USAID MEDICINES, TECHNOLOGIES, AND PHARMACEUTICAL SERVICES (MTaPS) PROGRAM

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Pharmaceutical Benefits and Benefits Packages in Asia: A Cross-Country Mapping of Coverage Arrangements

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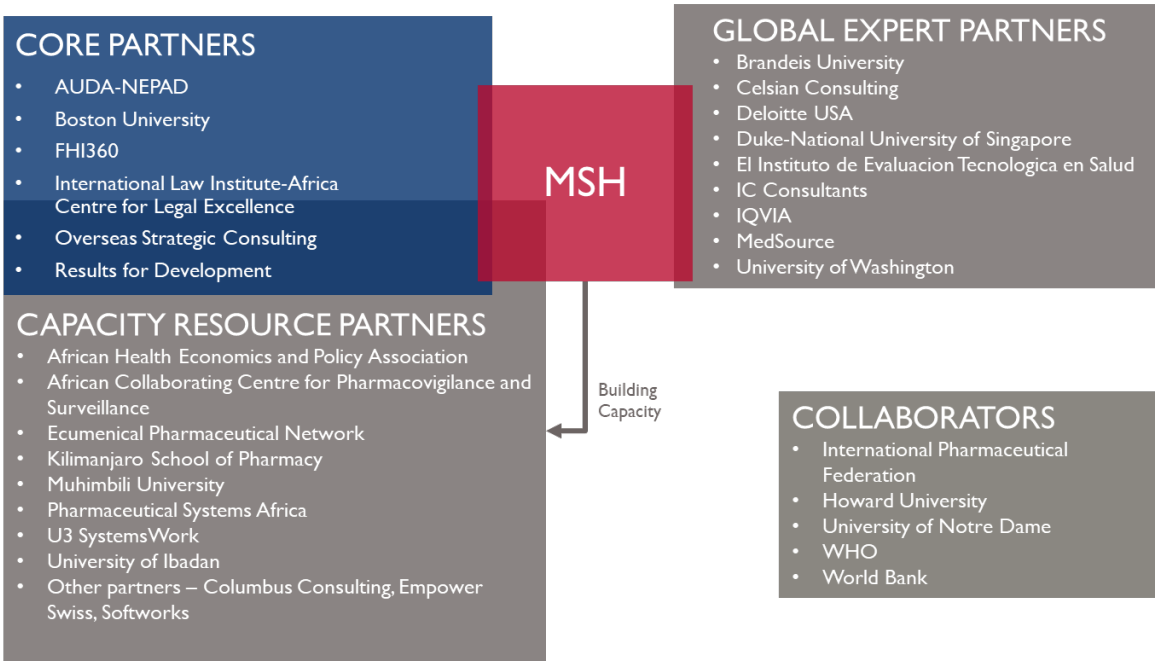
About the USAID MTaPS Program

The USAID Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program enables low- and middle-income countries to strengthen their pharmaceutical systems, which is pivotal to higher-performing health systems. MTaPS focuses on improving access to essential medical products and related services and on the appropriate use of medicines to ensure better health outcomes for all populations. The program brings expertise honed over decades of seminal pharmaceutical systems experience across more than 40 countries. The MTaPS approach builds sustainable gains in countries by including all actors in health care—government, civil society, the private sector, and academia. The program is implemented by a consortium of global and local partners and led by Management Sciences for Health (MSH), a global health nonprofit.

The MTaPS Consortium



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PROJECT SUMMARY

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	Global Expert Partners	Brandeis University, Deloitte USA, Duke-National University of Singapore, El Instituto de Evaluacion Technologica en Salud, IC Consultants, Imperial Health Sciences, MedSource, QuintilesIMS, University of Washington
	Capacity Resource Partners	African Health Economics and Policy Association, Ecumenical Pharmaceutical Network, U3 SystemsWork, University of Ibadan, University of Ghana's World Health Organizations (WHO) Pharmacovigilance Collaborating Center, Kilimanjaro School of Pharmacy, Muhimbili University, Pharmaceutical Systems Africa
	Collaborators	International Pharmaceutical Federation, Howard University, University of Notre Dame, WHO, World Bank

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Acronyms and Abbreviations

ATC	Anatomical Therapeutic Classification
CHE	current health expenditure
CSMBS	Civil Service Medical Benefits Scheme
DRG	diagnostic-related groups
EML	essential medicines list
HBP	health benefits package
HTA	health technology assessment
JKN	Jaminan Kesehatan Nasional
LMIC	low- and middle-income country
MTaPS	Medicines, Technologies, and Pharmaceutical Services
NF	national formulary
OOP	out of pocket
PMBJP	Pradhan Mantri Bhartiya Jan Aushadhi Pariyojana Kendra
PMJAY	Pradhan Mantri Jan Arogaya Yojana
PPP	purchasing power parity
SGBP	state guaranteed benefits package
SSK	Shasthyo Surokhsha Karmasuchi
SSO/SASS	Social Security Organization/State Authority for Social Security
SSS	Social Security Scheme
UCS	universal coverage scheme
UHC	universal health coverage
WHO	World Health Organization

Contents

1. Executive Summary

1.1 Background

Health benefit packages (HBPs) are instrumental in helping countries make informed resource allocations to provide health services that meet the needs of their populations and move toward universal health coverage (UHC). When designing HBPs and deciding which health services to include or exclude, governments must also decide on coverage of pharmaceuticals, including which ones to include or exclude. Historically, many low- and middle-income countries (LMICs) have created essential medicines or drugs lists (EMLs) to select medicines in the context of a given health burden while aiming to make effective and efficient use of resources available for pharmaceuticals. Pharmaceutical benefits packages should be systematically defined by considering the costs and benefits in relation to a country's disease burden and available financial resources. For this report, "pharmaceutical benefits package" is broadly defined as an explicit list of medicines and related commodities approved for use in specific health interventions for eligible beneficiaries, with a defined financing source and specified degree of patient cost-sharing (if any) at the point of use. Items in the package are eligible for prescribing, dispensing, and reimbursement using the funds pooled within the specified coverage scheme.

Over the last 10 to 20 years, some LMICs in Asia have developed health financing and coverage arrangements to provide financial risk protection to a large proportion of their populations. However, many in the region still lack financial risk protection, face financial barriers to accessing health care services, and experience high rates of catastrophic health expenditures (1). Most Asian countries have some form or multiple forms of HBPs. But stronger value-based resource allocation for pharmaceuticals is needed, as external financing for health declines and pharmaceutical expenditures continue to rise. Concurrently, there is a need to better understand if and how Asian countries define pharmaceutical benefits in relation to their HBP(s). Although the contents of HBPs are often well-documented, understanding how countries define pharmaceutical coverage, the ways in which governments and insurance schemes purchase drugs on behalf of the population, and the degree of patient cost-sharing for pharmaceuticals would provide an important evidence base at the regional level.

1.2 Objectives

The USAID Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program analyzed key coverage/financing arrangements from a selection of Asian countries to document and compare countries' definitions of HBPs and pharmaceutical benefits, including how medicines are included in provider payment mechanisms and the degree of patient cost-sharing.

1.3 Methodology

The analysis considered countries in the USAID Asia Region eligible for USAID global health assistance that had relevant research, analyses, and policy documents available publicly and in English, resulting in the inclusion of 14 countries: Bangladesh, Cambodia, India, Indonesia, Kyrgyzstan, Laos, Myanmar, Nepal, Papua New Guinea, Philippines, Tajikistan, Thailand, Timor-Leste, and Vietnam. The analysis team systematically analyzed country-specific data sources to document key characteristics of interest for each country. The team conducted comparative analyses to identify similarities and differences across countries, including relative levels of health expenditures and the breakdown of pharmaceutical spending by financing sources.

1.4 Findings

Across the 14 countries, the analysis team identified 24 different coverage/financing schemes for which more detailed analyses were conducted; 11 of 14 countries (79%) and 15 of 24 coverage arrangements (63%) defined some form of pharmaceutical benefits coverage. This mapping revealed four common approaches to how the countries and their respective coverage arrangements defined service and drug benefits:

- Defining covered services only and using an EML or national formulary (NF) as a guide to pharmaceutical procurement and distribution – 37% of coverage arrangements.
- Defining covered services and defining covered pharmaceutical benefits as any product medically indicated by accredited clinicians for those covered services (aligned with minimum service standards, as applicable) – 21% of coverage arrangements
- Defining covered services and using the NF or EML as the de facto explicit pharmaceutical benefits package – 21% of coverage arrangements
- Defining covered services and explicitly defining pharmaceutical benefits – 21% of coverage arrangements

Most arrangements covered health service benefits and pharmaceuticals for both outpatient and inpatient services; among the 24 coverage/financing arrangements analyzed, all but 2 covered a comprehensive set of outpatient and inpatient health services. The majority of countries defined pharmaceutical benefits in line with services covered under their HBP, whether this was an explicit benefits package for an insurance program or a list of essential services funded through the public health sector budget. Most of the analyzed countries defined both service and pharmaceutical benefits packages either by the type of service (i.e., promotive, preventive, curative) or by the location of service (i.e., outpatient, inpatient). Most used a positively defined list (what services or drugs are included), with some countries defining additional service exclusions (e.g., Indonesia, Laos, Thailand) or drug exclusions (e.g., Kyrgyzstan). Payment mechanisms for pharmaceuticals varied by country and by coverage/financing arrangement, and most countries did not officially mandate cost-sharing for pharmaceutical benefits, though data suggest continued reliance on out-of-pocket (OOP) pharmaceutical spending.

Private expenditures on pharmaceuticals remained the predominant financing source for total drug expenditures in analyzed countries (mean 72%, median 83%, range 9-90%). Despite the existence of financing arrangements that aim to provide access to a defined HBP and some degree of financial risk protection for pharmaceuticals, most spending on drugs in all but one country came from private sources, the majority of which is OOP spending. With the exception of Thailand and Timor-Leste, public spending on pharmaceuticals represented less than one-quarter of total pharmaceutical expenditures in the remaining 11 countries. For countries with coverage schemes that cover a large proportion of the population (e.g., Indonesia, Philippines, Vietnam) and define specific pharmaceutical benefits, most spending on drugs still came from private sources. For the Philippines, the limited range of outpatient drugs included in the benefits package likely contributed to this finding; however, Indonesia and Vietnam both defined separate and generous pharmaceutical benefits coverage but still had substantial private pharmaceutical spending. On average, higher per capita current health expenditures (CHEs) correlated with higher per capita expenditures on pharmaceuticals; however, there was not a clear pattern in the public share of pharmaceutical expenditures relative to total or pharmaceutical expenditures.

1.5 Conclusions

Across the 14 countries, there was considerable variability in the types of coverage/financing arrangements; many countries provided all or a substantial portion of a defined HBP through direct

budget support, while other countries guaranteed a set of explicit services through various health insurance schemes that covered all or some portion of a country's population. Most arrangements defined some form of pharmaceutical benefits coverage, though countries defined these benefits through four different approaches. Approximately one-third of the analyzed coverage arrangements (38%) relied on normative lists of pharmaceuticals—typically aligned with a broader package of health services—that led to implicit rationing of drugs and medical products from these lists. Other arrangements tended to either explicitly define drug benefits aligned with services included in a scheme's HBP or implicitly define them based on medically indicated drugs for services covered under the scheme's service benefits package; under both of these approaches, schemes used EMLs or formularies as the basis for the benefits. In sum, the use of explicitly defined pharmaceutical benefits packages that identify and quantify the use of drugs, create legal entitlements to that package, and outline financing arrangements for the included drugs is somewhat limited in Asia.

From a financing perspective, countries with health insurance-based financing schemes typically had higher levels of total per capita health expenditure and per capita expenditures on pharmaceuticals. However, pharmaceutical expenditure in only two countries—Thailand and Timor-Leste—came mainly from public sources, suggesting that private OOP spending represented the predominant financing source for drugs in the selected countries, despite the availability of some public financing for pharmaceutical benefits. Furthermore, countries with low per capita health spending typically had the highest proportion of pharmaceutical expenditures from private (OOP) sources. With these high levels of OOP drug spending, even in countries with coverage arrangements providing some financial protection, there is considerable concern for the continued risk of catastrophic payments. These findings suggest that further research is needed on consumer spending on pharmaceuticals, even where nominal publicly financed coverage is available, given continued challenges with ensuring drug availability in many countries and the growing role of the private sector in providing health care across the region.

Outputs from theses analyses could also be used to conduct deeper in-country analysis on the processes that countries employ to define their HBPs and their corresponding pharmaceutical benefits, including the use of evidence-based priority setting, the use of financing considerations in this priority setting, and the ways in which strategic purchasing could be strengthened to improve efficient use of available resources for pharmaceuticals. Such extensions of the analysis could provide further learning for countries within the region to understand the role that HBPs and pharmaceutical benefits play in moving countries in Asia toward UHC. The outputs of this analysis will also help MTaPS support capacity strengthening in Asia, as they indicate how costing methodologies can be adapted to different forms of pharmaceutical benefits packages.

2. Introduction

HBPs are instrumental in helping countries make informed resource allocations to provide health services that meet the needs of their populations and move toward UHC (2). HBPs can be defined broadly as the health services and products provided to a given population and covered by specific financing sources, whether through direct government provision of health services in the form of an essential package of services or through benefits defined under a specific coverage or insurance scheme, factoring in a country's broader health and economic context (3, 4). HBPs most often create some legal right for eligible beneficiaries to access the contents of the package (4). LMICs dedicated to achieving UHC must design HBPs that are comprehensive enough to meet the health needs of a population while making effective and efficient use of the resources available to the health sector (5). Although countries use different processes for defining their respective HBPs, well-designed HBPs should consider cost effectiveness, financial protection, and equitable access to services; they must also consider the benefits and tradeoffs among the health services and populations that HBPs cover, and the amount of cost

sharing from the covered populations (6). In many countries that have developed HBPs, there has been a shift from historical, implicit rationing of services (i.e., discretionary decisions made by policy makers, managers, and health care workers on how to allocate health services to an individual patient) to more explicit rationing (i.e., setting transparent rules and criteria on which services are accessible and by whom through a societal-wide decision-making process) (7) through HBPs. This shift has improved efficiency in spending health-sector resources while contributing to UHC coverage goals (4, 8).

When designing HBPs and deciding which health services to include or exclude, governments must also make the same kinds of decisions about pharmaceuticals. Historically, many LMICs have created EMLs to strategically select essential medicines in the context of a given health burden and make effective and efficient use of resources available for pharmaceuticals. Most countries have used the World Health Organization (WHO) Model List of Essential Medicines (revised every two years) as a guide for creating EMLs that are effective in treating a broad range of population needs (9). Practically, EMLs set standards for which drugs should be prioritized for procurement and available to countries' populations through service delivery systems. EMLs alone do not confer legal entitlements to a package of pharmaceutical benefits to a specific eligible population. In practice, the availability of drugs on EMLs varies for many reasons; countries may not procure drugs on the EML and choose instead to procure ones not on the EML, which can limit the effective coverage of drugs. They may simply run out of funding partway through the fiscal year. Ultimately, implicit rationing does not guarantee the same level of population-level effective coverage that more explicit HBPs can (4).

In addition to EMLs, there is a need to more systematically define pharmaceutical benefits that create legal entitlements for eligible populations. Covered pharmaceuticals may sometimes be detailed under a broader health service benefits package or may be defined in a separate pharmaceutical benefits package. For the purposes of this report, "pharmaceutical benefits package" is broadly defined as an explicit list of medicines and related commodities approved for use in specific health interventions for eligible beneficiaries, with a defined financing source and specified degree of patient cost-sharing (if any) at the point of use. Items in the package are eligible for prescribing, dispensing, and reimbursement using the funds pooled within the specified coverage scheme.

Although high-income countries with national and social health insurance schemes have a history of defining explicit pharmaceutical benefits packages as part of their HBPs (10), this practice is less common in LMICs, which tend to use EMLs to guide which medicines to procure and provide using public funds (1). With pharmaceutical spending growing faster than other types of health spending (e.g., human resources, information systems, etc.) (5, 11, 12), LMICs must be increasingly strategic in allocating resources; HBPs and related pharmaceutical benefits packages offer opportunities to control cost escalation, minimize financial risk, and improve health outcomes (5).

2.1 Pharmaceutical benefits coverage in the Asian region

Over the last 10 to 20 years, some LMICs in Asia have developed health financing and coverage arrangements to provide financial risk protection to a large proportion of their populations. However, many in the region still lack financial risk protection, face financial barriers to accessing health care services, and experience high rates of catastrophic health expenditures (1). As of 2015, an estimated 14.9% (up from 13.4% in 2010) of the population in Asian countries reported spending more than 10% of household income on health care-related costs (a common threshold for catastrophic OOP expenditure), and 3.6% (up from 3.2% in 2010) of the population have reported spending more than 25% of household incomes on health care-related costs); these estimates are above global averages of 12.7% and 2.9%, respectively (13). This degree of catastrophic health spending is especially evident in countries whose HBPs cover fewer services and focus primarily on inpatient services. Paying OOP for outpatient

care—along with high household expenditures on pharmaceuticals—often results in financial burden and catastrophic expenditures (13).

Most Asian countries have some form or multiple forms of HBPs. But stronger value-based resource allocation for pharmaceuticals is needed, as external financing for health declines and pharmaceutical expenditures continue to rise. Concurrently, there is a need to better understand if and how Asian countries define pharmaceutical benefits in relation to their HBP(s). Although the contents of HBPs are often well-documented, understanding how countries define pharmaceutical coverage, the ways in which governments and insurance schemes purchase drugs on behalf of the population, and the degree of patient cost-sharing for pharmaceuticals would provide an important evidence base at the regional level.

3. Rationale and Objectives

Given the need to document the extent to which Asian countries have well-defined pharmaceutical benefits, the USAID MTaPS Program conducted an analysis to:

- Analyze key coverage/financing arrangements from a selection of Asian countries to document and comparatively analyze countries' definitions of HBPs and pharmaceutical benefits, including how medicines are included in provider payment mechanisms and the degree of patient cost-sharing

- For countries that use an EML or equivalent as key guidance for pharmaceutical coverage, analyze the content of the EMLs and compare against the WHO 2019 Model EML.

By using these findings, key trends from both analyses are documented to identify possible areas for regional learning and further analysis.

4. Methodology

4.1 Country Selection

The analysis considered countries in the USAID Asia Region eligible for USAID global health assistance that had relevant research, analyses, and policy documents available publicly and in English; this resulted in the inclusion of 14 countries: Bangladesh, Cambodia, India, Indonesia, Kyrgyzstan, Laos, Myanmar, Nepal, Papua New Guinea, Philippines, Tajikistan, Thailand, Timor-Leste, and Vietnam. Countries excluded for the aforementioned reasons included Kazakhstan and Uzbekistan.

4.2 Analysis Team

The analysis team was led by one expert in health financing, who provided overall technical direction and analytical oversight, and served as the primary author of this report. Two research assistants supported data collection and synthesis across the different analysis components. A team of four senior experts in pharmaceutical systems and health financing served as technical reviewers throughout the data collection, analysis, and synthesis phases.

4.3 Data Sources

For included countries, the analysis team collected publicly available documents, which included peer-reviewed published literature, gray literature, and relevant health-sector policy documents. The analysis also collected data on CHEs from the WHO's Global Health Expenditure Database and data on the

breakdown of sources of pharmaceutical spending from a variety of WHO resources. For the EML analysis, a 2019 published analysis by Persaud et al. compared the contents of 137 countries' EMLs or formularies (whichever served as the nationally guiding document) against the 2017 WHO Model EML and made their dataset publicly available (14).[1] The team used this dataset as a basis for analysis and added countries that had more recently and publicly available EMLs or formularies in English.

4.4 Analysis of HBPs and Pharmaceutical Benefits

The analysis team systematically analyzed country-specific data sources to document key characteristics of interest for each country. First, the team documented the major coverage/financing arrangements and covered populations in each country. Next, they detailed the contents of these schemes' service benefits using broad categories based on the country's definitions (e.g., promotive, preventive, curative, emergency; primary, secondary, tertiary; or outpatient and inpatient). Third, the team detailed if and how a country defined pharmaceutical benefits for each coverage/financing arrangement. Although the analysis team did not define a categorization scheme a priori, the analysis team observed patterns in how different schemes defined pharmaceutical benefits. Based on these observations, as well as a review of literature on benefits package design (4, 6, 7, 8), the analysts delineated four mutually exclusive categories for defining pharmaceutical benefits coverage. The categories represent increasingly explicit definition of pharmaceutical coverage in relation to overall service coverage. The categories were:

- Defining covered services only and using an EML or NF as a guide to pharmaceutical procurement and distribution
- Defining covered services and defining covered pharmaceutical benefits as any product medically indicated by accredited clinicians for those covered services (aligned with minimum service standards, as applicable)
- Defining covered services and using the NF or EML as the de facto explicit pharmaceutical benefits package
- Defining covered services and explicitly defining pharmaceutical benefits

Following the categorization, the analysis team calculated the proportion of schemes in each defined category.

Fourth, the team described if and how pharmaceuticals were included in public provider payment mechanisms used by each coverage/financing scheme and the degree of any patient cost-sharing for pharmaceuticals. Finally, the team conducted comparative analyses to identify similarities and differences across countries, including relative levels of health expenditures and the breakdown of pharmaceutical spending by financing sources.

4.5 Analysis of EMLs/Formularies

Given the prominence of EMLs and limited use of explicit pharmaceutical benefits packages in the countries, the analysis team used publicly available EMLs or formularies, whichever was applicable for a specific country, to systematically code their contents in line with the protocol defined by Persaud et al. (14). The team also used the more recent 2019 WHO Model EML as a comparator to provide a benchmark of existing EMLs/formularies against the most recent WHO Model EML available, allowing

[1] The Persaud et al. analysis used EMLs, formularies, or standard treatment guidelines (whichever served as the guiding national document) available through the WHO Essential Medicines website.

for an updated comparison against the most recent WHO recommendations. The team then analyzed a subset of this data for the included countries to measure the degree of similarity of the EMLs/ formularies to the 2019 WHO Model EML and the breakdown of a country's EMLs/formularies by the primary use of drugs defined categorically by communicable, non-communicable, and other conditions classifications. These categories were defined using WHO's Anatomical Therapeutic Classification (ATC) codes as outlined in the Persaud et al. methodology. The data was then examined to identify trends across countries (findings are presented in annex A).

5. FINDINGS

Across the 14 included countries, the analysis team identified 24 different coverage/financing schemes for which more detailed analyses were conducted; some schemes that covered small portions of the population were not included in the analysis (e.g., small-scale, community-based health insurance schemes). Table 1 presents the detailed findings across the included countries and schemes.

Table 1: Summary of service and pharmaceutical benefits in selected Asian countries, by coverage/financing scheme

Country	Coverage arrangement	Covered population	Service coverage	Pharm coverage	Pharm. Payment mechanisms	Pharm. cost sharing
Bangladesh	Government health budget	All	Essential service package for outpatient services	EMLs	Line-item budget	No
	SSK health insurance pilot	People below poverty line within 3 pilot upazilas	Inpatient services defined by 70 disease groups	Inpatient drugs included in disease groups	Included in case-based payment	No
Cambodia	Government health budget	All	Minimum/complementary package of activities provided at health centers and referral hospitals, respectively; includes promotion, prevention, diagnosis, treatment, and rehabilitation services	EMLs	Line-item budget	No
	Health Equity Funds	Exempted poor and vulnerable		EMLs	Line-item budget	No
	National Social Security Fund	Private formal sector	Scheme-defined benefits package including select prevention, outpatient, and inpatient services	Prescribed medicines under service benefits package	Included in case-based payment for outpatient and inpatient	No
India	PMJAY National Health Protection Scheme	Population in lowest two wealth quintiles identified by socio-economic caste census	Secondary and tertiary-level services up to annual per family cap (INR 500,000); does not cover outpatient services	Medicines included under the 1,350 medical packages defined under the service coverage benefits	Varies based on state-level model but currently relies on fee-for-service mechanisms as part of medical package payments	No (unless exceed annual benefits cap)
	Employee's State Insurance Scheme	Formal sector employees in 10+ employee organizations	Outpatient, domiciliary treatment, specialist, inpatient, imaging, laboratory, ambulance	Prescribed medicines under service benefits package	Included in global budgets to public hospitals and fee-for-service in empaneled private hospitals	No

Table 1: Summary of service and pharmaceutical benefits in selected Asian countries, by coverage/financing scheme

Country	Coverage arrangement	Covered population	Service coverage	Pharm coverage	Pharm. Payment mechanisms	Pharm. cost sharing
	Central Government Health Scheme	Civil servants	Inpatient, outpatient, emergency, specialist, diagnostic	Based on scheme-defined NF available in approved dispensaries	Public facilities: global budgets Private facilities: case-based payment	No
India	National Health Mission Free Drugs and Diagnostics Service Initiative (government health budget)	All	Primary and secondary services available in public health facilities (including wellness centers) as defined under public health guidelines for National Rural Health Mission and National Urban Health Mission	Based on EMLs, which can vary by state given variability in existence of standard treatment guidelines at state level; linked with PMBJP government-subsidized scheme to independent stores to increase access to generic medicines	Line-item budget	No
Indonesia	National Health Insurance (JKN)	All	Scheme-defined benefits package based on medical conditions covering outpatient and inpatient care; excludes some high-cost services	Drugs listed on NF	Outpatient: Included in capitation Inpatient: Included in case-based payment	No
Kyrgyzstan	Mandatory Health Insurance fund	All	SGBP for primary, secondary, tertiary, and emergency services provided free of charge with some specialized care requiring additional cost sharing	SGBP covers drugs for only four conditions (bronchial asthma, terminal cancer, mental disorders, and epilepsy)	Outpatient: capitation Inpatient: case-based payment	No; drug benefits for inpatient stay may be capped
				Additional drug package covers expanded set of generic and tradename drugs for select outpatient and inpatient services	Outpatient: Capitation Inpatient: Case-based payment	50% of service tariff for drugs
Laos	National Health Insurance	All except private formal and civil servants	All outpatient and inpatient services except traffic accidents, malaria, TB, HIV/AIDS	EMLs	Outpatient: Capitation Inpatient: case-based payments	Lump sum co-payment for non-poor informal sector
	SSO/SASS	Private formal sector and civil servants	Scheme-defined benefits package covering outpatient and inpatient services with exclusions for certain services and programs	Prescribed medicines under service benefits package	Inclusive capitation for outpatient and inpatient	For six high-cost risk-adjusted conditions

Table 1: Summary of service and pharmaceutical benefits in selected Asian countries, by coverage/financing scheme

Country	Coverage arrangement	Covered population	Service coverage	Pharm coverage	Pharm. Payment mechanisms	Pharm. cost sharing
			provided directly by the Ministry of Health (e.g., immunization, TB)			
Myanmar	Government health budget	All	Essential Package of Health Services focused on primary care services at community levels and goals to expand to other levels of care	National EMLs	Line-item budget	No
Nepal	Free Healthcare Programme	All	Explicit list of benefits for primary, secondary, and tertiary services; maternal care provided through separate program	National EMLs	Line-item budget	No
	National Health Insurance	All within 22 initial districts	Scheme-defined benefits package, including promotive, preventive, curative, and rehabilitative services up to annual household benefit ceiling; also excludes specific list of services	Prescribed medicines under service benefits package and select ayurvedic treatments	Outpatient: Case-based payment inclusive of drug costs Inpatient: Mix of DRG and fee-for-service depending on service	No, unless beneficiary exceeds benefit ceiling
Papua New Guinea	Government health budget	All	National Policy on Free Primary Health Care and Subsidized Specialized Care outlines set of outpatient and inpatient services	National Policy on Free Primary Health Care and Subsidized Specialized Care includes primary care drugs for free	Line-item budget	None at primary-care level; some user fees for select inpatient services
Philippines	PhilHealth	All	Scheme-defined benefits package that includes inpatient and explicit list of outpatient services with varying benefits per enrollee categories; basic primary care benefits for indigent/sponsored members/ overseas workers/organized groups and an expanded primary care benefit for formal sector, lifetime members, and senior citizens	Inpatient services and select outpatient services (day surgery, radiotherapy, hemodialysis, blood transfusion) include all drugs Primary care benefits define explicit but limited list of drugs covered	Inpatient: Case-based payment Outpatient: Fee-for-service	None for inpatient and select outpatient services Drugs not under primary care benefits are paid for OOP
Tajikistan	Basic Benefits Package	All	Explicit list of emergency, primary, secondary, tertiary, laboratory, and dental	EML	Line-item budget	Co-payments defined for each service

Table 1: Summary of service and pharmaceutical benefits in selected Asian countries, by coverage/financing scheme						
Country	**Coverage arrangement**	**Covered population**	**Service coverage**	**Pharm coverage**	**Pharm. Payment mechanisms**	**Pharm. cost sharing**
			services with different coverage levels defined by social status or by health indications/disease groups			and population group, range from 50-100%
Timor-Leste	Government health budget	All	Basic package of health services defined under National Health Strategic Plan 2011-2030 by minimum services to be provided at all system levels, from community to national referral hospital	EMLs	Line-item budget	No
Thailand	CSMBS	Civil servants	UCS benefits package plus additional inpatient services at public hospitals	National EML plus provider-indicated drugs outside of list	Outpatient: Fee-for-service Inpatient: DRG	No
	Social Security Scheme (SSS)	Private formal sector	Scheme-defined benefits package inclusive of preventive and curative services across care levels with minimal exclusion list for select high-cost services	National EML	Inclusive capitation for outpatient and inpatient services	No
	UCS	All not covered by CSMBS or SSS	Scheme-defined benefits package inclusive of promotive, preventive, curative, and rehabilitative services across all care levels	National EML	Outpatient: Capitation Inpatient: DRG with global budgets	No
Vietnam	Vietnam Social Security	All	Scheme-defined benefits package, including primary, secondary, and tertiary services	Health Insurance Medicines List	Outpatient: Capitation Inpatient: Fee for service with DRG pilots	No

Sources: Please refer to reference list for country-specific sources.

Key findings from the comparative analysis include the following.

MOST HEALTH COVERAGE ARRANGEMENTS DEFINE SOME PHARMACEUTICAL BENEFITS COVERAGE, ALTHOUGH THERE IS SUBSTANTIAL VARIATION IN HOW COUNTRIES APPROACH THE DEFINITION OF THESE BENEFITS.

Across the countries and coverage arrangements, 11 of 14 countries (79%) and 15 of 24 coverage arrangements (63%) define some form of pharmaceutical benefits coverage. We identified the following categories of how the analyzed coverage arrangements defined pharmaceutical benefits.

- Defining covered services only and using an EML or NF as a guide to pharmaceutical procurement and distribution

    - Nine coverage arrangements (37%) define only explicit service benefits and use an EML to guide pharmaceutical procurement and distribution priorities; these seven coverage arrangements are examples of direct budget support to public sector providers/facilities (Bangladesh, Cambodia [two arrangements], India (National Health Mission Free Drugs and Diagnostics Service Initiative), Myanmar, Nepal, Papua New Guinea, Tajikistan, Timor-Leste).

- Defining covered services and defining covered pharmaceutical benefits as any product medically indicated by accredited clinicians for included services

    - Five coverage arrangements (21%) employ this method, including Bangladesh's Shasthyo Surokhsha Karmasuchi (SSK) pilot health insurance scheme, Cambodia's National Social Security Fund scheme, India's Employee's State Insurance Scheme, Laos' Social Security Organization/State Authority for Social Security (SSO/SASS) scheme, and Nepal's National Health Insurance scheme.

- Defining covered services and using the NF or EML as the de facto explicit pharmaceutical benefits package

    - Five of the 24 coverage arrangements (21%) employ this approach. Indonesia and Thailand, two countries with high-population-coverage health insurance schemes, define explicit service benefit packages but define pharmaceutical benefits as any prescribed drugs and/or supplies from their NF or EML, respectively, not a separate explicitly defined pharmaceutical benefits package.
    - Given the rigor with which Thailand uses health technology assessment (HTA) to define its service benefits and the EML for its three schemes (15), this EML effectively functions as a de facto explicit pharmaceutical benefits package across its three schemes.
    - Similarly, Indonesia employs a priority setting process for determining service benefits under its national health insurance scheme, Jaminan Kesehatan Nasional (JKN) (16). The NF also defines specific criteria for drug selection, including scientifically validated efficacy/safety, high benefit-cost ratio, and a beneficial benefit-risk ratio to most patients (17). By policy, the process for updating the NF also requires the use of HTA; however, there have been challenges in meaningful implementation of the HTA process in the formulary updating process (18) (box 1). Although less rigorous in practice than Thailand's processes, the use of these mechanisms suggest that Indonesia's NF functions as a de facto pharmaceutical benefits package for JKN.
    - Laos' National Health Insurance also employs a similar method for defining de facto drug benefits through a service benefits package linked to its EML; however, its use of HTA and similar priority-setting processes is less advanced than those of Indonesia and Thailand (19, 20).

Box 1: Drug benefits under Indonesia's JKN national health insurance scheme

Indonesia's national health insurance scheme, JKN, has covered nearly 83% of the 221 million population since the consolidation of disparate health insurance schemes into a unified scheme in 2014 (16). The mandatory scheme targets and covers the poor, near-poor, formal public sector, private sector, and the informal sector with different subsidization and contribution rates depending on the membership segment (16). JKN's service benefits package is a negative list that includes promotive, preventive, curative, and rehabilitative services, as well as medically indicated pharmaceuticals, supplies, and tests, for all services unless explicitly excluded (e.g., cosmetic surgery, orthodontia); it also excludes services for which a patient does not adhere to procedures for accessing care (e.g., accessing care for primary services at a higher-level facility). Some infectious disease services are not covered by JKN but are provided through vertical programs, such as tuberculosis and HIV/AIDS; these benefits are available to all beneficiaries, regardless of contribution/subsidization status (16).

JKN's pharmaceutical benefits are based on an NF (Formularium Nasional or FORNAS). Created in 2013, FORNAS is designed to align with JKN's larger service benefits package and articulates a process for evidence-based priority setting and the use of HTA to inform its development (17). However, there have been challenges in fully implementing the HTA process in recent FORNAS updating processes (18). Effectively, FORNAS does not function as a separate and explicitly defined pharmaceutical benefits package, but as a de facto set of drug benefits aligned with JKN's service benefits package.

The development of FORNAS in 2013 was, in part, to control cost escalation and the quality, transparency, and efficiency of the government's drug procurement process. In practice, there have been challenges in implementing drug tender processes that ensure a consistent availability of essential commodities, resulting in stock-outs, drug rationing, and patients seeking and paying for drugs in the private sector (16, 21). Even with high levels of population coverage, OOP spending remains the predominant source of private health spending as of 2018. Furthermore, 79% of pharmaceutical spending comes from private sources (22), suggesting that JKN members—despite having a de facto drug benefits package—continue to pay OOP for some drugs. Although research on the JKN scheme has shown some degree of increased financial protection and increased service utilization among contributing and non-contributing members (23), OOP expenditures continue to be a large source of health expenditure and are inequitably distributed across Indonesia's regions (24). Furthermore, there are continued concerns about the scheme's longer-term financial sustainability to provide benefits that meet the needs of the Indonesian population. There is recognition that improvements in benefit-setting processes to better examine and prioritize cost-effective services and pharmaceuticals could contribute to this longer-term financial sustainability (16).

- Defining covered services and explicitly defining pharmaceutical benefits package
    - Five of the 24 analyzed coverage arrangements (21%) had a separate and explicitly defined pharmaceutical benefits package. The Philippines' PhilHealth outlines explicit drug benefits for primary care services (box 2), India's Central Government Health Scheme for civil servants define a specific set of drug benefits aligned with its service package, and the Pradhan Mantri Jan Arogaya Yojana (PMJAY) National Health Protection Scheme's service benefits packages explicitly define covered medicines for each of its included services (though there may be variation in this package at the state level). Kyrgyzstan defined a specific supplemental Additional Drug Package for its State Guaranteed Benefits Package (SGBP) under its Mandatory Health Insurance Fund, and Vietnam defines a large list of reimbursable pharmaceuticals—larger than its EML—available to beneficiaries under its Social Security Scheme.

Box 2: Primary care drug benefits in the Philippines' PhilHealth health insurance scheme

PhilHealth, a public purchaser attached to the Department of Health, is responsible for implementing the Philippines national health insurance scheme, including defining benefits, negotiating prices, and paying providers. PhilHealth provides coverage to both informal and formal members of the economy, indigent populations, overseas Filipinos, sponsored program members, senior citizens, and retirees (25). In 2018, it covered 94% of the population, approximately 106 million people (26).

Benefits are determined by the PhilHealth Board, which is composed of service providers, the Department of Health, government agencies, and other members with interest in health insurance (25). Decisions on benefits have historically been based on considerations of financial sustainability rather than population need (25). PhilHealth's benefits package includes inpatient services (including all prescribed drugs during an inpatient stay) and an explicit list of outpatient services (day surgeries, radiotherapies, hemodialysis, outpatient blood transfusion, and primary care) with varying primary care benefits per enrollee categories. Basic primary care benefits are guaranteed for indigent, sponsored members, overseas workers, organized groups, and an expanded primary care benefit is offered to formal sector, lifetime members, and senior citizens (27). Both tiers of primary care benefits define the facility levels at which they are available, covered conditions, and explicit diagnostic and drug benefits (table 2) (27).

Table 2: Drug benefits under PhilHealth's primary care benefit tiers

Primary care benefit	Expanded primary care benefit	
1. Inhaled corticosteroids (fluticasone) 2. Short-acting beta 2 agonists/inhalation solution or metered dose inhaler (salbutamol) 3. Oral or systemic corticosteroids (prednisone) 4. Oral rehydration salts 5. Amoxicillin 6. Macrolide (erythromycin) 7. Beta lactams with beta lactamase inhibitors (cephalexin) 8. 2nd generation cephalosporins (cefuroxime) 9. Oral fluoroquinolones (ofloxacin) 10. Co-trimoxazole	1. Amoxicillin 2. Co-amoxiclav (amoxicillin + potassium clavulanate) 3. Co-trimoxazole (sulfamethoxazole + trimethoprim) 4. Erythromycin 5. Fluticasone + salmeterol 6. Ofloxacin 7. Oral rehydration salts 8. Prednisone 9. Salbutamol (as sulfate) + ipratropium bromide	10. Salbutamol 11. Paracetamol 12. Simvastatin 13. Gliclazide 14. Metformin hydrochloride 15. Enalapril 16. Metoprolol 17. Amlodipine 18. Hydrochlorothiazide + losartan

While the Philippine NF, which is used as general guidance for the reimbursement of drugs to public and private providers through PhilHealth, includes a more expansive set of drugs for conditions treated at the outpatient level, the lack of adequate drug benefits coverage for primary care services has contributed to substantial OOP spending among beneficiaries (28). Coupled with challenges in drug availability in public facilities and high drug prices (25), estimates suggest that the overall high proportion of private spending on drugs contributes to high rates of catastrophic health expenditures among some beneficiary groups (28). Although the high proportion of private spending on drugs for primary care in the Philippines is similar to primary care drug expenditure trends in other middle-income countries with similar coverage schemes (29), further refinement of PhilHealth's primary care drug benefits to reduce OOP spending could help accelerate the Philippines on its path toward UHC (30).

MOST COUNTRIES COVER HEALTH SERVICE BENEFITS AND PHARMACEUTICALS FOR BOTH OUTPATIENT AND INPATIENT SERVICES.

Among the 24 coverage/financing arrangements analyzed, all but two cover a comprehensive set of outpatient and inpatient health services; Bangladesh's SSK pilot health insurance scheme only covers inpatient services and India's PMJAY schemes only cover secondary and tertiary services for eligible populations. However, there is greater variation in the degree of pharmaceutical benefits coverage across outpatient and inpatient services among countries that define explicit pharmaceutical benefits. For example, the Philippines' national health insurance scheme, PhilHealth, provides only a limited range of outpatient drugs as part of its benefit package but provides a more extensive set of inpatient drugs (box 2). Kyrgyzstan's SGBP initially only covered pharmaceuticals for a small set of outpatient and inpatient health conditions. Later, Kyrgyzstan created a separate Additional Drug Package for enrollees of

Kyrgyzstan's Mandatory Health Insurance Fund (the purchaser of the SGBP) which provides more comprehensive outpatient drug benefits, primarily for non-communicable diseases (31).

THE CONTENTS OF PHARMACEUTICAL BENEFIT PACKAGES DIFFER ACROSS COUNTRIES AND BY FINANCING SCHEMES WITHIN A GIVEN COUNTRY.

The majority of countries define pharmaceutical benefits in line with services covered under their HBP, whether this is an explicit benefits package for an insurance program or a list of essential services funded through the public health sector budget. Most of the countries define both service and pharmaceutical benefits packages either by the type of service (i.e., promotive, preventive, curative) or by the location (i.e., outpatient, inpatient). Most use a positively defined list (what services or drugs are included), with some countries defining additional service exclusions (e.g., Indonesia, Laos, Thailand) or drug exclusions (e.g., Kyrgyzstan). One scheme in Thailand allows for more generous pharmaceutical benefits than what is outlined in an existing list; those covered by Thailand's Civil Servants Medical Benefits Scheme can receive medicines outside of Thailand's national EML (which is the basis for pharmaceutical benefits across its three coverage/financing schemes) should an accredited provider prescribe a drug outside of the list.

PAYMENT MECHANISMS FOR PHARMACEUTICALS VARY BY COUNTRY AND BY COVERAGE/FINANCING ARRANGEMENT.

For countries that directly pay for an essential package of services through the government budget (e.g., Bangladesh, Cambodia, India's National Health Mission Free Drugs and Diagnostics Service Initiative, Myanmar, Nepal, Papua New Guinea, Tajikistan, Timor-Leste), pharmaceuticals are paid for by direct line-item budget support, including direct procurement and distribution of pharmaceuticals to public providers through public supply chains. For all countries with health insurance schemes, pharmaceuticals are paid for via the usual provider payment arrangements. For outpatient services, the most common payment mechanisms are capitation, fee for service, or case-based payments; for inpatient services, the most common are case-based payments, such as diagnostic-related groups (DRGs), that include the costs of pharmaceuticals.

MOST COUNTRIES DO NOT OFFICIALLY MANDATE COST-SHARING FOR PHARMACEUTICAL BENEFITS, THOUGH DATA SUGGEST CONTINUED RELIANCE ON OOP PHARMACEUTICAL SPENDING.

Of the 24 coverage arrangements, only 6 require some level of cost sharing for included pharmaceutical benefits. Four of these six schemes are health insurance schemes (Kyrgyzstan's Additional Drug Package under its Mandatory Health Insurance Fund, Laos' two health insurance schemes, and PhilHealth); cost sharing is typically only required of certain eligible beneficiaries (e.g., non-poor informal sector under Laos' National Health Insurance scheme) or for certain services (e.g., drugs for primary care services under PhilHealth). The other two arrangements that require cost sharing are publicly financed packages of essential health services that require user fees for certain services. Two additional health insurance schemes state that cost sharing can be required should a patient exceed a particular benefits cap (Kyrgyzstan's SGBP under its Mandatory Health Insurance Fund and Nepal's National Health Insurance scheme).

Among those schemes that require it, there was variation in the degree of cost sharing. In Tajikistan, for example, patients must cover 50-100% of the costs of prescribed medicines under their basic benefits package. Under Laos's coverage scheme that covers the formal private sector and civil servants, enrollees are only required to contribute to the cost of drugs for a list of defined high-cost services. However, evidence from reviewed resources across multiple countries suggests that shortages of pharmaceuticals in public facilities/dispensaries remain a persistent challenge and lead to substantial OOP expenditures by patients who purchase drugs in the private sector. This observation was particularly

relevant for countries without large-scale risk-pooling arrangements (e.g., Bangladesh, Cambodia, Myanmar, Timor-Leste) (32–35).

PRIVATE EXPENDITURES ON PHARMACEUTICALS REMAIN THE PREDOMINANT FINANCING SOURCE FOR DRUGS IN ANALYZED COUNTRIES.

Despite the existence of financing arrangements that aim to provide access to a defined HBP and some degree of financial risk protection for pharmaceuticals, the majority of spending on drugs in all but one analyzed country comes from private sources, the majority of which is OOP spending (table 3).[2] With the exception of Timor-Leste and Thailand, public spending on pharmaceuticals represents less than one-quarter of total pharmaceutical expenditures in the remaining eleven countries (table 3). For countries with coverage schemes that cover a large proportion of the population (e.g., Indonesia, Philippines, Vietnam) and define specific pharmaceutical benefits, most spending on drugs still comes from private sources. For the Philippines, the limited range of outpatient drugs included in the benefits package likely contributes to this finding; however, Indonesia and Vietnam both define separate and generous pharmaceutical benefits coverage but still have substantial private pharmaceutical spending. On average, higher per capita CHEs correlate with higher per capita expenditures on pharmaceuticals; however, there was not a clear pattern in the public share of pharmaceutical expenditures relative to total or pharmaceutical expenditures (figure 1).

Table 3: Pharmaceutical spending as proportion of CHE and breakdown of pharmaceutical expenditure by public and private sources

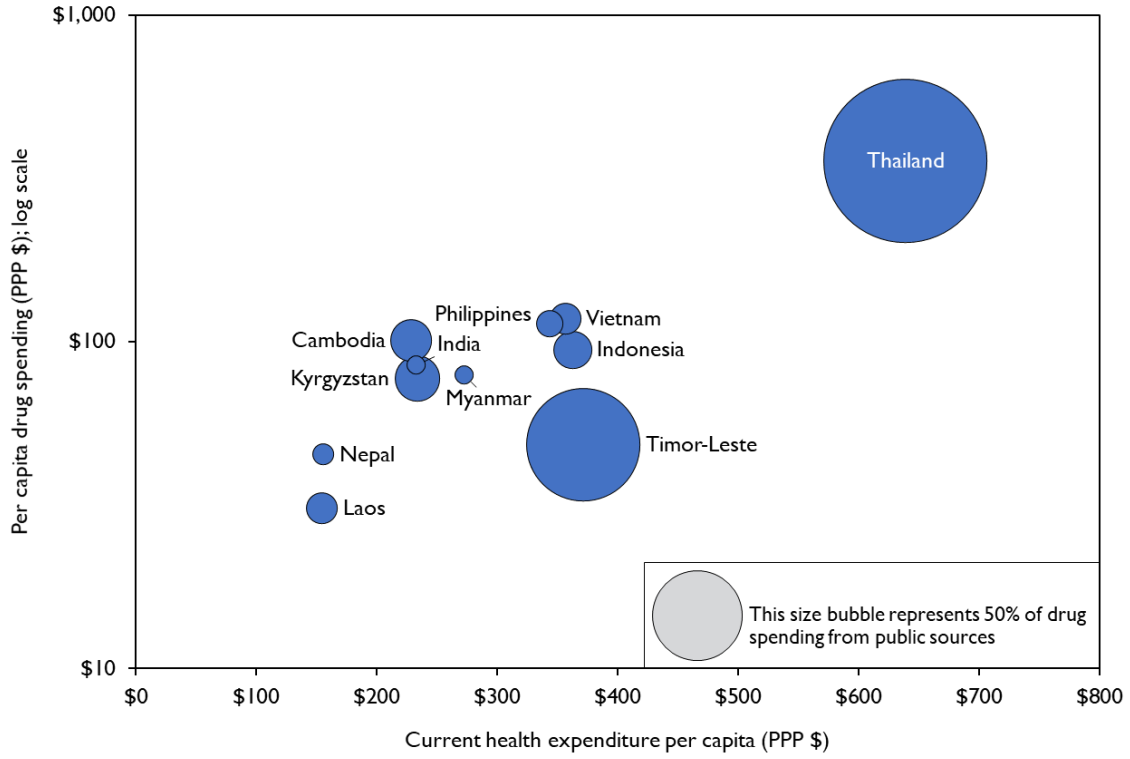
Country	CHE per capital 2016 (PPP $)*	Pharm. Spending (% of CHE)	% of pharm. Spending from public sources	% of pharm. Spending from private† or OOP‡ sources‡
Bangladesh	$89	45%	N/A	N/A
Cambodia	$229	44%	23%	77%†
India	$233	35%	10%	90%‡
Indonesia	$363	26%	21%	79%‡
Kyrgyzstan (2011)	$234	33%	25%	75%‡
Laos	$155	20%	17%	83%†
Myanmar	$273	29%	6%	94%‡
Nepal	$156	29%	12%	88%‡
Papua New Guinea	$104	N/A	N/A	N/A
Philippines	$344	33%	15%	85%†

[2] Based on recent data from the Global Health Expenditure Database, the source of the majority of domestic private expenditures is household OOP spending in all the analyzed countries with the exception of Thailand (where OOP spending is 48% of domestic private spending). Furthermore, in all countries, OOP spending was a larger source of CHE compared to external sources.

Tajikistan	$209	N/A	N/A	N/A
Timor-Leste	$372	13%	63%	37%‡
Thailand	$639	56%	91%	9%‡
Vietnam	$357	33%	17%	83%†

Note: Drug spending breakdowns based on 2014-2016 data unless otherwise noted
* PPP = purchasing power parity; N/A = not available
† Further disaggregation of private sources was not available for countries marked with (†); however, given the composition of overall health expenditures in the analyzed countries, most private sources are likely from household OOP spending in those countries that report an aggregate private spending percentage.
‡ Quoted figured represents the percentage of pharmaceutical spending from OOP sources only.
Sources: CHE per capita: Global Health Expenditure Database; Pharmaceutical spending: WHO Pharmaceutical Profiles 2019 and OECD & WHO 2018.

Figure 1: Per capita pharmaceutical expenditure versus per capita CHE, and relative proportion of pharmaceutical expenditures from public sources (represented by size of bubbles)



Note: y-axis used on logarithmic scale to adjust for Thailand's outlying per capita drug spending.

LIMITATIONS OF ANALYSIS

Given the comparative nature of the study, the analysis team did not conduct an in-depth analysis of available data on the degree to which OOP spending on pharmaceuticals contributes to the prevalence of catastrophic or impoverishing expenditures. Similarly, although the analysis revealed that a majority of analyzed countries do not mandate cost sharing for pharmaceuticals prescribed through public providers, the analysis did not investigate the availability of commodities in public facilities—often

resulting in patients purchasing drugs OOP through private providers—beyond basic facts provided in the reviewed resources.

6. Discussion and Conclusions

This analysis sought to document the extent to which Asian countries have well-defined pharmaceutical benefits packages and the range of modalities by which the selected countries define health service benefit packages and corresponding pharmaceutical benefits. Across the 14 analyzed countries, there was considerable variability in the types of coverage/financing arrangements; many countries provided all or a substantial portion of a defined HBP through direct budget support, while others guaranteed a set of explicit services through various health insurance schemes that covered all or some portion of a country's population. Most arrangements defined some form of pharmaceutical benefit coverage, though countries defined these benefits through four different approaches. Many countries relied on normative lists of pharmaceuticals (typically aligned with a broader package of health services) that led to implicit rationing of drugs and medical products from these lists. Other arrangements tended to either explicitly define drug benefits aligned with services included in a scheme's HBP or implicitly define them based on medically indicated drugs for services covered under the scheme's service benefits package; under both of these approaches, schemes used EMLs or formularies as the basis for benefits. Relatively few coverage arrangements defined separate and explicit drug benefits packages.

Countries with more developed health insurance schemes did not consistently use explicitly defined pharmaceutical benefits packages to define drug benefits. For example, Indonesia's and Thailand's insurance schemes defined de facto pharmaceutical benefits based on lists of drugs from which accredited providers can prescribe drugs for services explicitly defined under the schemes' respective service benefits packages. In schemes that defined benefits as any medically indicated drug, this type of benefit definition effectively grants providers greater autonomy in decision making for which drugs or medical products to prescribe; but without adherence to standard treatment guidelines or operating procedures, this approach can potentially lead to inefficiencies or inequities in service provision. However, in some contexts, giving providers greater autonomy in decision making provides flexibility in certain situations, such as stock-outs.

The analyzed countries typically defined pharmaceutical benefits for both inpatient and outpatient services, though there were notable exceptions, such as PhilHealth's limited outpatient drug benefits. In sum, the use of explicitly defined pharmaceutical benefits packages that identify and quantify the use of drugs by beneficiary populations, create legal entitlements to that package, and outline financing arrangements for the included drugs is somewhat limited in Asia.

From a financing perspective, countries with health insurance-based financing schemes typically had higher levels of total per capita health expenditure and per capita expenditures on pharmaceuticals. However, pharmaceutical expenditure in only two countries—Thailand and Timor-Leste—came mainly from public sources, suggesting that private OOP spending represented the predominant financing source for drugs in Asia despite the availability of some public financing for pharmaceutical benefits. Furthermore, countries with low per capita health spending typically had the highest proportion of pharmaceutical expenditures from private OOP sources. With these high levels of OOP drug spending—even in countries with coverage arrangements providing some financial protection—there is considerable concern for the continued risk of catastrophic payments.

Among the countries and arrangements analyzed, the existence of a high-coverage national health insurance scheme did not necessarily correlate with reduced private spending on drugs. For example, spending on drugs in Thailand—whose three schemes confer a de facto drug benefits package—comes from primarily public sources (91%); however, in Indonesia, private drug spending comprises nearly 80%

of all drug spending, despite JKN covering most of the Indonesian population and having a defined pharmaceutical benefits package. These findings suggest that further research is needed on consumer spending on pharmaceuticals, even where nominal publicly financed coverage is available, given continued challenges with ensuring drug availability in many countries and the growing role of the private sector for health care provision across the region.

6.1 Areas for Regional Learning and Further Analysis

As noted in the methodology, the analysts identified four common approaches to how different countries in Asia and their respective coverage arrangements defined service and drug benefits:

- Defining covered services only and using an EML or NF as a guide to pharmaceutical procurement and distribution
- Defining covered services and defining covered pharmaceutical benefits as any product medically indicated by accredited clinicians for those covered services (aligned with minimum service standards, as applicable)
- Defining covered services and using the NF or EML as the de facto explicit pharmaceutical benefits package
- Defining covered services and explicitly defining pharmaceutical benefits

The spectrum ranges from coverage arrangements that define service benefits, but that lack clearly defined pharmaceutical benefits (they instead use an EML to guide procurement), to arrangements that identify and quantify the use of drugs by beneficiary populations, create legal entitlements to that package, and outline appropriate financing arrangements. The analysis revealed that there is significant variation in how countries use these approaches; for example, insurance-based coverage arrangements used all but the first approach to define pharmaceutical benefits. Understanding how countries compare to one another can help countries within the region understand the relative strengths and weaknesses of these approaches, and how shifting to more explicitly defined pharmaceutical benefits packages—coupled with the appropriate use of priority-setting and decision-making processes, such as HTAs—can help countries make progress toward UHC goals.

Choices on how to structure pharmaceutical benefits should be supported through empirical analysis and evaluation based on a country's system-level priorities (e.g., cost containment, increased efficiency). Additional empirical analysis could investigate how different modalities of defining pharmaceutical benefits have contributed to a country's health systems goals and provide further evidence on the pros and cons of these different approaches. It would also be useful to better understand countries' practical experiences in employing these approaches; deeper regional learning could influence both policy and practice.

Although this analysis attempted to assess the level of cost sharing for pharmaceutical benefits under different coverage arrangements—which appears officially to be zero or nominal as defined by policies in the analyzed countries—further analysis could triangulate country-specific data on drug availability among public sector providers and the degree to which a lack of availability leads to OOP pharmaceutical spending from private providers. Furthermore, triangulation of country-specific data on catastrophic and/or impoverishing pharmaceutical expenditures under schemes that theoretically provide financial risk protection could provide further nuance on how pharmaceutical benefits could be better structured to meet UHC objectives. Further country-specific analysis could be done to investigate the effective coverage of affordable pharmaceutical benefits in countries that define an explicit package, such as the Philippines, Kyrgyzstan, Vietnam, or India, as states implement PMJAY reforms.

The processes that countries employ to define their HBPs and their corresponding pharmaceutical benefits should be studied further, including the use of evidence-based priority setting, the role of financing considerations in this priority setting, and the ways in which strategic purchasing could be strengthened to improve efficient use of available resources for pharmaceuticals. This study will inform MTaPS' capacity strengthening on the costing of pharmaceutical benefits packages within Asia as it provides background in how costing methodologies can be adapted for different forms of pharmaceutical benefits coverage. Extensions of the analysis could provide further learning for countries within the region to understand the role HBPs and pharmaceutical benefits play in moving countries in Asia toward UHC.

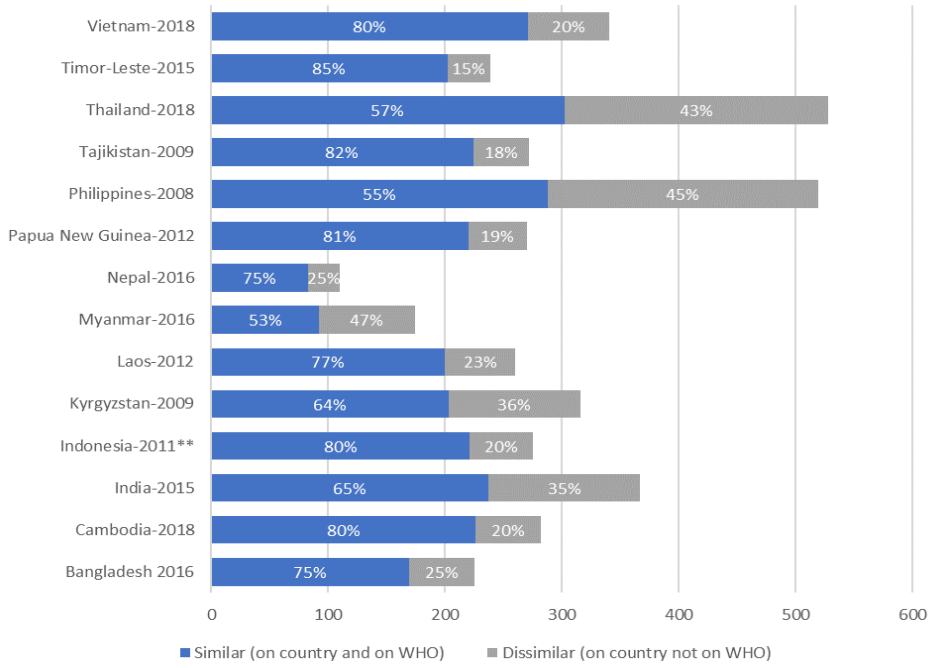
ANNEX A: ANALYSIS OF EMLS AND FORMULARIES

Because many countries in Asia use an EML or equivalent to define their pharmaceutical benefits, this analysis looked at the contents of these lists using the existing dataset from Persaud et al.'s 2019 analysis, which included 15 of the 24 examples. Although Vietnam's EML has been included, it should be noted that the data presented here differs from the larger list of drugs eligible for reimbursement under the Health Insurance Medicines List. Other schemes not reflected in this sub-analysis included Bangladesh's SSK health insurance pilot, Cambodia's National Social Security Fund, India's multiple coverage schemes (as the national EML served as the unit of analysis in this sub-analysis), Laos' SSO/SASS scheme, and Nepal's National Health Insurance pilot. Key findings from the analysis include the following.

COUNTRIES WITH HIGHER PER CAPITA CHES AND LARGER INSURANCE-BASED COVERAGE SCHEMES INCLUDED MORE DRUGS ON THEIR EMLS COMPARED TO THOSE WITH LOWER PER CAPITA SPENDING.

Across the analyzed countries, the average number of drugs on each EML was 298 (median 274), and, on average, 72% of the included drugs were similar to the WHO 2019 Model EML (median 76%). However, there were substantial variations in EMLs by country, by level of per capita health spending, and by the types of coverage/financing arrangements in each country (figure 2). For example, the Philippines and Thailand—both countries with large insurance schemes and relatively higher per capita health spending—both had more than 500 unique drugs on their EMLs and only 55% and 57% congruence with the WHO Model EML, respectively. Conversely, countries that finance most health services through direct budget support typically had fewer drugs on their EMLs and higher degrees of alignment with the WHO Model EML (e.g., Bangladesh, Cambodia, Nepal, Papua New Guinea, Timor-Leste). These results align with previous findings that most countries with lower health care expenditure had EMLs with fewer drugs compared to countries with higher degrees of health expenditure (14).

Figure 2: Number of drugs on country EMLs disaggregated by degree of congruency between country EML and 2019 WHO Model EML

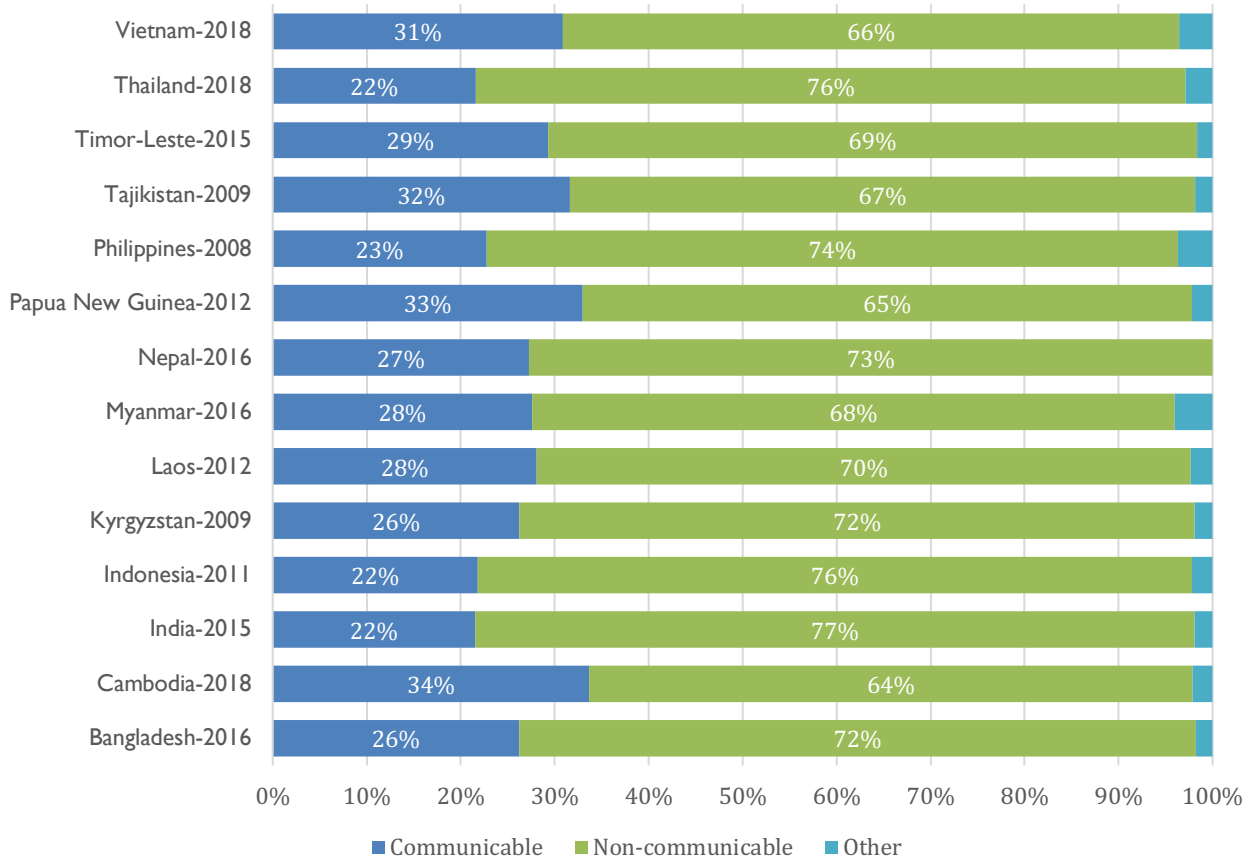


**Signifies that a more recent EML is available but was not included in the analysis as it was not available in English.

ANALYZED COUNTRIES' EMLS SHOWED SIMILAR PROPORTIONS OF DRUGS WHOSE PRIMARY USE WAS FOR COMMUNICABLE VERSUS NON-COMMUNICABLE DISEASES.

On average across the 14 countries, 71% of drugs on EMLs had a primary purpose to treat non-communicable diseases, 27% were for communicable disease, and 2% for other conditions (figure 3). There was no apparent correlation between these proportions and relative level of per capita health expenditure or by the types of financing arrangements within a given country. Generally, these findings align with the growing double burden of communicable and non-communicable disease globally, though the degree of the analysis did not allow us to determine if national EMLs truly relate to priority health needs. Global research indicates that many countries' EMLs do not fully relate to expressed priority needs and health burdens (14).

Figure 3: Breakdown of country EMLs by primary use of drug for communicable, non-communicable, or other disease categories



Note: Classifications based on primary ATC and disease groupings outlined by Persaud, et al. 2019.

LIMITATIONS OF ANALYSIS

Due to data availability, it was not possible to analyze the contents of each coverage scheme's drug benefits in detail. In many cases, drug benefits were not explicitly defined but rather defined as "covered" based on the diagnosis of a certain condition under an HBP. Without this level of granularity in the HBP or drug benefits package, it was not possible and was potentially erroneous to compare covered drug benefits packages against the WHO Model EML. Finally, given that providers can procure or prescribe drugs outside of the covered benefits package in some of the included countries, these analyses also do not necessarily illustrate the actual provision of certain drugs by providers.

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