies that are contracted by the scheme. Usually, Jamkesmas medicines are dispensed in government outlets and these medicines are prepaid and dispensed in these public health facilities.

#### Purchasing

Select pharmaceutical purchasing strategies directed at pharmaceutical manufacturers and suppliers have been implemented in Indonesia. A policy for **medicine pricing** exists at the national level where the price of medicines is controlled by the Ministry of Health (Law No. 36/2009)(3). The MoH implemented a decree requiring any pharmaceutical products marketed in Indonesia to be labeled with the maximum retail price as set by the MoH (21).

A policy for **bulk purchasing** exists in Jamkesmas where local governments, through District and Provincial Pharmacy Installations, procure medicines through the open tender system. Technical guidelines for the procurement of medicines at the District and Provincial levels exist in Indonesia. Pooled procurements between different provinces do not take place. The Indonesian Ministry of Health has also recently implemented an electronic procurement system which was made through Presidential decree in February 2012 (22). In 2013, the MoH used the new electronic procurement system to purchase and distribute medicines to community health centers (24). Local government estimates the need of medicine by province and asks companies to submit an offer of price and quantity that they could reliably deliver. Local government then chooses the companies and products with the lowest price until the total amount of medicine needed is reached.

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<sup>2</sup> 2010 National Formulary would be a better comparison. However, we were unable to get access.

Companies that do not perform well or cannot deliver on agreed orders will be removed from the list for defined amount of time. Quality of medicine is ensured by the regulatory oversight during the registration process of companies that participate in this electronic procurement system. All providers, including public and private health facilities, can purchase medicines electronically through this new online procurement system (24).

The electronic procurement system lists the generic medicine by name, packaging, labeling, price, and contact information of registered suppliers and companies. The online system integrates the maximum retail price as set by the MoH (21) which applies to both public and private health facilities purchasing medicines. As the Jamkesmas formulary is made primarily of generic medicines, all health facilities that serve Jamkesmas beneficiaries are potentially using this new electronic procurement system. In fact, public health facilities are required to use this electronic procurement system once fully operational (23).

As this is a newly implemented procurement system, the wide-spread usage of this system is most likely low. However, there have been reports of several issues associated with this new procurement system. It was noted that delivery of essential medicines to government health facilities often faced lengthy delays impacting the availability of medicines. In addition, the price of the same medicine among provinces may be different, as a result of manufacturers setting price based on the distance of the province and the volume of medicines needed (23).

### **Provider contracting and payment methods**

Non-performance based contracting and payment strategies are currently employed for government healthcare providers in Indonesia. Public health workers, including government physicians and pharmacists, receive a **fixed salary** independent of productivity or capitation (25). Physicians trained in government medical schools have compulsory public service after graduation while the small numbers of physicians trained in private schools often go directly to private hospitals and clinics. Due to the low salaries of government physicians, they often augment their income by working in private practice and/or private hospitals, a practice commonly referred to as “dual-practice” (16). It is common that government physicians have private practice -- at their homes or clinics -- in the morning and in the evenings. In cities, government physicians often work in several hospitals or establish small private clinics. In general, physicians prefer to have a government appointment since it gives them visibility useful for their private practice (7). Although dual-practice is not against the law, there is an apparent conflict of interest for government doctors to work simultaneously in public health facilities and private practice. There can be a perverse incentive to give poor service in government facilities in order to refer patients to their own private practice where they can get better service. Patients with disposable income will often pay more for better healthcare services -- shorter queues, friendlier staff, and improved facility infrastructure -- while the poor will receive whatever services are available at government facilities. As for pharmacists in Indonesia, most are civil servants working in government hospitals, large clinics and health departments. The majority of government pharmacists run their own pharmacies on the side, which allows them to supplement their civil servant salaries. Private healthcare facilities will have

different payment methods for health workers based on contract type which could include fee-for-service.

It is important to note that most of the medicines provided under Jamkesmas are dispensed in public health facilities where medicines have been pre-paid by the government. Beneficiaries do not need to pay fees at the point of care and as a result, there are no policies for **dispensing reimbursements** (4).

The Jamkesmas program also has a clear policy on **preferred prescriber and dispensing network** (4). Although the Jamkesmas network is primarily made up of public facilities, such as community health centers and public hospitals, select private hospitals that have a MOU with the MoH can also enroll Jamkesmas patients. The number of private hospitals in the Jamkesmas program has continued to increase - 30% of Jamkesmas network hospitals were private in 2012 (4). The increased participation by private hospitals is partially a result of the assurance in increased patient volume. However, some private hospital participation is mandated by local government. The Jamkesmas program reimburses hospitals based on diagnostic-related groups (DRGs) for Jamkesmas coverage and uses the same DRG rate for public and private hospitals. Community health centers are reimbursed based on fee-for-service (4), **excluding medicines as they have already been purchased through government resources.**

### **Utilization**

Several utilization management strategies directed to providers are in place in Indonesia. **Standard Treatment Guidelines** (STGs) for specific primary and secondary care exist, including certain pediatric conditions (ARI), infectious diseases (TB and HIV), and certain chronic diseases (diabetes), however, it is unknown to which extent they are implemented / adhered to (5). STGs can be downloaded from the MoH website or accessed from professional medical associations in Indonesia. No policies for **pay for performance** were observed in Indonesia resulting in fixed salaries for public health workers with no financial incentives to reward improvements in quality of care. There is a national policy for **separation of prescribing and dispensing** in Indonesia (26), however, there is no financial incentive related to prescribing as dispensed medicines are purchased by the state and provided free of charge at the point of care. There are specific **disease management programs and education** as evidence from the disease specific MoH literature for tuberculosis and bird flu (5), however, the extent that these are used by healthcare workers in Indonesia is unknown. Finally, it is not known whether **patient and consumer satisfaction** is routinely monitored in Indonesia.

### **Information Systems**

Indonesia has a rich collection of household surveys that are routinely implemented throughout the country, including:

- Indonesian Demographic & Health Survey (DHS) - 2002/3, 2007, 2012
- Indonesian Family Life Survey (IFLS) - Longitudinal 1993/4, 1997/8, 2000, 2007/8
- National Socio-Economic Survey / Survei Socio-Ekonomik Nasional (SUSENAS) - Annual

- Basic Health Research / Riset Kesehatan Dasar (RISKESDAS) - 2007, 2010, 2013
- Health Facility Research / Riset Fasilitas Kesehatan (RISFASKES) -2011

The various surveys implemented in Indonesia have the potential to assess access to healthcare services, measure health impacts, and determine rates of financial protection. However, it's not clear whether a national plan has been developed to systematically use these surveys to evaluate the Jamkesmas program. In regards to information associated with medicines purchasing information (volume and price), prescription monitoring, and other relevant aspects of pharmaceutical management, some household surveys contain specific medicine-related indicators (Table X.3). In addition, the Pharmaceutical Services and Medical Devices at MoH routinely collects medicines purchasing information and monitors quality of prescription from all the Indonesian provinces (23). Unfortunately, access to this pharmaceutical database is limited and requires pre-approval by the MoH. Indonesia has also undergone two rounds HAI survey data collection, the first in August 2004 and the second in June 2010 (27). In addition, a medicine price survey was conducted as part of doctoral dissertation work in April 2010 (28)

**Table X.2: Overview of the medicines benefit package and pharmaceutical management in Jamkesmas**

Domain	Area	Policy (yes/no)	Description national level
<b>Selection (directed to providers and beneficiaries)</b>			
	Formularies (number of medicines included, existing link between STG and formulary)	✓	2010 Jamkesmas formulary includes 630 medicines formulation, which is approximately 70% of the 2008 NLEM. Beneficiaries are only entitled to get generic medicines. Jamkesmas formulary is updated every 2 years(1).
	Beneficiaries cost-sharing or co-payment	✗	No cost-sharing as medicines included in the formulary are free at the point of care; dispensing of medicines most commonly within public facilities and select private health facilities selected to enroll beneficiaries(4).
	Generic substitution	✗	Generic substitution policy exists, however, if medicines are purchased and dispensed within public facilities this would not apply (1)
<b>Purchasing (Mainly directed to pharmaceutical suppliers, including distributors and industry or providers)</b>			
	Medicines price or rebate negotiation	✓	Medicine pricing policy was set by Cost Plus Pricing Method at the national level where the price of generic medicine is controlled by the Ministry of Health (3).
	Bulk purchasing	✓	A policy for bulk purchasing exists in Jamkesmas where local governments, through District and Provincial Pharmacy Installations, procure medicines through an open tender system. In 2013, a new electronic procurement system was used to purchase and distribute medicines to community health centers (2). Before implementing the electronic system, procurement at the District Health Office and District Hospital was conducted by open tender.
	Generic reference pricing directed towards providers	✗	A policy for generic reference pricing policy was implemented requiring any pharmaceutical products marketed in Indonesia – both in the public and private sector - to be labeled with the maximum retail price as set by the MoH (11). As all medicines are directly purchased by the MoH, this would not be applicable.
<b>Contracting and payment methods (directed to providers)</b>			



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	Fixed salary for prescriber	✓	Public health worker receives a fixed salary independent of productivity or capitation(25). Private companies will have different payment methods based on contract type which could include fee-for-service. Most of the care provided to beneficiaries under Jamkesmas is provided in public institutions.
	Rate of prescriber and dispensing reimbursement	✗	Prepayment of medicines by the Government. Beneficiaries do not need to pay fees at the point of care(4).
	Preferred prescriber and dispensing network	✓	Jamkesmas provider network is primarily made up of public facilities, such as community health centers and public hospitals. Select private hospitals who have a MOU with the MOH can also enroll Jamkesmas patients. The number of private hospitals in the Jamkesmas program has continued to increased - 30% of Jamkesmas network hospitals were private in 2012 (4).
<b>Utilization (directed to providers and beneficiaries)</b>			
	Standard treatment guidelines	✓	STGs for specific primary and secondary care exist, including certain pediatric conditions (ARI), infectious diseases (TB), and chronic diseases (diabetes). It is unknown to which extent they are implemented/adhere to (5).
	Pay for performance (financial incentives for quality of care)	✗	For public health worker, they receive fixed salaries with no mechanism to reward performance (25).
	Separation of prescribing and dispensing	✓	National policy to separate prescription and dispensing of medicine exists (26). Physicians are authorized to prescribe medicines listed in the formulary. There is no financial incentive related to prescribing as dispensed medicines are purchased by the state and provided free of charge at the point of care.
	Disease management programs and education	✓	Specific programs exists for several conditions (e.g. diabetes, HIV/AIDS), some of them are delivered by specialists. It is unknown to which extent they are implemented/adhere to (5).
<b>Information System (directed mainly to insurance and providers)</b>			
	Patient/consumer		

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	satisfaction	Information not publically available	
	Medicines purchasing information (volume and price)	Information not publically available	Department of Pharmacy Services under the MOH collects medicine purchasing information at primary health center, however, not available to the public (23). Indonesia has undergone two rounds HAI survey data collection, the first in August 2004 and the second in June 2010 (27). There was price survey in April 2010.
	Prescription monitoring	Information not publically available	Department of Pharmacy Services under the MOH conducted prescription monitoring at primary health center. There is no prescription monitoring focus within the Jamkesmas program.

## Challenges

The pharmaceutical strategies and policies found within Jamkesmas are intended to promote cost-effective use of medicines. However, partial and incomplete implementation of various pharmaceutical policies, coupled with underlying health systems issues, highlights the on-going challenges of the Indonesian pharmaceutical sector. Jamkesmas pharmaceutical strategies tries to address the issues associated with equitable, appropriate, and affordable costs of medicines. However, no causal inference can be associated between specific Jamkesmas pharmaceutical management strategies and the current challenges of the Indonesian pharmaceutical sector as there have been no studies that explore the cause and effect of specific pharmaceutical strategies and policies in Indonesia.

### **Equitable Access**

The 2011 health facility survey in Indonesia suggests challenges remain in access to medicines. Among the 8,981 surveyed health centers, only 19.9% had more than 80% of the essential general medicines needed to be available at the facility in stock at the time of the survey (6). The high level of medicine stock outs in these public health facilities will result in patients going to private pharmacies and paying out of pocket for their medicines.

Differential access to medicines between groups of patients is an important indicator of equity. The Jamkesmas program is intended for beneficiaries that are poor and near-poor. Common complaints by Jamkesmas beneficiaries include long wait times and complex administrative requirements that result in additional barriers to equitable access (4). In addition to shortages of medicines in public health facilities, there is a lack of qualified doctors and specialists (Ob-Gyn, pediatricians, internist, surgeons) in Indonesia. These shortages are more acute in remote and rural parts of the country where health facilities cover geographically remote, difficulty, and sparsely populated areas (16). Although Jamkesmas has a comprehensive benefit package, the constrained health system and the inequities in the availability of basic primary health care limit the potential benefits for many Jamkesmas enrollees (4).

### **Appropriate Use**

Several research studies have indicated overuse of antibiotics in Indonesia both by health care providers and patients. Doctors in Jakarta prescribed antibiotics for 94% of young children although they believed that the infection was of viral origin (8). In a study comparing antibiotic consumption between patients admitted to a public hospital (group A), visiting a primary health center (group B), and healthy relatives (group C) – 7% of healthy participants (group C) consumed antibiotics while groups B and A exhibited a three-fold and four-fold higher use of antibiotics, respectively (9). A good proportion of antibiotic used to treat respiratory infection and diarrheal ailments for participants in this study was probably unnecessary or ineffective. Finally, rates of antibiotic usage in Indonesian hospitals is approximately twice of European counterparts - 95.7 defined daily doses (DDD) per 100 patient days (PD) in a the largest state-owned hospital vs 54.7 (Netherlands) and 44.8 (Denmark) DDD / 100 PD (2). Overuse of antibiotics is partly

driven by a combination of poor clinical practice in conjunction with the ability to purchase antibiotics without prescription in pharmacies and drug stores throughout Indonesia, even though this is against the law.

## **Affordable Costs**

Indonesia spends around US\$12 per capita per year on medicines, which is one-third to one-half of the level in Malaysia and Thailand and two-thirds of the level in the Philippines (11). The low rate of pharmaceutical spending is a combination of policies that have achieved greater use and acceptance of low priced generics in the public sector and underutilization and barriers to access of appropriate and effective medicines (11). A great majority of pharmaceutical expenditure is out-of-pocket payments where total public expenditure on pharmaceuticals was 16.7% in 2011 (2). Indonesians are paying more than necessary as the largest share of medicines sold are branded generics which are priced higher than international reference prices.

Jamkesmas has an annual operating budget based on an estimated “premium” rate of Rp 6,500 per person per month (about US\$8 per person per year), amounting to about a quarter of the central government’s annual health budget (4). It is not clear whether medicine expenditure has been factored into this premium.

The actual cost of providing health services may be higher than the rate of reimbursement that the Government is willing to pay hospitals. For example, the government reimbursement fees for normal and cesarean deliveries are lower than the actual costs of these services in 2007 (29,14). For Class C hospitals (class of service utilized by the poor), the actual price of a basic normal delivery is approximately \$40 USD more than the government reimbursement rate; this reimbursement discrepancy is further highlighted in cesarean sections where there is a sizable gap of about \$300 USD. Private hospitals may not want to be enrolled into the Jamkesmas provider network if hospitals are losing money on Jamkesmas patients.

## **Engaged industry**

Although there are both publicly and privately-owned manufacturers in Indonesia, state production and distribution of unbranded generics was the main means by which the MoH supplied the public sector until the late 1990s (11). Since then, state production has been converted to state-owned enterprises which are expected to operate on commercial lines. Indo Farma, Kimia Farma and Phapros dominate the supply of unbranded generics and Biofarma dominates the supply of vaccines in Indonesia. There are currently about 240 local producers in Indonesia (30). Policies on importation of medicines are still uncertain as significant barriers to entry still exist for international firms (11). For example, the government policies and their enforcement for product quality assurance differ for products from national and international manufactures. Indonesia is also highly dependent on imported pharmaceutical raw materials with a majority (90-100%) of active raw materials imported from India and China (2). The lack of basic chemical industry, low mastery of technology, and low export-rate of local pharmaceutical manufacture results in the current high dependency of imported raw materials in Indonesia. This condition makes Indonesia highly vulnerable to factors such as exchange rate fluctuations and international trade policies.

**Table X.3: Information sources and the pharmaceutical challenges in Indonesia**

Information available on four aspects	Existing information source that provide answers	Pharmaceutical challenges
<b>Equitable access</b>		
Do people receive the medicines they need?	-Indonesian Demographic & Health Survey (DHS) - 2002/3, 2007, 2012 -Indonesian Family Life Survey (IFLS) - Longitudinal 1993/4, 1997/8, 2000, 2007/8 -Basic Health Research / Riset Kesehatan Dasar (RISKESDAS) - 2007, 2010, 2013 Unclear if these contain information that allows identifying access for those in need	The 2011 health facility survey states that among the 8,981 surveyed health centers, around 60% fulfilled 60-79% availability of essential medicines while only 15% had 80% of essential medicines (6)
How does access to appropriate medicines differ between groups of patients?	-Indonesian Demographic & Health Survey (DHS) - 2002/3, 2007, 2012 -Indonesian Family Life Survey (IFLS) - Longitudinal 1993/4, 1997/8, 2000, 2007/8 -National Socio-Economic Survey / Survei Socio-Ekonomik Nasional (SUSENAS) - Annual -Basic Health Research / Riset Kesehatan Dasar (RISKESDAS) - 2007, 2010, 2013 Other academic studies – not routine data collecting	Common complaints include long wait times and complex administrative requirements (4). It is likely that this results in accessed barriers. In addition to shortages of medicines in public health facilities, there is a lack of qualified doctors and specialist doctors (Ob-Gyn, pediatricians, internist, surgeons in Indonesia. These shortages are more acute in remote and rural parts of the country where health facilities cover geographically remote, difficulty, and sparsely populated areas (16). Although Jamkesmas has a comprehensive benefit package, the constrained health system and the inequities in the availability of basic primary health care limit the potential benefits for many Jamkesmas enrollees(4).
<b>Appropriate use</b>		
Are we overusing/under using medicines?	-Research studies	Several research studies have indicated overuse of antibiotics in Indonesia – both by health care providers and patients (2,8,9).

<b>Affordable costs</b>		
How much does Jamkesmas spend on medicines?	Insurance scheme budget info	Jamkesmas has an annual operating budget based on an estimated “premium” rate of Rp 6,500 per person per month (about US\$8 per person per year), amounting to about a quarter of the central government’s annual health budget(4). It is not clear whether medicine expenditure has been factored into this premium.
What is the financial burden associated with medicines spending in households?	<ul style="list-style-type: none"> <li>-Indonesian Demographic &amp; Health Survey (DHS) - 2002/3, 2007, 2012</li> <li>-Indonesian Family Life Survey (IFLS) - Longitudinal 1993/4, 1997/8, 2000, 2007/8</li> <li>-National Socio-Economic Survey / Survei Socio-Ekonomik Nasional (SUSENAS) - Annual</li> <li>-Basic Health Research / Riset Kesehatan Dasar (RISKESDAS) - 2007, 2010, 2013</li> <li>-Health Facility Research / Riset Fasilitas Kesehatan (RISFASKES) -2011</li> </ul>	Public expenditure on medicines in Indonesia was as low as 17% in 2011 which means that the majority (83%) was private out-of-pocket expenditure (2)
<b>Engaged industry</b>		
Does local industry produce a reliable supply of certain high-quality, low cost generics?	N/A	Indonesia is also highly dependent on imported pharmaceutical raw materials with a majority (90-100%) of active raw materials imported from India and China policies (2).This condition makes Indonesia highly vulnerable to factors such as exchange rate fluctuations and international trade.
Do risk-sharing strategies to provide access to selected high-cost medicines for selected patients achieve intended	N/A	

outcomes, and what are unintended ones?		
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## **Discussion & Conclusions**

When looking at the pharmaceutical policies of the Jamkesmas health insurance scheme, several aspects are important to note in this case study. Several pharmaceutical management strategies are incorporated into the Jamkesmas program, however, this is undermined by the underlying “supply-side constraints”. With low investments in health -- total health expenditure of 2.7% of GDP in 2011 (12) -- there are challenges for primary health facilities to provide adequate services to those in need. Increased health investments coupled with efficiency measures will need to be made if Indonesia wants to successfully achieve universal health coverage. In addition, the current incentive of increased patient volume (4) for private health facilities who participate in the Jamkesmas network provider does not seem realistic to increase overall private sector participation, which is necessary given the human resource constraints in Indonesia. Beyond the assurance that Jamkesmas beneficiaries will increase patient volume, there is no differentiation between the reimbursement rates of public versus private hospitals. If the actual costs of services is greater than the government DRG reimbursement rate, private hospitals have the potential to lose money when joining the Jamkesmas network. Suboptimal reimbursement rates seem to be a problem in both the public and the private sector. A potential consequence may be that private facilities will opt out of the scheme, however, the impact on public facilities is more implicit rationing and stock-outs.

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