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Stakeholders take part in a capacity-strengthening training workshop on pharmaceutical expenditure tracking in Indonesia, May 9–13, 2023. Photo credit: Fairuz Rabbaniyah, MTaPS

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Mapping Pharmaceutical Expenditure Data Sources in Indonesia

Technical Highlight | June 2023 | Asia Bureau/Indonesia

Tracking pharmaceutical spending for data-driven resource allocation and use

Background

Indonesia's National Social Insurance Agency for Health (BPJS-K) provides national health insurance (JKN) to an estimated 265.6 million people (November 2023).[1] Increased utilization of the program along with an extensive benefits package and rising costs have created challenges for BPJS-K. A large portion of JKN reimbursements go toward pharmaceuticals, currently estimated to be around 23.2% of national health expenditure in 2022.

As part of their efforts to rein in health care costs while ensuring that Indonesians can access the medicines and other pharmaceutical products they need, the MOH and BPJS-K seek to better understand their spending on pharmaceuticals so that they can make data-driven decisions that will promote equitable access to quality pharmaceuticals while allowing the insurance program to cover costs for the growing population.

[1] National Social Security Council of Indonesia. Available from: https://sismonev.djsn.go.id/sismonev.php.

Building on its global expertise in pharmaceutical expense tracking, in July 2021, the US Agency for International Development (USAID) Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program began to support Indonesia in conducting a landscape study of its pharmaceutical expenditure (PE) information sources to allow it to better understand and manage these expenses.[2]

Problem Statement

PE tracking highlights the equity of resource allocation and aids policymakers in decision making for resource allocation and use.[3] Although PE can be measured using the System of Health Accounts (SHA) 2011—a standardized framework that systematically tracks the flow of expenditures in the health system—Indonesia, as is the case with many other countries, faces challenges in the comprehensive tracking and analysis of PE. In Indonesia, two main obstacles hampered PE tracking and analysis:

- *Pharmaceutical data are spread across technical units in ministries and agencies*. No single, national health information system holds all pharmaceutical expenditure data, and the data are scattered across various institutions, meaning there is no clear source available for accurate pharmaceutical data. Additionally, the PE data are often very general and lack the detail needed for decision making.
- *The Indonesian health accounts team does not have sufficient capacity for pharmaceutical expenditure data collection and analysis.* The country health accounts team lacks training and practical experience in collection, analysis, and use of PE data to inform government and partner decision making.

Technical Approach

In 2020, MTaPS collaborated with the global USAID Local Health System Sustainability (LHSS) project to develop guidelines for estimating PE using the SHA 2011 framework. The guidelines document, completed in 2021, provides support to health accounts (HA) teams worldwide on tracking PE. It includes guidance on how to customize an HA framework to collect detailed data on PE, common sources for data on pharmaceutical spending, how to align existing data with health accounts disease areas, and key indicators that can be calculated using the data.

Building on this experience, in 2021, MTaPS initiated two years of targeted technical assistance activities to support Indonesia to identify sources of PE data. These activities would also build the capacity of Indonesia's HA team to track PE and analyze the data, collect secondary PE data at the national level, and map secondary sources of information on PE. MTaPS' support focused on building counterpart capacity to institutionalize transparent and evidence-based pharmaceutical decision making, use robust information to define and cost pharmaceutical coverage, promote PE tracking to improve purchasing value, and strengthen pharmaceutical-sector governance.

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[2] MTaPS' experience in PE tracking is discussed in more detail in the following documents:
Policy Brief: Pharmaceutical Expenditure Tracking in Benin (2020 Data) https://www.mtapsprogram.org/our-resources/policy-brief-pharmaceutical-expenditure-tracking-in-benin-2020-data/.
Policy Brief: Pharmaceutical Expenditure Tracking in Burkina Faso (2018 Data). https://www.mtapsprogram.org/our-resources/policy-brief-pharmaceutical-expenditure-tracking-in-burkina-faso-2018-data/.
Pharmaceutical Benefits and Benefits Packages in Asia: A Cross-Country Mapping of Coverage Arrangements. https://www.mtapsprogram.org/our-resources/pharmaceutical-benefits-and-benefits-packages-in-asia-a-cross-country-mapping-of-coverage-arrangements/.

[3] World Health Organization, 2006. Rational use of medicines: progress in implementing the WHO medicines strategy. Geneva.

This support allowed the MOH and BPJS-K to better understand and make pharmaceutical-coverage decisions based on resource mobilization, sources of finance, and covered population; resource allocation, equity, and financial protection; and efficiency, as discussed below.

Policy Questions for Consideration Prior to PE Tracking

Prior to tracking PE and engaging policy actors in the PE tracking process, the following policy questions must be considered:

- Resource mobilization, sources of finance, and coverage:
  - Are we adequately investing/spending on pharmaceuticals?
  - Are our investments in pharmaceuticals growing to meet the demand of the population?
  - To what extent are we able to diversify our pharmaceutical funding sources to ensure national self-reliance and financial protection objectives?
  - What is the financial gap to be covered in the event of a withdrawal of international cooperation?
- Resource allocation, equity, and financial protection:
  - Does PE adequately reflect health policy priorities/burden of disease?
  - Is PE distributed equitably?
  - What is the extent of the population covered by risk pooling?
  - What are the key drivers of growth in PE?
  - Is expenditure on pharmaceuticals efficient? Does it represent good value for money?

Stakeholder Engagement

The PE data sources landscape study required extensive stakeholder engagement and involvement. MTaPS conducted several meetings to engage stakeholders in identifying PE data sources. MTaPS held its first engagement meeting in August 2021 to discuss the work plan, the implementation timeline, and expected outputs of the planned PE tracking. This was followed by a second meeting in November 2021 with the Directorate General of Pharmacy (Directorate General of Pharmacy and Medical Devices) to explain the implementation process and their role in supporting the process. A third stakeholder meeting, to map the available PE data sources, took place in December 2021. This meeting brought together a wider group of stakeholders, including the Directorate General of Pharmacy and Medical Devices, the National Food and Drug Authority (Badan Pengawas Obat dan Makanan [BPOM]), the Ministry of Industries, the National Population and Family Planning Agency (Badan Kependudukan dan Keluarga Berencana Nasional [BKKBN]), the Government Procurement Policy Agency (Lembaga Kebijakan Pengadaan Barang/Jasa Pemerintah [LKPP]), BPJS-K, IQVIA (a multinational health information technology and clinical research firm), the Association of Indonesian Pharmaceutical Entrepreneurs (Gabungan Pengusaha Farmasi Indonesia [GPFI]), the International Pharmaceutical Manufacturers Group (IPMG), and the Association of Medical Equipment and Laboratory Companies (Gakeslab), the health accounts team, and the Center of Policy for Health Financing and Decentralization (Pusjak PDK).

Intervention

Preparation

MTaPS launched its work on identifying data sources on pharmaceutical expenditure in Indonesia with a kickoff meeting to inform stakeholders about activity plans and met with the Directorate General of Pharmacy and Medical Devices to gain buy-in for the pharmaceutical expenditure tracking exercise.

Landscaping of PE data sources in Indonesia (November 2021–January 2022)

In collaboration with the Indonesia National Health Accounts (NHA) team, MTaPS took the following steps to develop a landscape of PE data sources in the country:

- Engaged experts from the Directorate General of Pharmacy and Medical Devices, the Ministry of Health (MOH)/Pusjak PDK, the MOH/Directorate General of Pharmaceutical and Medical Devices (Ditjen Farmalkes), LKPP, BPJS-K, and other stakeholders in a series of virtual discussions to identify PE data sources. During the discussions, MTaPS collected information on pharmaceutical

spending data sources, including government budgets; procurement records; health insurance claims; household survey data; and private data sources (i.e., IQVIA data).

- Discussed and documented the accessibility and availability of each data source, the level of the system at which they are compiled, the structure of the data, the required process and permissions for obtaining them (including expected challenges and the stakeholders who need to be involved), the costs (if any) of each source, the frequency of updates, and data storage options and processing needs.
- Mapped secondary PE data at the national level organized by type of disease, as per the SHA 2011 framework.
- Used the data collected to prepare a PE data landscape report.

Compiling secondary PE data at the national level (April 2021–December 2022)

- Worked with the Indonesia NHA team to identify key variables for inclusion in the dataset (drug molecules, therapeutic class, total spending, final consumption costs, source of funding, etc.) and developed data compilation tools/templates in Excel format to collect, compile, and organize the pharmaceutical data.
- Supported the Pusjak PDK HA team in compiling PE data available from national sources, with support from the Indonesian HA team. Throughout the process, Pusjak PDK was instrumental in leveraging its resources to facilitate activities, including providing administrative letters as needed, nominating lead points of contact, participating in regular meetings/discussions, and facilitating access to existing datasets.
- Hired a team of five local data collectors (including one data collection supervisor) as consultants to compile secondary PE data at the national level. The consultant team collected secondary data from MOH databases and the Indonesia Food and Drug Authority's information system.
- Supported the Pusjak PDK to use the national-level data to prepare preliminary high-level figures.

Organize, map, and analyze national-level PE data (April–December 2022)

MTaPS provided technical assistance to the NHA team (part of Pusjak PDK) to compile and analyze PE data for 2021 as follows:

- Supported development of PE databases and data mapping.
- Supported analysis of the data and calculation of national aggregate PE figures. The aggregate figures include identified generic drug names and coding based on Anatomical Therapeutic Chemical (ATC) WHO and ATC European Pharmaceutical Market Research Association classification in the type of disease and included in the NHA report on the PE section.

Results

As a result of MTaPS' technical support, Indonesia's capacity to track PE as part of routine HA exercises increased. Furthermore, secondary, national-level PE data has been compiled and analyzed to inform decision making.

This landscaping provides a comprehensive picture of how pharmaceutical spending happens, how information on that spending is captured and organized, and where there are gaps in the data. MTaPS developed preliminary templates summarizing the information available from each database.

The resulting landscape report shows various data sources for the PE data with descriptive information, including the name of unit and institution holding the data, the PE information available from the source, the name of the information system, the PE data format (Excel or PDF), the flow of the pharmacy procurement and distribution system, the limitations of the data, how the data were collected, and the contact person. The PE data sources landscape aims to accomplish the following:

- Get an overview of the units in the health system managing PE data.
- Obtain a detailed description of the PE information available at the relevant agencies.
- Obtain an overview of the PE flow in the health system.

- Understand the limitations or constraints to get PE data and identify key stakeholders who might facilitate the data gathering.

The final report will be publicly available on the website of Pusjak PDK.[4]

The data collection process revealed that PE data are still scattered in various places from the upstream level (data on production, sales, procurement, supply, distribution) to the downstream level (patient-based provider administration data, community-level surveys among consumers).

As a result of the data collection exercise, stakeholders have greater awareness of the data types and sources available; the MOH has a better understanding of where different types of data on drug expenditures may be obtained; the Pusjak PDK/NHA team has improved its capacity to track national-level PE. In December 2022, at an NHA dissemination meeting, the MOH presented the national-level PE results, sharing for the first time a clear picture of total PE in the country.

"For the first time in Indonesia, Pharmaceutical Expenditure Tracking was conducted, and the results became part of the National Health Account 2021 Report."

—Dr. Prastuti Soewondo, S.E., M.PH., PhD, Special Advisor to the Minister of Health, speaking at the dissemination of the 2021 NHA report, December 6, 2022.

Indonesia Pharmaceutical Expenditure Results in Context

Based on estimates from PE tracking, Indonesia's total pharmaceutical expenditure (TPE) at current prices in 2021 is 175.2 trillion Indonesian rupiah (IDR) (12.2 billion US dollars [USD]), including spending on the COVID-19 vaccine, which is estimated to reach IDR 45.6 trillion (2.9 billion USD). The PE analysis revealed that the proportion of TPE to Indonesia's total health expenditures (THE) in 2021 was 25.7%. In general, low-income countries have a higher proportion of TPE to THE (30.4%) compared with high-income countries (19.7%). Based on Indonesia's population of 274 million in 2021, TPE per capita was IDR 640.0 (USD 44.70).

Lessons Learned

- **Convening pharmaceutical stakeholders around pharmaceutical policy question definition and PE data source mapping builds consensus on ways to track and report PE commitments and disbursements.**

  One of the challenges for country PE tracking is the lack of capacity to identify relevant PE data sources and estimate final consumption with high precision. There are many pharmaceutical data flows in the country, making double counting a risk. The Indonesian HA team, through Pusjak PDK, brought PE stakeholders together to map the stakeholders and their data sources for the first time. This mapping included the type of information, how to access the data, the file formats (Excel, PDF, or via a software program), and key contact persons. The stakeholder meetings also helped raise awareness of the need for country PE tracking and for gaining stakeholder buy-in and adherence to the PE tracking process.

[4] The most recent landscaping report is not yet published. The 2019 Indonesia National Health Accounts report is available on the Pusjak PDK website: pusjakpdk online (kemkes.go.id)

PE data allow planners to better align disbursements with national priority areas as identified in the national pharmaceutical strategic planning. Visibility into pharmaceutical expenditure data allows planners and policy makers to make better allocative decisions that can lead, for example, to efficiency gains in service delivery, increased investments in pharmaceuticals to meet the population need for medicines at lower cost, and understanding of the diverse Indonesian pharmaceutical funding sources to ensure national self-reliance and financial protection objectives.

- **Building upon existing health system expenditure tracking processes with the NHA team maximizes information available for PE tracking and institutionalizes PE tracking.**

  While the PE tracking conducted with MTaPS' support was the first of its kind in the country, Indonesia was already experienced in using the SHA. The implementation framework used for the PE tracking was derived from the SHA framework.[5] When MTaPS started the PE implementation in Indonesia, the country HA team was already fully engaged in an SHA expenditure tracking exercise in the health sector, so MTaPS partnered with the MOH SHA team to support the PE tracking process; the SHA team later used the PE data as supplementary data to improve the HA data. The PE tracking implementation process in Indonesia was accepted by policy actors largely because of the country's previous experience in resource tracking, which led to policymakers' both recognizing that they lacked PE data and understanding the importance of these data.

- **Efforts to improve PE tracking should include steps to institutionalize the process.**

  Institutionalizing the tracking of PE data is generally defined as the annual production and use of PE data for health/pharmaceuticals decision making. Standard guidance on institutionalizing HA recommends that policymakers request and use the data routinely, establish standards for data collection and analysis, and institute data reporting requirements for the various groups that provide data for the HA exercise. The Indonesian HA team learned how to conduct PE tracking both through an in-person MTaPS training and through a learning-by-doing process. Investments in PE tracking in Indonesia and conducting PE tracking on a regular basis are expected to improve pharmaceutical outcomes. Specifically, MTaPS recommends that the Government of Indonesia invest in including PE data in its new digital transformation strategy on health. This would allow for institutionalization of PE tracking as a routine exercise, making relevant and timely data available to support strategic and critical decision making on health financing. Furthermore, MTaPS recommends that PE tracking be conducted in concert with the HA exercise and reported as a subsection within the HA report.

Pathway to Sustainability

MTaPS engaged Pusjak PDK's National Accounts team in a learning-by-doing process through the PE tracking data sources landscape study and will continue to engage them in a joint process. Members of the HA team are working on the data collection and analysis process, along with other stakeholders. MTaPS will also provide remote support for a second-round PE tracking exercise to be led by the HA team.

As part of its long-term commitment to producing and using HA data for policymaking, the government should institutionalize PE tracking in a national document or decree. This would enable Pusjak PDK to lead the process within the government to easily access data from all relevant stakeholders and ensure that the PE data production is prioritized during budgetary allocations.

To further promote sustainability, in 2023, MTaPS will facilitate a five-day training for the HA team and consultants to ensure that they have the skills to facilitate the PE tracking process in the future without MTaPS' support.

[5] OECD, Eurostat, and WHO. A System of Health Accounts 2011. Paris: OECD Publishing; 2017. doi:10.1787/9789264270985-en.

Conclusions

Despite the limited experience of the Indonesia NHA team in collecting pharmaceutical expenditure data and the scattered nature of pharmaceutical data in the country, MTaPS' technical support demonstrated that significant data on PE do exist in various sources in Indonesia and can be compiled and effectively categorized to allow them to be useful for stakeholders. The process also served as a learning opportunity to build the capacity of the HA team. The resulting PE tracking data sources landscape report will serve as the foundation for collection and analysis of PE data.

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About USAID MTaPS:

The USAID Medicines, Technologies, and Pharmaceutical Services (MTaPS) Program (2018–2024) enables low- and middle-income countries to strengthen their pharmaceutical systems, which is pivotal to better health outcomes and higher-performing health systems. The program is implemented by a consortium of global and local partners, led by Management Sciences for Health (MSH), a global health nonprofit.