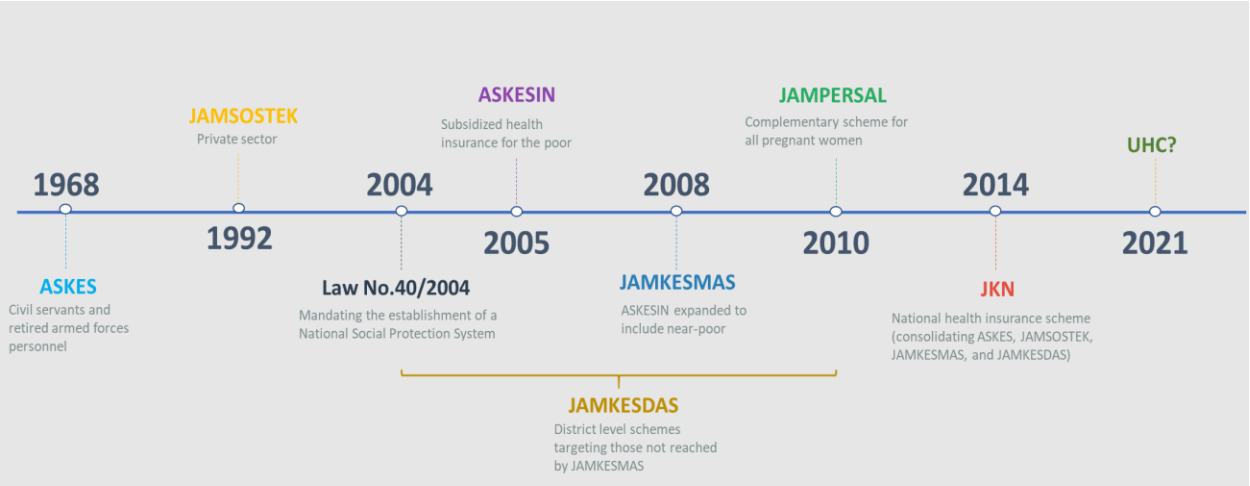
Technical assessment

Strategic Relevance

1. **Over the past 15 years, Indonesia has made significant progress towards universal health coverage (UHC).** Prior to 2004, only formal sector workers – 27.4 percent of the population – had access to health insurance. Decentralization in 2001 and the passing of Indonesia's Social Protection Law in 2004 opened up the space for local governments to experiment with multiple models of health coverage at the district level. Between 2004 and 2014, more than 300 schemes[1] were set up. All were managed independently, with much variation in design (e.g., financing, eligibility, benefits, and provider payment arrangements). In 2012, Indonesia declared that it would achieve UHC by 2019. Two years later, it had rolled out Jaminan Kesehatan Nasional (JKN) or National Health Insurance – consolidating all schemes into a single national scheme managed by Badan Penyelenggara Jaminan Sosial-Kesehatan (BPJS-K) – a semi-autonomous public agency (Figure 1)**.** JKN entitled all Indonesians to the same benefit package and applied a uniform set of rules for providers (e.g., payment methods, reimbursement rates, and quality standards) (Pisani, Kok, & Nugroho, 2017). Between 2014 and 2019, JKN coverage expanded to 83 percent of the population (approximately 220 million people) and out-of-pocket (OOP) expenditures decreased by 20 percentage points (Figure 2).

Figure 1. Indonesia's path to UHC

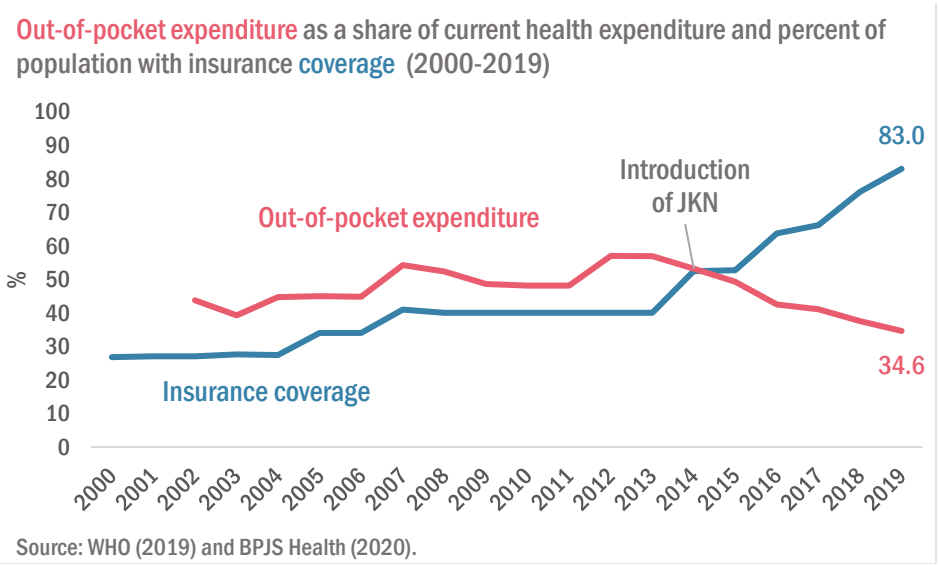


2. **Despite these achievements, significant gaps in financing and quality of care remain.** As of end of May 2020, JKN had incurred a cumulative deficit of IDR 31.7 trillion (around USD 2.2 billion). Fifty million Indonesians, mostly among the informal sector, remain uninsured. And the quality of care remains problematic with continued high maternal mortality, tuberculosis, and stunting rates, and a growing burden of chronic diseases. The breakdown in service delivery happens early on in the continuum of care. While 77 percent of pregnant women received at least 4 antenatal care (ANC) visits, they did not receive

[1] Indonesia is a unitary republic but quasi-federal in operation with 34 provinces and 514 districts. In 2001, there were fewer than 300 districts; by 2014 there were 514.

all intended interventions during visits. Blood and urine tests – essential for the diagnosis of high-risk pregnancies – were carried out in only 47.6 and 38.7 percent of ANC visits respectively in 2017 (BPS, 2017). Of the over 700,000 active TB cases, more than a quarter went undiagnosed and only a third were successfully treated) (Hafez, Harimurti, & Martin-Hughes, 2020). Of the more than 11 million adults thought to have diabetes, only 21 percent were diagnosed and only 7 percent had their diabetes under control (Stein, et al., 2020).

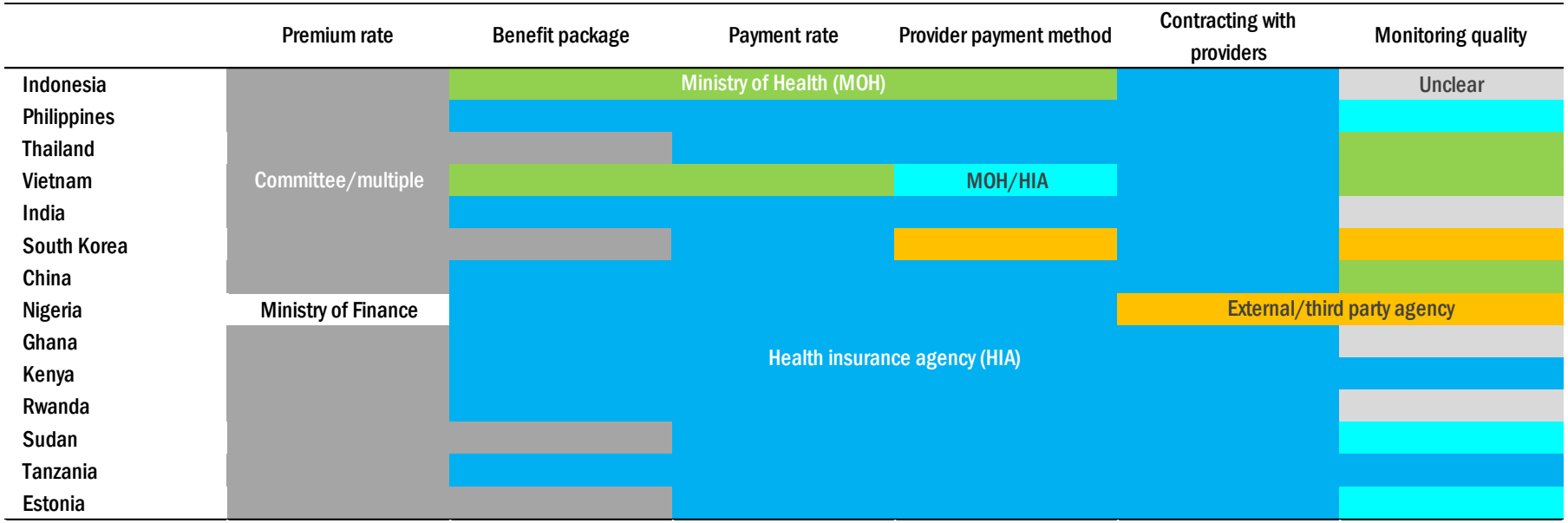
Figure 2. JKN improves coverage and financial protection



3. **Indonesia's rapid roll-out of JKN left many questions about the details of implementation unanswered – specifically around who is responsible for setting the rules, regulations, and processes for delivering care**. There are many different governance arrangements for who the purchaser of health care goods and services could be – a State agency like the Ministry of Health (MOH), an autonomous public health insurance agency (like BPJS-K), or private insurers. Globally, most National Health Insurance agencies are independent or quasi-independent; but even when they are embedded within the MOH or other State agency, they retain a significant amount of operational autonomy to carry out the main purchasing functions of a health care system (Figure 3).

Figure 3. Main purchasing functions of health care system

Figure 4. Distribution of responsibilities across stakeholders in other countries.



Source: World Bank Staff (2021).

4. **While there is no blueprint on where key purchasing functions should sit, patterns emerge based on the respective mandates of different stakeholders** (Figure 4).
    - Most health insurance agencies are responsible for determining provider payment arrangements, setting tariffs, and contracting with providers – their primary objectives being fund management and solvency. Indonesia stands out from its peers in that the MOH determines how much providers are paid and how they are paid.
    - Provider accreditation and quality assurance are more commonly managed by the MOH whose primary objectives are often service delivery and ensuring quality standards. However, in many countries, the National Health Insurance agencies work jointly with the MOH to ensure compliance with clinical standards and guidelines through claims management. This function also tends to be the least well defined and overlooked – with many different stakeholders partly involved but not entirely accountable.
    - Allocating resources to the health insurance agency, determining premiums, and selecting the benefit package have a broader set of stakeholders – Ministries of Finance (MOF) and Health, health insurance agencies, professional medical associations, health technology agencies or academia, industry, the media, and the public are often involved. These functions are commonly decided by committee.

    Despite these divisions of labor, what is clear is that health insurance agencies and Ministries of Health cannot work in isolation from each other. Even when there is a distinct lead stakeholder, all functions rely on information and coordination between stakeholders.

5. **The PforR facilitates the coordination and sequencing of second generation reforms needed to improve the quality of care and the efficiency of JKN spending**. Box 1 maps out the respective mandates of key stakeholders in Indonesia with respect to JKN to better clarify their roles and responsibilities. The PforR brings together BPJS-K, the MOH, the Social Security Council (DJSN) and the MOF; its activities aim to strengthen core business processes related to provider payment, claims management, service delivery, and healthcare analytics.

6. **The PforR is fully aligned with the GOI's National Development Plan (RPJMN 2020-2024), the MOH's Strategic Plan (Renstra 2020-2024) and the SJSN's JKN roadmap (2020-2024).** The timing of this operation also presents a unique opportunity to align with the new Board of BPJS-K as they work to implement the JKN roadmap. It presents the first opportunity to engage directly with BPJS-K on a substantive level. The World Bank has been working with the MOH under its analytical and advisory work program (Reforms to strengthen UHC in Indonesia P176289) and lending operation (Indonesia's Supporting Primary Health Care Reform (I-SPHERE) P164277) to support modest revisions to JKN's performance-based scheme[2]. However, engagement with BPJS-K has been limited.

7. **The operation is in line with the World Bank Group's Country Partnership Framework FY2021-2025 (CPF) for Indonesia.** The PforR is aligned with the CPF's third engagement area to nurture human capital. In particular, CPF objective 3.2 aims to strengthen the quality and equity of health services. JKN is essential

[2] This corresponds with disbursement linked indicators 8 for KBK under I-SPHERE.

to this objective – building human capital among the poor and vulnerable, and incentivizing their use of health, nutrition, and other services (World Bank, 2021).

8. **The operation also promotes the Health, Nutrition, and Population Global Practice's strategy to support countries in their progress towards UHC** and the World Bank's overarching strategic priorities to end extreme poverty and boost shared prosperity. UHC is an equity-related health policy that aims to divorce ability to pay from need for services and reduce socioeconomic inequalities between individuals of different health need. It is also an instrument of social protection with an explicit concern to tackle poverty, invest in human capital, and promote economic growth. Not only are individuals healthier, they are more productive, earn higher incomes, contribute to society, and are less dependent on government support. Of central importance to achieving UHC in Indonesia has been the expansion of health insurance. Health insurance or other risk pooling arrangements provide individuals with protection against unpredictable health related costs by lowering the out-of-pocket price of otherwise unaffordable health care services.

9. **Finally, there is a strong rationale for public sector financing/provision of the health sector**. The classical arguments justifying the need for government intervention in health care markets are generally grouped into discussions on:

   (a) neglected externalities – governments are increasingly considering UHC as a merit good that provides a positive social and fiscal externality, arguing that healthier individuals are more productive, earn higher incomes, contribute to society, and are less dependent on government support;

   (b) information failures – the average person generally has less information than providers about both the need for and quality of health care often leading to misalignment between provider self-interest and patient objectives; and

   (c) risk and uncertainty – illness can expose individuals to potentially ruinous medical expenditures and loss of earnings during extended sick days.

   Societal values may impose additional moral arguments such as health as a human right, equity in access to healthcare, and equalization with regards to income distribution.

Box 1. Respective mandates of key stakeholders with regards to JKN.

The Ministry of Home Affairs (MOHA) maintains foundational systems such as the national ID (NIK) and the civil registration and vital statistics (CVRS) databases to ensure an up-to-date population registry. MOHA also ensures the JKN program can be operationalized at the subnational level - evaluating the planning of subnational governments to make sure enough resources have been allocated in the budget to deliver services at facilities.

The Ministry of Social Affairs (MOSA) draws on the population registry to develop and maintain an up-to-date social registry (i.e., DTKS targeting database) that ensures the bottom 40% of households (PBI beneficiaries) are automatically enrolled in JKN.

The Ministry of Finance (MOF) uses the social registry to pay PBI premiums. The MOF also maintains the tax ID (NPWP) database that can be used to verify contribution compliance from contributing members. As the largest funder of BPJS-K and payer of last resort, the MOF's main objectives are financial accountability, sustainability and overall efficiency of spending.

The Ministry of Health (MOH) develops licensing and accreditation criteria and maintains information on the number and distributions of providers; develops diagnostic and clinical protocols, referral pathways, and quality of care standards for services included in the benefit package; develops clinical coding guidelines, a health data dictionary for common terms, and standardized medical record forms; determines provider payment rates and approves provider payment methods. MOH's main objectives are to ensure UHC, health outcomes, and quality of care, especially by prioritizing public health and preventive and promotive benefits in the JKN package.

Providers deliver services based on MOH diagnostic and clinical protocols, referral pathways, and quality of care standards. They also maintain records on number of patient visits, symptoms, diagnosis, drugs, procedures, and treatment outcomes.

The National Health Insurance Agency (BPJS-K) collects premiums and enrolls beneficiaries; uses information on licensing and accreditation status to empanel providers; uses foundational ID systems to authenticate identity at enrollment and point of service; uses patient information from providers and MOH protocols and standards to verify claims; and develops provider payment methods to reimburse providers. BPJS-K's main objectives are to ensure financial sustainability and efficiency while promoting quality of care.

The Social Security Council (DJSN) provides the main oversight mechanism for the JKN ecosystem (e.g., ensuring transparency and accountability on key performance indicators) and advocates on behalf of beneficiaries.

Technical Soundness

10. **Findings from the World Bank's previous analytical and advisory engagements squarely put the focus on the need to spend more and better to strengthen service delivery and the quality of care, especially at the primary health care level.** This assessment is informed by and builds on an extensive body of analytic work carried out over the past five years.
    (a) A health financing systems assessment (World Bank, 2016) and public health expenditure reviews in health (World Bank, 2020) and nutrition (World Bank, 2020) highlighted the need to raise additional revenue and improve the quality of spending. At 1.4 percent of GDP or 8.5 percent of total government expenditure, public expenditure on health is well below what countries with a similar level of income spend on average. Findings showed that the two sources of health financing that offer the greatest potential for improving the quality of health spending are a special allocation fund called *Dana Alokasi Khusus* – a fund that finances capital investments, medicines, and commodities – and JKN spending that finances service delivery.
    (b) Functional and regulatory reviews (World Bank, 2018) of JKN highlighted design flaws on the revenue and expenditure side that threaten the financial sustainability of the scheme. While reforms to expand membership and improve contribution compliance have dominated the government's policy

dialogue, most pressing is the need to reform provider payments, especially at the hospital level, in order to manage expenditure growth. As the largest source of revenue for primary health care facilities, JKN also offers a significant financial lever to incentivize improvements in the quality of primary health care among public and private providers – where more than 50 percent of health care takes place.

(c) Supply side readiness assessments in the public (World Bank, 2018) (World Bank, 2018) and private (World Bank, 2017) sector highlighted gaps in the quality of care, especially diagnostic capacity, the availability of diagnostic and treatment guidelines, and provider's competence to diagnose and treat conditions – especially at the primary care level. They also revealed that while the private sector provides a significant share of healthcare, the quality of services is generally better in the public sector.

(d) Feasibility studies to unlock the potential of private providers (World Bank, 2019) and civil society organizations (World Bank, 2019) in service delivery highlighted the type of contracting mechanisms most suitable for different types of non-state providers. As private providers do not receive the significant supply side financing (DAK) that public providers do, here too JKN offers the strongest lever to incentivize improvements in the quality of services provided in the private sector. However, other existing budget mechanisms may be better suited for engagement with civil societies.

(e) An ongoing policy note series on JKN sustainability provides just-in-time support on key topics to improve JKN implementation. To date notes on governance and accountability arrangements, targeting, information systems, clinical coding, and claims management have been produced all of which have directly fed into the design of this PforR.

11. **Many countries face similar challenges as they strive towards UHC often having to choose between increasing revenues, limiting coverage, and/or improving efficiency in the use of funds**. But global evidence has shown increasing revenue is limited by the fiscal capacity of the government – a relevant constraint in Indonesia. And in countries where the benefit levels remain relatively shallow or where breadth of coverage is prioritized over depth of services (as in Indonesia), access and quality of care has been limited. While improving the quality of current spending is likely the most feasible entry point for increasing fiscal space for health, weak governance and accountability, financial and institutional fragmentation, and limited performance-orientation for service delivery have made it difficult to link health sector spending with performance ensuring greater value for money.

Program description

12. **To address these issues, the PforR focuses on second generation reforms aimed at improving the quality of health care interventions and the efficiency of health spending.** Achievement of the PDO will be measured by the following PDO-level results indicators:

(a) Improved provider competency score in FKTPs (quality);

(b) Improved member satisfaction rate (quality); this is also a measure of citizen engagement

(c) Increase in the percent of outpatient utilization among bottom two quintiles (efficiency); this is also a measure of equity

(d) More sustainable JKN claims ratio (efficiency).

13. **Activities are organized around three results areas (RAs).** RA 1 aims to strengthen the quality of care. RA 2 aims to improve the efficiency of JKN spending. RA 3 is cross-cutting and aims to support JKN policy formulation and implementation. Table 1 describes the theory of change and how activities help address identified challenges around the quality of care and inefficiencies in service delivery. Disbursement linked indicators (DLIs) are summarized by RA in Figure 3. A more detailed overview of the DLIs is provided in Annex 1.

Table 1. Theory of change.

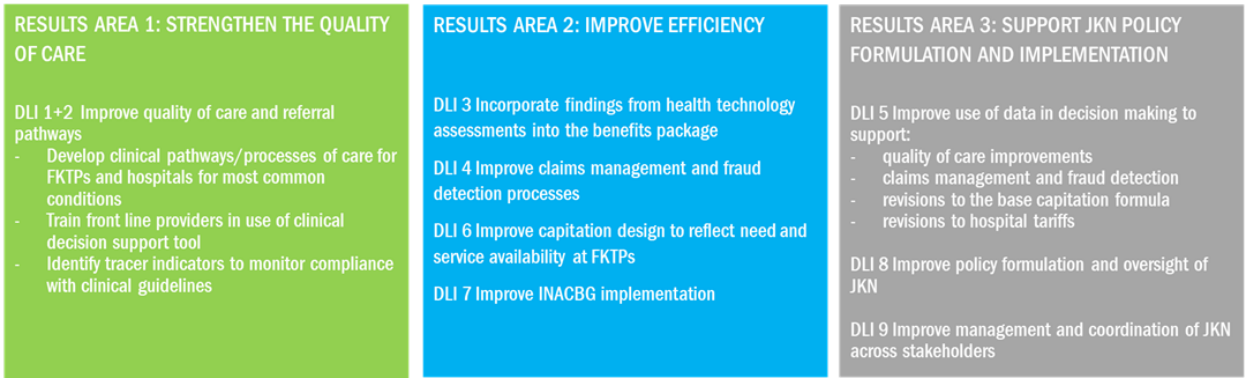
Challenges	Activities	Outputs	Outcomes
Results Area 1: Strengthening the quality of care			
Providers unable to diagnose common conditions (e.g., diabetes, hypertension, high risk pregnancies) Clinical standards, pathways, and protocols not available at front line facilities	Draft clinical pathways/processes of care for most common conditions Identify tracer indicators to monitor compliance with clinical pathways/processes of care Train providers in the use of clinical decision support tool Assess provider competence	MOH has developed a clinical decision support tool for FKTPs (DLI 1) MOH has trained FKTP workers in use of clinical decision support tool (DLI1) MOH has developed hospital clinical pathways for 20 conditions (DLI 2)	Improved patient satisfaction (PDO) Improved provider competence in primary care based on pre/post assessment (PDO) Increase in the % of antenatal care visits in-line with clinical protocols (e.g., that carry out blood and urine tests) (IO) Increase in the % of adults who have been screened for diabetes and hypertension as per clinical protocols (IO) Increase in the % of outpatient utilization among bottom two quintiles (PDO)
Results Area 2: Improving the efficiency of JKN spending			
Benefits are not aligned with available resources FKTPs are not able to deliver all benefits listed in the FKTP benefit package Health Technology Assessment (HTA) findings are not always incorporated into the benefits package and disseminated to the public	Review basic benefits package Establish explicit criteria for benefit package inclusion/exclusion Establish explicit criteria for selecting HTAs	MOH has published revised HTA guidelines (DLI 3) Number of HTA studies in accordance with revised guidelines and disseminated findings to the public (DLI 3) At least 5 HTA studies have informed revision of the benefit package (DLI 3)	An explicitly defined benefit package Improved JKN claims ratio (PDO) JKN beneficiaries more informed of their entitlements and changes to benefit package
Input-based capitation formula does not reflect	Review historical utilization patterns and allocation and use of capitation at FKTPs	MOH has developed and adopted a roadmap for	Capitation allocations more in line with FKTP member risk profile

need, absorptive capacity, or service readiness of FKTPs Existing capitation formula reinforces existing imbalances in HR and financing Quality is weakly incentivized in existing KBK scheme	Develop a roadmap to improve the design and implementation of capitation	revising capitation design (DLI 6) Number of additional quality indicators included in KBK scheme (DLI 6) Number of FKTPs implementing capitation changes as per roadmap (DLI 6)	Reduced undisbursed capitation Increase in the % of outpatient utilization among bottom two quintiles (PDO) Improved quality of care
Poor documentation by providers, lack of clear coding guidelines, the low competence of clinical coders lead to the wrong Indonesian Case Base Groups (INACBG) being assigned The tariff structure is not representative and complicated encouraging gaming and inefficiencies	Revise clinical coding guidelines Develop clinical coding training course and certification process Develop standardized cost accounting template Assess utilization and expenditure at hospitals by age, gender, diagnosis, and INACBG Revise the INACBG tariff	MOH has developed clinical coding guidelines and audit protocol (DLI 7) MOH has supported the development of a clinical coding training course (DLI 7) Availability of at least 1 certified clinical coder in each hospital (DLI 7) Number of hospitals randomly assessed for coding accuracy (DLI 7) MOH has developed a standardized cost accounting template (DLI 7) MOH has revised INACBG tariffs (DLI 7)	Increased accuracy of clinical coding Improved monitoring of morbidity and health outcomes Decrease in the % of hospital claims that are rejected/unverified (IO) Increased savings from reductions in errors Improved JKN claims ratio (PDO)
Weak claims management and fraud prevention processes	Draft claims, fraud, and audit investigation guidelines, including identifying tracer indicators to monitor claims performance Revise, simplify, and/or automate claims investigation processes Audit hospital claims	BPJS-K has revised claims, fraud, and audit investigation manuals/processes (DLI 4) Tracer indicators embedded and automated in claims verification software (DLI 4) Number of hospital claims subjected to detailed claims audit per year using revised audit protocols (DLI 4)	Reduction in unnecessary or inappropriate claims Increased compliance with protocol-base care (e.g., % of adults screened for diabetes and hypertension and % of ANC visits in line with clinical protocols) (IO) Increased savings from improvements in claims management Improved JKN claims ratio (PDO)
Results Area 3: Supporting JKN policy formulation and implementation			
Fragmented information systems	Agree on list of essential data needs from all stakeholders	Roadmap for data system integration developed (DLI 5)	Number of information systems integrated as per roadmap (IO)

High reporting burden/low reporting compliance from front line providers Weak or absent health management information system for decision making	Review/simplify data collection and reporting processes Develop a roadmap for data integration based on essential data needs and simplified processes Mandate the submission of a simplified electronic medical resume form with all claim submissions		Increased accuracy of clinical coding Improved compliance with protocol-based care Improved monitoring of morbidity and health trends Improved management of JKN
Lack of health insurance specific expertise in DJSN Lack of data sharing from key stakeholders to inform decision making	Agreement on list of essential data needed to inform JKN policy formulation Development of an internal and external dashboard on key JKN performance indicators Capacity building on key topics and analyses to assess JKN performance Production of an annual report to assess JKN performance	DJSN has developed and is using a dashboard of key performance indicators from BPJS-K and other sources (DLI 8) DJSN has produced and published an annual performance report on JKN (DLI 8)	Improved oversight of JKN implementation More informed policy formulation More informed public
Lack of coordination among JKN stakeholders	Form technical working groups comprised of focal points responsible for achieving DLIs Track progress on program action plan, DLIs, and results framework Investigate and intervene to solve bottlenecks Support implementation agencies to deliver results through additional budgets and/or hiring of additional technical staff	PforR Secretariat strengthened with technical experts and consultants ((DLI 9) PforR Secretariat compiles and analyzes JKN data and provides recommendations on the JKN-related objectives for the new RPJMN (DLI 9)	Improved management and coordination across JKN stakeholders DLIs and program development objectives achieved

Notes: PDO=program development objective; IO=intermediate objective; DLI=disbursement linked indicator**;** FKTP= *Fasilitas Kesehatan Tingkat Pertama* (Primary level healthcare facilities); HTA=health technology assessment; KBK= Kapitasi Berbasis Komitmen (Performance-based capitation); INACBG=Indonesian case base groups.

Figure 5. DLI summary by results area



Justification for choice of DLIs

DLIs 1 and 2 – Improve the quality of care and referral pathways

14. **While there are no silver bullet interventions to improve the quality of care, countries often combine several interventions to improve quality.** Figure 6 describes the main stakeholders responsible for overseeing the quality of health services in Indonesia. At the national level, health professional councils and accreditation organizations are responsible for setting pre-service standards, licensing health professionals, and accrediting facilities. Health professional associations and associations for healthcare facilities are responsible for developing in-clinical and professional standards. Finally, while the MOH is responsible for regulating and monitoring overall quality of care, it is the responsibility of subnational governments to allocate resources and personnel for carrying out clinical audits and mortality/morbidity reviews, organizing continuing education and training opportunities, and disseminating clinical guidelines and professional standards. Table 2 summarizes the status of common quality interventions in the health sector. Overall, the most pressing shortcomings that can also be leveraged through JKN concern clinical care interventions, performance-based financing, and information systems.

Figure 6: The main quality stakeholders in Indonesia.

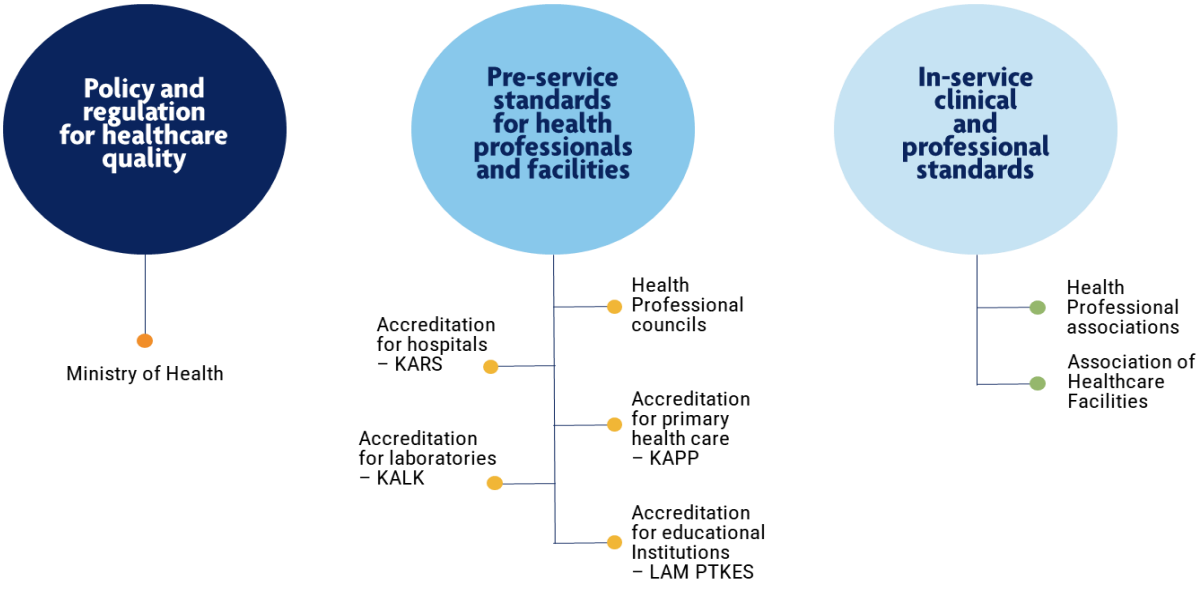


Table 2. Status of selected quality interventions in Indonesia.

Quality intervention	Status of intervention in Indonesia
Registration and licensing of health professionals	The Law no. 36/2014 assigns the regulation of health worker quality to higher education institutions and professional organizations based on professional service standards. The law mandates the establishment of a Health Professional Council (*Konsil Tenaga Kesehatan Indonesia, KTKI)* under the purview of the Minister of Health. The KTK coordinates 12 health professional councils – each tasked with registering health professionals, developing clinical guidelines and national standards for health worker education, and ensuring compliance with practice and competency standards (MOH, 2021). The Medical Practice Act no. 29/2004, the Nursing Act no. 38/2016, and the Midwifery Act no. 4/2019 includes articles to ensure the quality of physicians, nurses, and midwives. The acts mandate the establishment of the Indonesian Medical Council (*Konsil Kedokteran Indonesia, KKI*), the Nursing Council (*Konsil Keperawatan*), and the Midwifery Council (*Konsil Kebidanan*). Registration with the respective Council is a prerequisite for obtaining a license to practice from local government. To register, physicians, nurses, and midwives must present the certificate of graduation and students must pass the national standardized examination to graduate. Registration is valid for five years, after which it must be renewed. Health care professionals must present a certificate of competency for reregistration. The certificate of competency is given based on scoring in five areas: continuing education, professional performance, community service, scientific publication, and research and development (Anderson, Andreasta, Marzoeki, & Pambudi, 2014). Law 36/2014 regulates health professionals more broadly.
External evaluation and accreditation of facilities	Ministerial Regulation no. 12/2020 requires all hospitals to be accredited every four years by an independent agency. As part of hospital accreditation, hospital must provide 3 reports to the MOH – a strategic improvement plan; a performance report tracking national service quality indicators; and a patient safety incident report. Each health facility is also required to establish a Patient Safety Committee that will coordinate with the National Patient Safety Committee under the oversight of the Directorate of Quality and Health Facility Accreditation. Reporting to the national committee is voluntary. Complaints and/or cases are categorized along generic classifications of incidents in line with the Ministerial Regulation of MOH no. 11/2017 hence, it is difficult to generate specific incident classifications. As 2019, accreditation is also a criteria for BPJS-K empanelment. While private hospitals have to renew their contracts annually, this does not apply to public hospitals. Accreditation of primary health care facilities began more recently, with the enactment of MOH regulation no. 46/2015, and the establishment of an Accreditation Commission for Primary Health Care Facilities *(KAFKTP)*. While KAFKTP's current capacity is limited, the vision is to expand its capacity, attain independence (even though it is currently set up within the MOH), cover both the public and private sectors, and eventually get accredited by the International Society for Quality in

	Health Care. There are four levels of accreditation for primary health care facilities – *dasar, madya, utama, and paripurna* – based on the scores achieved across nine standard areas. Facilities must be re-accredited every three years and accreditation will become a prerequisite for empanelment by BPJS-K starting 2021. While public facilities have access to funds (DAK akreditasi, APBD) to cover the cost of accreditation, private facilities are required to cover all costs (e.g., facilitator, assessments) themselves.
Public reporting and comparative benchmarking on issues of quality and cost	There is no systematic standardized mechanism to collect and report on quality. While there are several nation-wide surveys that cover service quality such as the Basic Health Survey (*Riskesdas*) and the Healthcare Facility Census (*Rifaskes*), they are carried out every 5 and 8 years respectively. Assessment of service quality and patient safety is mostly conducted by researchers in educational institutions or by donor organizations. However, findings are not adequately used in decision making and have not demonstrated improvements in national healthcare quality (UGM and MOH, 2019). Real-time performance data on quality indicators remains is limited (Asia Pacific Observatory on Health Systems, 2017).
Performance-based financing	In 2016, a performance-based component to capitation payments was introduced at the primary care level known as *Kapitasi Berbasis Komitmen* (KBK). Capitation payments could be deducted up to 10 percent if targets on three performance indicators were not met. Initially indicators focused on utilization (e.g., contact rate; rate of visit of chronic disease patients) and referral rates. In 2020, KBK was revised to include quality measures. However, the changes were modest. While the chronic disease visit rate was replaced with two quality measures on diabetes and hypertension control, the weight of these indicators is small. The KBK capitation received is still determined predominantly by achieving referral and contact rate targets.
Training and supervision of the workforce	The KKI oversees curriculum development of medical doctors. It requires all new medical graduates to undertake 3.5 years of undergraduate training at a faculty of medicine to obtain a bachelor's degree in medicine, followed by two years of clinical rotation leading to the national board examination, after which the medical school can award the final degree. In theory, medical training has shifted towards a competency-based and problem-solving approach. In practice, this has proven challenging and implementation varies across medical schools. Provincial health offices are meant to provide training and continuing education. However, budget and opportunities are limited (Asia Pacific Observatory on Health Systems, 2017).
Medicines regulation	Food and drug regulation is done by the National Agency for Food and Drug Control (BPOM). BPOM has issued guidelines on bioequivalence and bioavailability testing for generic drugs to ensure quality. Indonesia has a national essential drugs list which is revised every two years. While rational drug use is regulated by the National Drug Policy, there is little evidence that it is being implemented in systematic ways with reports of widespread irrational use of medicines, including overuse of antibiotics (Asia Pacific Observatory on Health Systems, 2017).
Inspection of institutions for minimum safety standards	As part of accreditation requirements, FKTPs are required to develop Standard Operating Procedures (SOPs) in the handling of medical solid and liquid wastes and expired chemicals/reagents/medicines and radioactive waste. The Indonesian Law No.

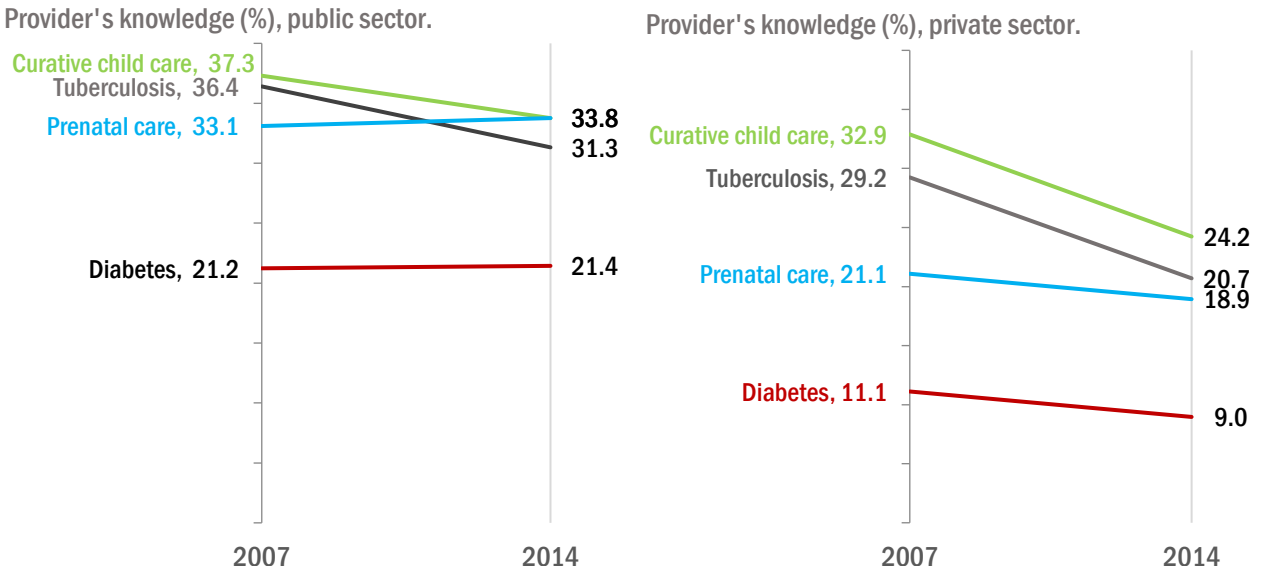
	36/2009 on Health states that provincial and district health offices are required to oversee and ensure occupational health and safety for health workers and provide them with preventive, treatment, and rehabilitation services.
Adverse event reporting	There is no systematic mechanism to collect standardized information on adverse events resulting from specific health services or during patient medical encounters in a medical care setting.
Clinical standards, pathways, and protocols	According to Ministerial decree No. 1423/2010, it is the responsibility of health professional organizations to develop clinical guidelines, which are then endorsed by the MOH. However, progress has been slow. Out of more than 500 conditions, guidelines for only 44 have been completed at the national level; and dissemination down to the facility level has been limited. Professional organizations have drafted an additional ~250 clinical guidelines but they are yet to be endorsed. In addition, clinical care pathways are not mandatory for every guideline, only high cost, high volume conditions. It is also the responsibility professional organizations and healthcare facility associations to provide standardized instructions for routine working activities, including clinical pathways. The national hospital association (*Perhimpunan Rumah Sakit Seluruh Indonesia* or PERSI) has developed the guidance for hospitals; but the implication for having each facility come up with their own clinical pathways is that care is not standardized across Indonesia. There is only one professional organization, the Indonesian Association of Internists (*Perhimpunan Dokter Spesialis Penyakit Dalam Indonesia* or PAPDI) that issued a guideline for its members to develop a more standardized clinical pathways.
Clinical decision support tools	Clinical decision support tools – such as alerts to potential drug contraindications, reminders for preventive care, and guided clinical workflows – are limited. Such tools are often a core component of electronic medical records (EMRs). However, only 20% of hospitals use EMRs in Indonesia. In addition, EMRs are not integrated or standardized across providers limiting health care professionals' ability to follow patients throughout the healthcare system.
Clinical audits and feedback, including morbidity and mortality reviews	Districts are responsible for implementing the Maternal and Perinatal Audit (AMP) 2010 guidelines. The audit process requires medical specialists (e.g., obstetricians, anesthesiologists). AMPs are meant to be financed from APBD and BOK. The MOH's Family Health Unit requires audits be carried out at least 4 times a year. However, many districts could not meet this target and, in 2019, maternal death audits were carried out on less than 10 percent of all deaths. Lack of budget and medical personnel to carry out audits were cited as the main reasons. The MOH is currently finalizing a revised AMP protocol that adapts elements of the WHO's Maternal and Perinatal Death Surveillance and Response (AMP-SR) guideline to the Indonesian context. Beyond AMPs, medical audits are required by the Medical Committee of each hospital as regulated by Ministerial Regulation no. 755/2011 and Ministerial decree no. 496/2005 – the latter also acting as the medical audit guideline for hospitals. However, in practice this is done on a voluntary basis with no obligation to report the results. There is no systematic mechanism to inform providers of medical audit findings and provide actionable feedback on clinical practice.

15. **In Indonesia, the predominant strategy for improving the competence of health workers has been the provision of clinical guidance. However, this has not been very effective.** According to Ministerial decree No. 1438/2010, it is the responsibility of health professional organizations to develop clinical guidelines, which are then endorsed by the MOH. The MOH has consolidated the plethora of sometimes outdated and inconsistent clinical guidelines into a on overwhelming manual (~500 pages) for primary health care doctors (*Panduan Praktik Klinis di Fasilitas kesehatan Tingkat Pertama*). However, dissemination and knowledge of its existence at the front lines is lacking. The guideline is also largely disease-based – assuming all doctors are already able to diagnose patients. It treats each condition in silos and does not account for patients with comorbidities. Finally, conditions do not have clear algorithms that provide an integrated approach to screening, diagnosing, and treating common symptoms.

16. **DLIs 1 and 2 aims to support the development and implementation of clinical pathways and processes of adult care.** At the primary care level, a comprehensive clinical decision tool is intended to be used by clinicians during a primary care consultation, incorporating a symptoms-based approach to guide doctors in assessing, advising, and treating patients. The operation will also support training in the use of the clinical decision support tool and assessment of providers' competence before and after roll-out. At the hospital level, translation of clinical guidelines into pathways will be limited to 20 conditions, as these are only mandated for high frequency, high cost conditions.

17. **Overall, the evidence on the impact of clinical practice guidelines on health outcomes is positive but small. However, this operation does not just introduce clinical pathways and decision support tools on their own**. First, the evidence mostly comes from high-income countries where provider competence is relatively higher compared to lower- and middle-income settings and continuing education opportunities widespread and mandated. In Indonesia, doctor's knowledge of basic health conditions is low and decreasing, therefore, the potential impact could be much larger (Figure 7). Second, studies assess the effectiveness of decision-support technologies on their own. However, the PforR introduces a package of interventions (i.e., training (DLI 1), compliance monitoring (DLI 4), and performance-based financing (DLI 6)) that together are aimed at improving and incentivizing improved health outcomes. Third, while the impact on health outcomes was limited, the impact on standardizing care practices and improving the process and structure of care was more important (Lugtenberg, Burgers, & Westert, 2009) (WHO, 2018). This on its own will be a significant achievement not just in improving the quality of care but also in facilitating BPJS-K's claims management and verification process.

Figure 7. Doctor's knowledge of basic health conditions is low and decreasing.



Source: Indonesia Family Life Survey 2007 and 2014.

Note: Provider knowledge is measured as the percent of medical history questions asked, laboratory tests/exams recommended, and treatment suggested by the provider most likely to treat the tracer condition based on a list of items deemed essential for responding to each clinical vignette scenario.

DLI 3 – Incorporate findings from health technology assessments in the benefits package

18. **In the absence of an explicit and transparent process to decide what is included/excluded from the benefit package, it has been politically difficult to incorporate findings into JKN**. Health technology assessments (HTA) provide a globally accepted and structured approach to synthesizing evidence on the cost and effectiveness of interventions alongside other criteria to support evidence-based priority setting and policy decisions. The MOH formally established a HTA unit/committee through Presidential Regulation 13 in year 2013 to support decisions on what new diagnostic and/or screening technologies, drug therapies, medical devices, and procedures should be included in JKN. However, a general lack of capacity in the production of evidence and acceptability of the process among high-level policy makers have limited its effectiveness (Sharma, et al., 2020) (Teerawattananon, et al., 2019). Despite HTA studies having identified potential annual savings on the order of US$ 31.9 million since 2014 (iDSI, 2020), the media and public opinion have often helped to reverse recommendations from HTAs and cost-effectiveness studies. In the absence of a transparent process, methodology, and criteria for assessment, policy makers have not been able to rely on HTA findings to support politically sensitive decisions.

19. **DLI 3 revises the HTA guidelines to clearly and transparently lay out the process, methodology, and assessment criteria for HTA studies will help ensure findings are incorporated into the benefit package and are in line with available resources**. HTA guidance helps answer four questions: 1) Does the technology work? 2) For whom? 3) At what cost) and 4) How does it compare to exisiting alternatives. The revised HTA guidelines should include (i) explicit criteria for how diagnostic and/or screening technologies, drug therapies, medical devices, and procedures are selected for evaluation; (ii) the methodology for

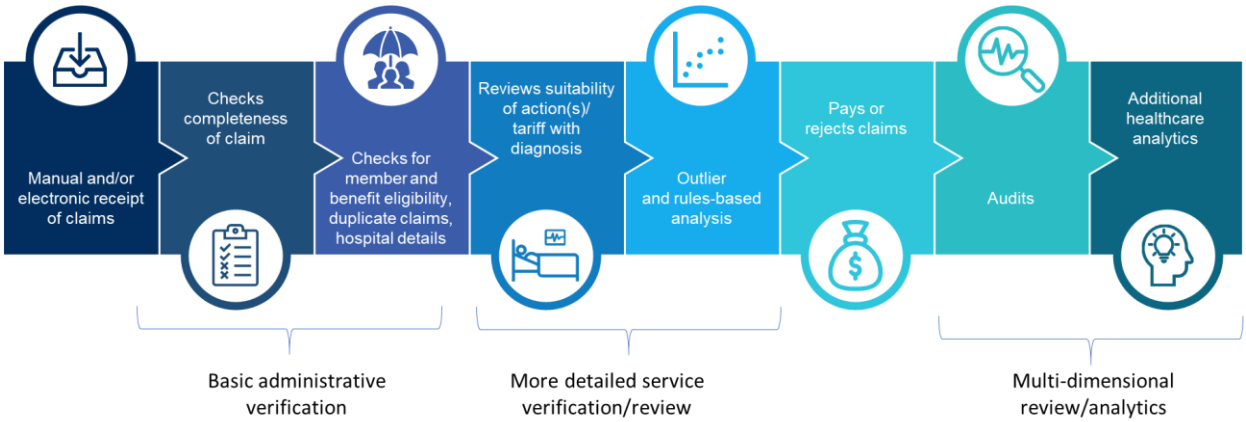
carrying out the HTA; (iii) explicit criteria for decision making; and (iv) how findings will be disseminated to the public.

DLI 4 – Improve claims management and fraud detection processes

20. **By all accounts, investing in improving claims management will achieve substantial savings**. Claims expenditures are the single largest expenditure item for BPJS-K. Five claims alone account for more than half of all JKN spending – outpatient visits for chronic conditions (Q-5-44-0), dialysis (N-3-15-0), and cataract procedures (H-2-36-0) and admissions for mild caesarean sections (O-6-10-I) and bacterial and parasitic infections (A-4-14-I). A recent study by Deloitte found that insurers that can enforce protocol-based care, build automated and streamlined workflows, and leverage data to provide actionable information can achieve 4-8 percent reductions in annual expenditures. Insurers that adopt advanced fraud detection tools and techniques that identify claims with a high propensity for fraud can achieve additional savings on the order of 5-10 percent. Overall, Deloitte claims that leveraging technology enablement and advanced analytics with the proper training to develop new skills can reduce claims and increase productivity by as much as 20-25 percent (Deloitte, 2011).

21. **DLI 4 aims to streamline and strengthen existing processes in claims management and fraud prevention.** A review of claims management processes in other countries suggest a common progression of system maturity. First, digitize and automate the basics. Digitizing as many steps as possible in the claims process from data input to payment has the potential to dramatically improve productivity, accuracy, and savings. Second, as the system matures, use more advanced healthcare analytics to answer specific policy questions, such as "are resources being spent efficiently?" or "can the quality of care be improved? (Figure 8) (Berndt, 2020). Currently only basic administrative verification is automated in Indonesia. More detailed service verification and analytics are still manual in BPJS-K's claims processing requiring significant manpower and time to carry out. Given that Indonesia currently only has 926 verificators and 323 fraud detection specialists to process 9 million hospital claims a month, this more detailed verification is not carried out during the pre-payment phase (Figure 9). DLI 4 will embed and automate tracer indicators identified under DLIs 1 and 2 into its claims verification software to monitor compliance with protocol-based care.

Figure 8. Typical claims verification steps.



DLI 5 – Improve the use of data in decision making

22. **DLI 5 will support the complementary digital transformation agenda needed to ensure improvements in the quality of care and claims management.** Claims data is often a natural entry point for healthcare analytics as data is standardized, structured, and widely available. Linking primary health care and hospital claims data would allow tracking patient pathways and episodes of care. Links to electronic medical records could further help verify the appropriateness of care and adherence to clinical protocols. In the absence of widespread electronic medical records, introducing additional indicators to claims intake forms, requiring additional claims forms for certain conditions, or mandating the submission of medical resume forms would also work as it would enable checking adherence to guidelines and protocol-based care. Reporting compliance would be high because there is a strong financial incentive for providers to submit the required forms to get reimbursed. Gradually connecting BPJS-K membership data to the Ministry of Social Affair's targeting database (DTKS) or the MOF's tax database could automatically verify contribution compliance and membership eligibility. And linkages to the Ministry of Health's accreditation database (SIAF) would automatically verify provider's credentials. As information systems for drug prescriptions, supply chain logistics, and other inventory management systems are developed they too could facilitate appropriateness of care and facility credentialing checks (Figure 10). Artificial intelligence can then be applied to identify patterns and inform BPJS-K's operational and financial decisions or influence clinician and patient behavior (McKinsey, 2019).

Figure 9. Claims in Indonesia are submitted electronically and manually (supporting documentation) with many system discontinuities.

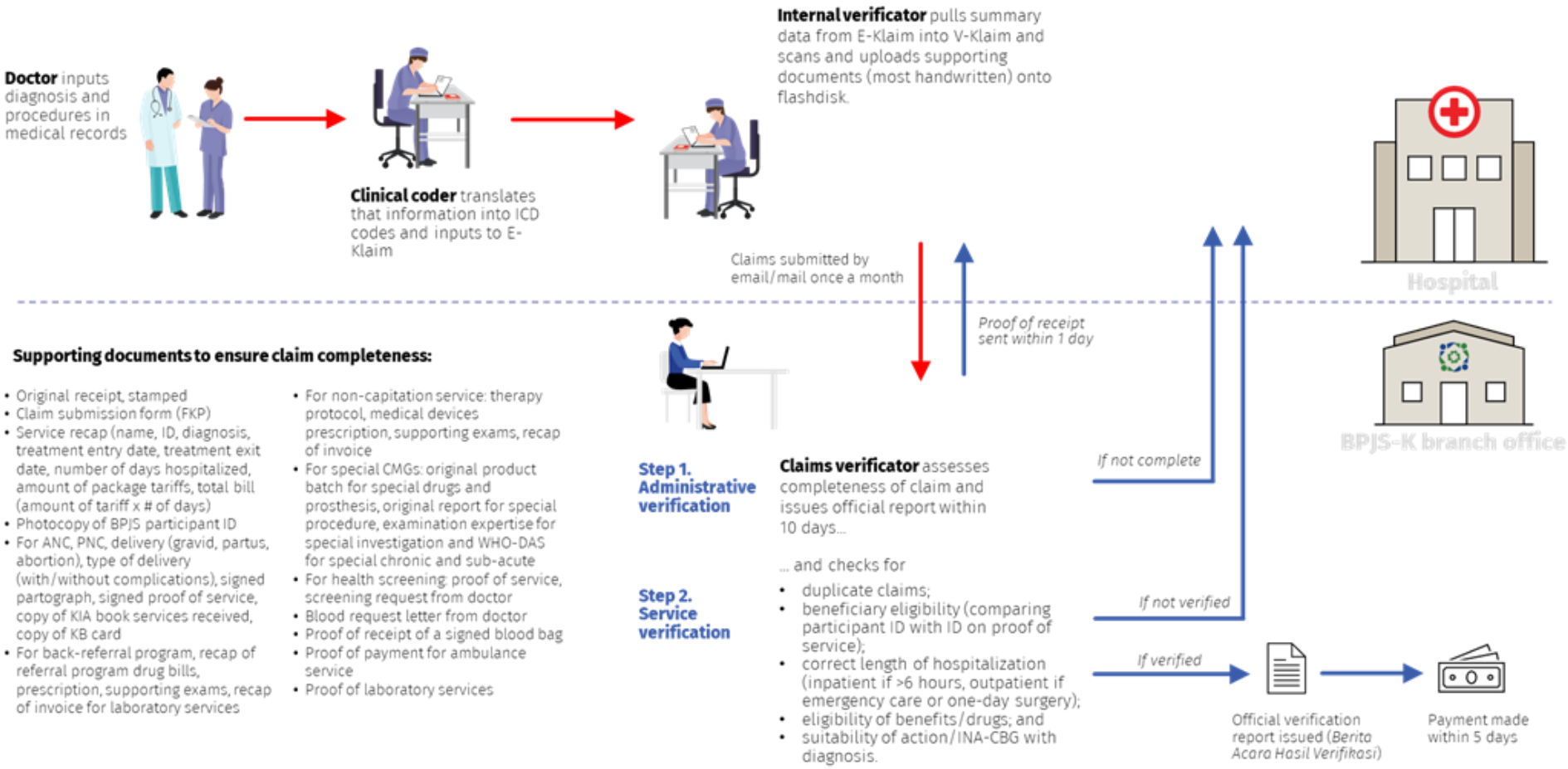
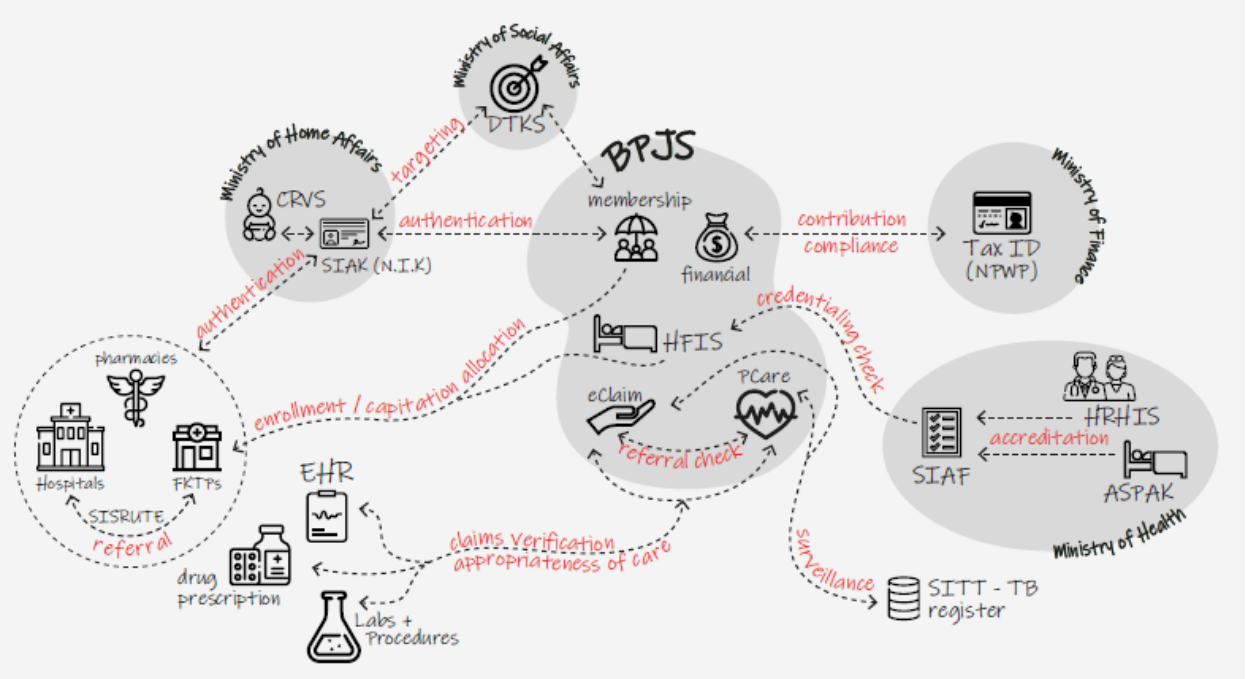


Figure 10. The more integrated the relevant health information systems are, the greater is the ability to inform JKN policy.



DLIs 6 & 7 – Improving the design and implementation of provider payment arrangements

23. **Every provider payment methods embodies specific incentives that influence behavior. Capitation and case-based payments are generally considered the most efficient provider payment methods for primary health care and hospitals respectively if implemented well but they are complex to administer**. As facilities are funded on the same basis for the same package of services (in the case of capitation) and the same activity (in the case of case-based payments), they are meant to i) improve management and promote medical efficiency by reducing unnecessary care; ii) promote equity in financing by reducing large variations in the cost of treatment across facilities; and iii) enhance the transparency of funding by use of a payment formula. However, they require substantial coding and costing expertise, strong data systems, and active oversight. In the absence of a strongly enforced or monitored gatekeeping system primary care providers have an incentive to refer complicated or chronic patients to the hospital sector. As hospitals are paid per admission/case, they may discharge prematurely, compromising quality and/or encourage readmissions to incur another claim. Hospitals also have an incentive to up-code – that is code for a condition/case that has a higher reimbursement rate.
24. **In Indonesia, the capitation formula reinforces existing distributional imbalances in human resources, weakly incentivizes quality, and does not account for FKTPs' absorptive capacity**.
    - Primary health care is paid by capitation – a fixed per capita budget covering 144 competencies or services that first level healthcare facilities (*fasilitas kesehatan tingkat pertama* or FKTP) are meant to perform. However, the FKTP package covered by capitation was never costed nor was it based on whether facilities could actually provide all services. Instead, the amount an FKTP receives is based on the number and type of providers and the number of beneficiaries assigned to facilities without any

adjustment for geography, age, sex, or other indicator of health need (Table 3). This reinforces existing imbalances in provider and beneficiary distribution (Figure 11).

- Second, the performance-based capitation component weakly incentivizes quality. In 2020, the GOI revised the KBK design to include quality measures. However, the changes made were modest. While they replaced the chronic disease visit rate with two quality measures on diabetes and hypertension control, the weight of these indicators (10 percent) is small. The KBK capitation received is determined mostly by achievement on meeting referral and contact rate targets (Figure 12). While performance information on new KBK regime is not yet available, a simulation of the potential impact of KBK design changes on FKTP revenue is presented in Figure 13. Based on application of the new KBK rules alone, with no expected change to performance achievement, the new KBK formula will likely decrease overall achievement compared with old KBK formula among public FKTPs (puskesmas) but improve among private FKTPs (clinics) as the range of potential deduction widens for puskesmas and shrinks for clinics. The significantly larger financial impact among puskesmas will likely reduce revenue by an additional 6 percent. As a result, it is expected that puskesmas will be further penalized financially without any improvement or worsening of performance.
- Lastly, fragmented financing, unclear guidelines, and weak capacity for managing funds at the primary care level leads to undisbursed capitation funds. Total cumulative undisbursed capitation funds (SILPA) amounted to IDR 2 billion as of June 2020.[3]

Table 3. Capitation tariff formula

Type of FKTP	#Doctor (GP)	#Dentist	IDR Capitation
Puskesmas	0	0	3.000
	0	1	3.500
	1	0	4.500
	1	1	5.000
	2	0	5.500
	2	1	6.000
DPP	1	0	8.000
Clinic	2	0	9.000
	2	1	10.000
RS D Pratama	2	1	10.000

Source: PMK 52 2016

[3] MOH. Ibu Yani, webinar with Perklin

Figure 11. The input-based formula reinforces existing imbalances.

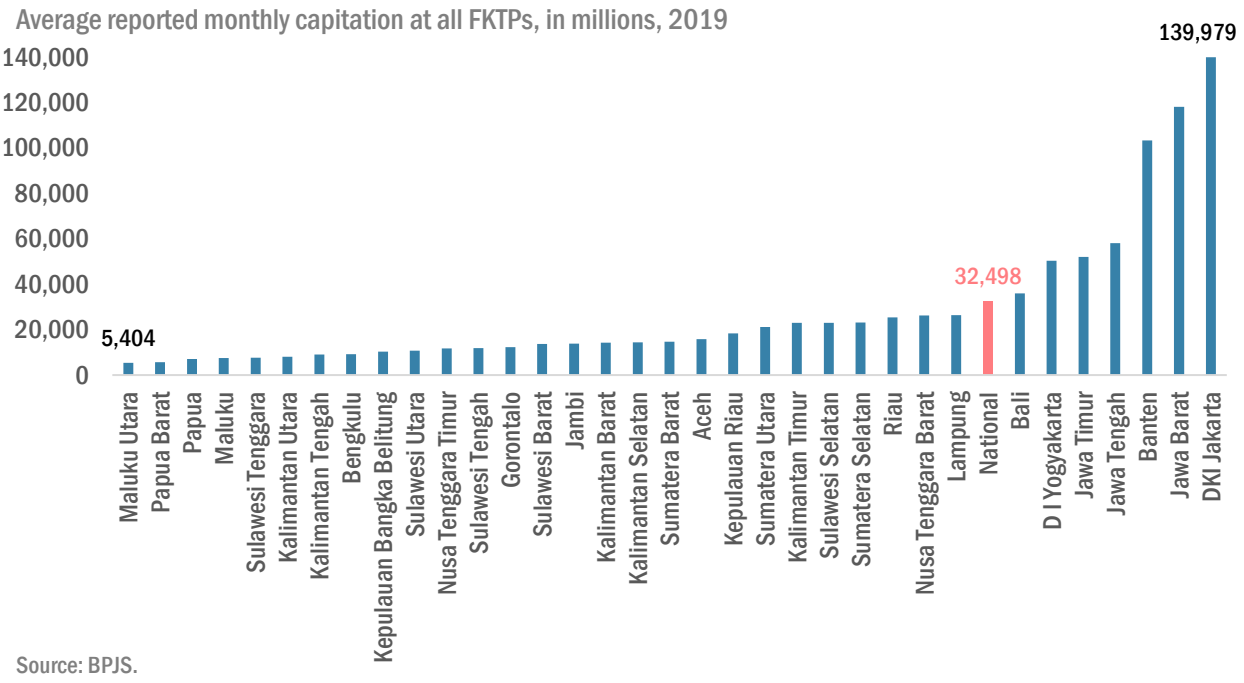


Figure 12: Overview of KBK design.

Old KBK

KBK indicators

1. Contact rate > 150 contacts per 1,000 people per month
2. Referral rate for non-specialistic services < 5%
3. Rate of visit for Prolanis patients >50%

Indicators achieved	Capitation received
0	90%
1	92.5%
2	97.5%
3	100%

New KBK

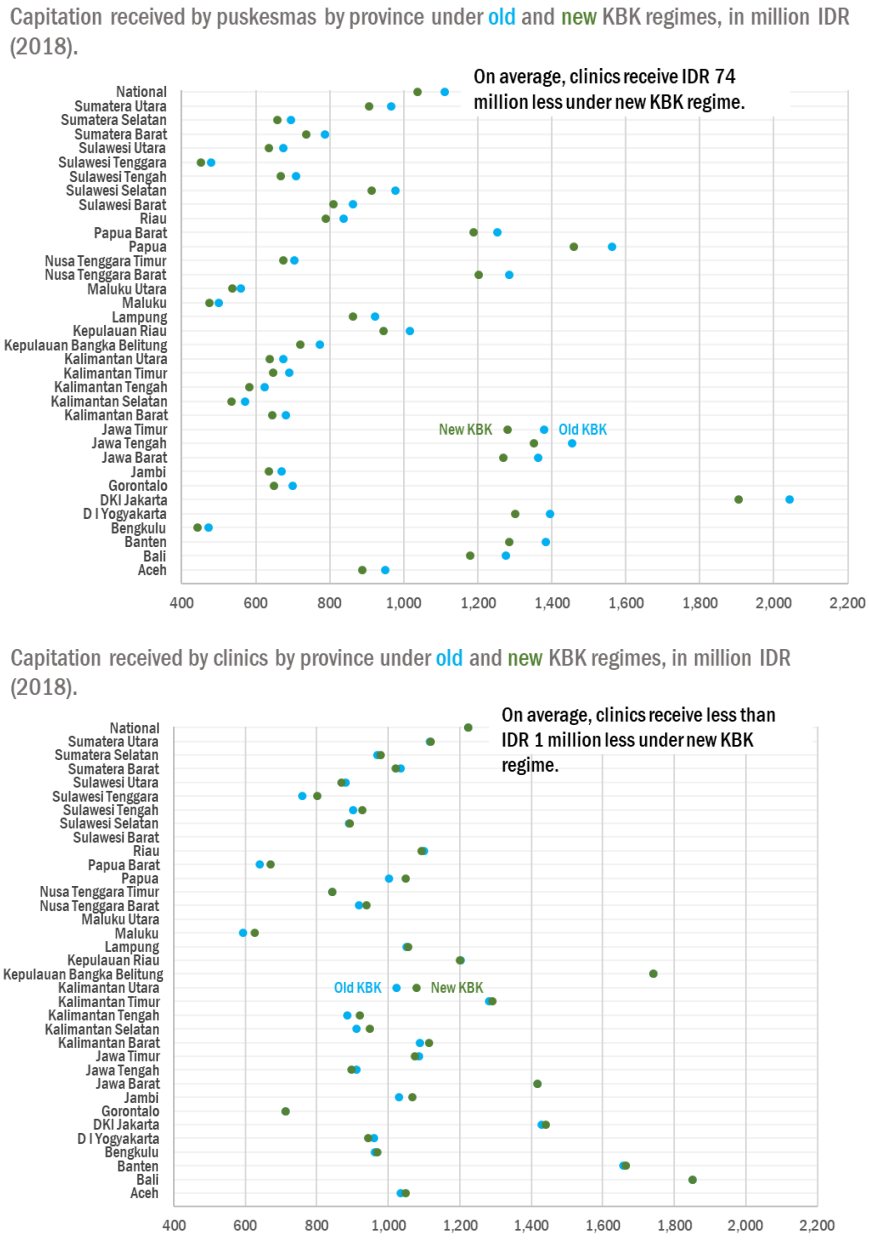
KBK indicators

1. Contact rate > 150 contacts per 1,000 people per month
2. Referral rate for non-specialistic services < 2%
3. Controlled Prolanis – i.e. >5% of diabetes and hypertension patients have their condition under control.

Indicator	Weight	Rating	Description	KBK score
a	b	c	d	e=bxc
Contact Rate	40%	4	>= 150 ‰	1,6
		3	>145 - < 150 ‰	1,2
		2	> 140 - 145 ‰	0,8
		1	<=140‰	0,4
Referral rate	50%	4	<=2%	2
		3	> 2 - 2,5 %	1,5
		2	> 2,5 - 3%	1
		1	> 3 %	0,5
Controlled Prolanis	10%	4	>=5%	0,4
		3	4% - <5%	0,3
		2	3% - <4%	0,2
		1	< 3 %	0,1

Total KBK score	Capitation received	
	Puskesmas	Clinic
1 - <2	85%	95%
2 - <3	90%	96%
3 - <4	95%	97%
4 - <5	100%	100%

Figure 13. Simulations suggest new KBK will penalize puskesmas with no significant impact to clinics.



25. **DLI 6 aims to improve the capitation design to reflect need and service availability at FKTPs.** It will develop a roadmap based on a review of historical utilization patterns at FKTPs by age, gender, diagnosis; the ability of FKTPs to deliver interventions listed in the benefit package; the historical allocation and use of capitation, including undisbursed capitation; and the performance of existing KBK indicators. The roadmap should consider the following reforms, especially to the base per capita rate and KBK indicators.

- **Changing the capitation formula**. Alternatives to an input based capitation formula include: i) a simple budget neutral formula where the base per capita rate is equal to the total funds in the FKTP pool divided by the total population; ii) a more complex risk-based capitation formula based on the average visit cost by age, gender, and diagnosis. The latter generally requires properly coded/disaggregated historical utilization and costing data.

- **Revising the basic benefit package**. Assessing whether FKTPs are able to deliver all 144 services meant to be delivered at the primary health care level could further inform the base per capita amount and referral quotas.
- **Additional incentives**. Still, capitation incentivizes providers to underprovide services. To ensure essential public health services remain in FKTPs, existing (and/or additional) payment methods may need to be refined and blended with the fixed capitation. For example, Indonesia pays for antenatal and postnatal care on a fee-for service basis to increase provision of these services given the higher than expected maternal mortality rates for Indonesia's level of income. Similarly, in remote and rural areas other financial incentives (e.g., transport allowance for patients or top-up payments for outreach visits) may be necessary to improve supply and/or increase utilization.
- **Increasing the financial autonomy of puskesmas**. There has been an increasing trend towards giving greater financial autonomy to public FKTPs (BLUD puskesmas)[4]. In terms of JKN capitation fund, puskesmas with BLUD status are able to hire non-civil servant employees and procure drugs. Reviewing and potentially revising the minimum criteria for attaining BLUD status might be needed to ensure planning and budgeting capacity.
- **Refining performance-based capitation design to reward quality improvement.** In parallel to improving accountability processes, the GOI should consider refining existing performance-based indicators at the primary-care level to incentivize improvements in the quantity and quality of service delivery interventions linked with national priority areas (e.g., maternal health, nutrition, TB) and priority programs like the back-referral program, which focuses on 9 chronic conditions (e.g., diabetes, hypertension, cardiovascular disease, asthma, chronic obstructive pulmonary disease, stroke, lupus, epilepsy, and chronic mental health). JKN offers the most scope for performance-based financing, as it is earmarked for health, has the potential to be tied to outcomes, and makes up a significant share of district health revenues.

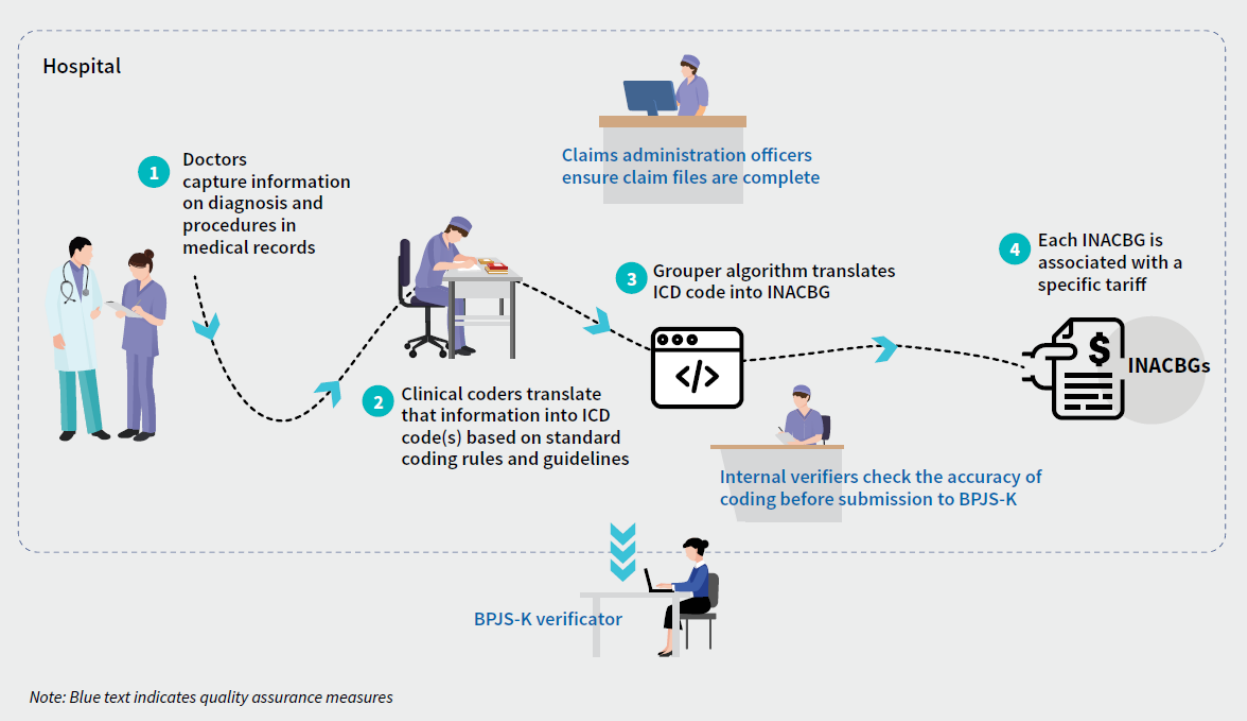
26. **At the hospital level, open-ended payments incentivize volume over quality or efficiency**. Hospitals are reimbursed based on diagnosis-related groups (DRGs), known locally as INACBGs. Normally in DRG-based systems, the payment rate is set prospectively based on average cost (or the cost of the best performing hospital); the provider is meant to bear some of the financial risk if the cost of treatment for a given case exceeds the payment rate for that case. Of critical importance is the presence of a budget and/or volume ceiling; but, in Indonesia, payment to hospitals is essentially open-ended shifting the burden to BPJS-K as hospitals get reimbursed for all or most of their claims – removing any incentive they might have to manage resources more efficiently.

27. **Poor documentation by providers, lack of clear coding guidelines, the low competence of clinical coders also lead to the wrong INACBG being assigned**. The two main design characteristics of a DRG-based payment system are the patient classification system (i.e., how diagnoses are grouped into cases of similar clinical aspect and resource use) and the payments associated with each DRG. This requires detailed data on hospital activity (e.g., diagnosis, tests and services provided) and cost data for each admission (Figure

[4] Majority of puskesmas are nonBLUD and they cannot hire medical staff. Private sector can hire medical staff. No 40 2004, initially FKTP design was for clinic and private not puskesmas.

14). A few small-scale studies in Indonesia found that coding accuracy ranged from 40–75 percent depending on the condition assessed. On the one hand, underreporting the care received during a hospital admission, or not listing a secondary diagnosis (known as downcoding), can result in the loss of significant revenue. On the other, clinical coders may face pressure from doctors or hospital administrators to report complex diagnoses, services, or procedures that command higher reimbursement rates (known as upcoding). Both down- and upcoding also have implications for patient safety and continuity of care, especially when the care received (or required) is not accurately reported in a patient's medical record for future or follow-up visits. Strong coding and data systems are especially vital because in 2019, hospital expenditures accounted for 84 percent of all JKN expenditures (Figure 15).

Figure 14. The accuracy of clinical coding is essential for assigning the correct payment.



28. **The most common ways to ensure the quality of clinical coding and, by extension, the correct payment include**:

- **Certification of clinical coders.** While in some settings doctors may code their own findings, coding is generally done by professional coders with a substantial knowledge of the coding system and its rules. In many countries, employers and health insurance agencies require a professional process of certification and may even stipulate it as a precondition for accreditation of a medical facility (Table 4). The bodies responsible for developing curriculums, organizing training courses, and certifying coders tend to be the MOH (or related public entities), professional organizations, or accredited universities. In Indonesia, there is currently no national exam or formal certification process. The MOH recently approved professional standards for technicians who process medical records and health information technicians (PMK 312 2020). Although these are now to be used as a reference when developing training curriculums, it remains unclear who is meant to take the lead in developing and

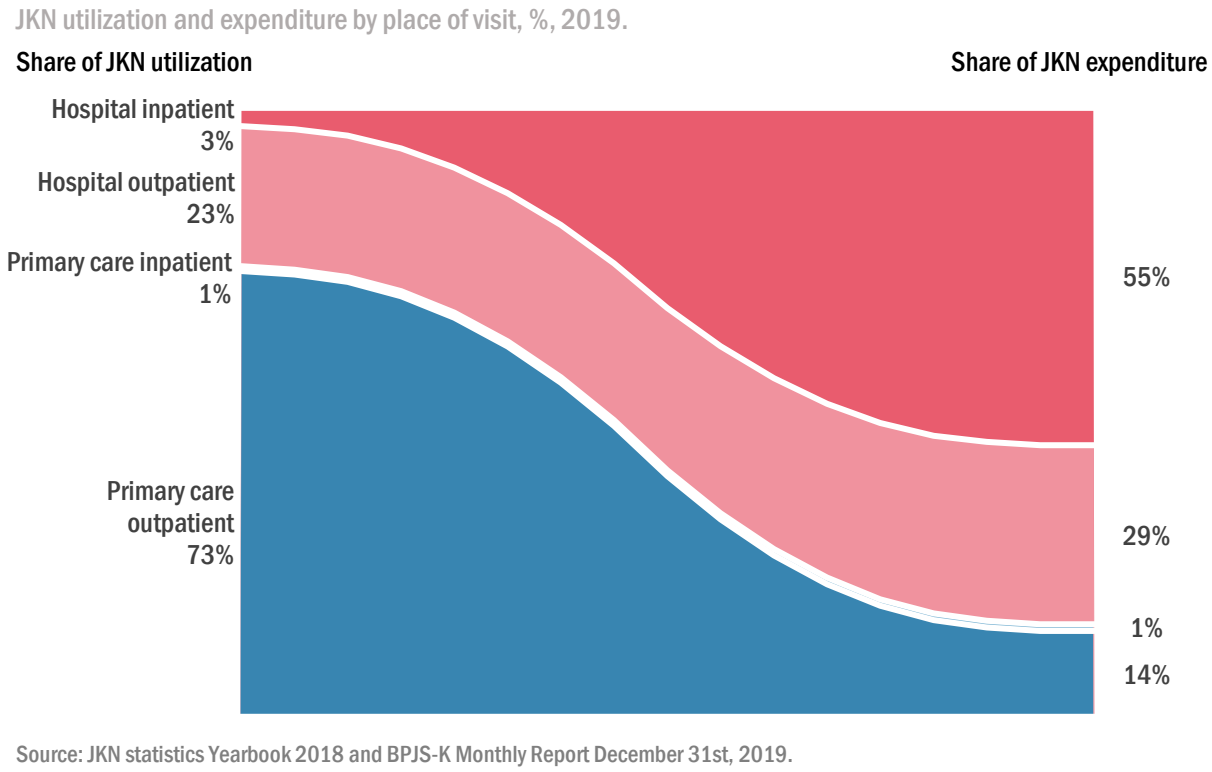
carrying out a clinical coder certification process. The Indonesian Professional Organization for Medical Record and Health Information (PORMIKI, established in 1989), with more than 16,000 members, has struggled to develop an updated curriculum. The Coding Center of Excellence (CoCE), established in 2015, responds to demands for capacity building at the facility level to improve the quality of coding. CoCE estimates that Indonesia needs at least 50,000 clinical coders, whereas it currently has roughly 3,000.

- **Internal and/or external coding audits**. Auditors review medical records, coding guidelines, and compliance and usage rules for accuracy and completeness. Findings may form part of key performance indicators or job evaluations for a facility or department. Audits can be carried out by the facility, the MOH, the insurance agency, or an entirely independent agency (Box 2). Sampling can either be targeted, to address a specific problematic code, or random, to monitor overall coding quality. Audits can be done remotely or on-site. In low and middle income countries it is not unusual for human resources and funding constraints to determine the parameters of coding audits. Currently, Indonesia does not carry out any clinical coding audits. However, BPJS-K conducts some audit functions as part of its claims management and fraud detection processes.
- **Use of enabling technology.** Increasingly countries are shifting towards the use of electronic medical records (EMRs) and other health information technologies. This has allowed doctors in some settings to assign ICD codes directly with only a limited knowledge of coding rules. Drop-down menus that list diagnoses and procedures in text format are automatically mapped to ICD codes, significantly enhancing efficiency. EMR applications can also be designed to flag incomplete medical records and any data entry combinations that should not be accepted. Currently, only about 20 percent of hospitals in Indonesia use EMRs. Furthermore, EMRs are not standardized across the country.

29. **The DRG tariff structure is also based on unrepresentative cost data and is unnecessarily complicated**, **which may further encourage gaming and inefficiency**. First, the costing template is not detailed enough to get accurate estimates of unit cost. Filling out the templates is also not based on a representative sample of public and private hospitals and the tariffs are only 3 percent higher at private hospitals even though public hospitals receive significant supply side financing. When the cost data is inaccurate or unfair it may incentivize providers to underprovide services or upcode. Second, Indonesia has 1,075 codes – many of which are not being used. Tariffs also have several adjustments for hospital type, region, and JKN membership class – but none of these adjustments were costed and do not reflect the cost of actually delivering care. Instead, adjustments are standard percentage increases – the justification for which is unclear.[5]

[5] For example, any given condition or treatment, class 1 tariffs are 17% more expensive than class 2, and class 2 are 20% more expensive than class 3. Similarly hospital class A tariffs are 43% more expensive than hospital class B, hospital class B are 31% more expensive than hospital class C, which is 15% more expensive than class D.

Figure 15. Hospitals account for 84% of JKN expenditure, but just 26% of utilization.



Source: JKN statistics Yearbook 2018 and BPJS-K Monthly Report December 31st, 2019.

Box 2. While the scope of audits may differ, they are all complementary to one another.

Strict coding audits verify the correctness of principal diagnosis, other diagnosis, and procedures using coding guidelines and clinical documentation. Their main purpose is to identify incomplete provider documentation and incorrect use of medical codes, whether intentional or not, and thereby improve the quality of medical record documentation and coding practices. They are most commonly conducted internally by hospitals, but are also undertaken by the MOH, professional organizations, or academic institutions.

Technical or accounting audits verify the validity of claims submitted for reimbursement against claims protocols, fraud detection guidelines, and beneficiary and provider contract terms. Their main purpose is to check the completeness of claims, the insurance status of the patient, the eligibility of benefits, whether procedures match hospital capacity, whether diagnosis and procedure codes are correct, and any outlier behavior. They are most commonly conducted by health insurance agencies or third-party claims administrators to identify inefficiencies and fraud in reimbursement.

Medical audits (also morbidity and mortality audits) verify whether the services provided by health providers comply with professional clinical guidelines written by medical professional associations. Their main purpose is to check the appropriateness and quality of care.
Medical audits are most commonly conducted by the MOH to improve the competence of health care professionals. However, where clinical professional guidelines exist, health insurance agencies often write definitions of medical necessity and appropriate care into provider contracts and check for compliance as part of their claims management process (for example, whether prior authorization was sought when required).

Table 4. Clinical coding practices in other East Asia countries.

	Who codes?	Who certifies?	Who is responsible for ensuring coding accuracy?	What coding standards are used?
Indonesia	Medical record professionals	No coder certification process	The MOH does not carry out quality coding audits. BPJS conducts audits as part of its claims management and fraud detection processes.	ICD10 and ICD9CM 2010 edition for diagnoses and procedures respectively. No country-specific coding guidelines but as problems arise, BPJS-K and MOH jointly clarify coding guidelines (Panduan Manual Verifikasi Klaim INA-CBG).
Philippines	Certified clinical coders required for hospital accreditation	The MOH runs training courses and issues certificates for those who successfully pass a post-training test. Certificates are required for issuing and renewing licenses. PhilHealth also conducts training on ICD10 with an exam and certificate.	The MOH plans to publish a National Coding Audit Protocol for hospitals. PhilHealth carries out targeted prepayment audits on known problematic claims and random post-audit reviews on fewer than 1% of claims. Penalties and sanctions exist for upcoding.	ICD10 2016 edition for diagnoses. Separate procedure codes are used for surgical cases and other specialized procedures. Migration to ICD9CM is under consideration. Country-specific coding handbook reflecting Philippines ICD10 modifications.
China	Certified coders	Clinical coders are required to undergo training and pass an exam organized by the Chinese Medical Record Association.	The Chinese Medical Record Association carries out coding quality audits annually on behalf of the National Health Commission. The National Healthcare Security Administration (NHSA) conducts coding audits as part of its claims management and fraud detection process.	ICD10 (NHSA modification) and ICD9CM3. Country-specific coding guidelines reflecting NHSA ICD10 modifications.
Vietnam	Physicians or nurses	No coder certification process yet.	No regulations yet in place on accuracy of coding but there are some basic rules to catch combinations that should not be accepted.	ICD10 and Vietnamese technical medical service codes have been mapped to ICD9CM but no country specific coding guidelines yet.
Thailand	Coders with Bachelor degree or physicians and nurses who have received training in diagnosis and procedure coding	The National Health Security Office (NHSO) delivers a medical records/auditors training with certification but there is no formal regulation or compulsory certification requirement.	Hospitals set up their own internal coding audit system to check accuracy and completeness of data. The MOH mobilizes certified junior auditors from hospitals to perform audits on 1-5% of all claims. The NHSO ensures the quality of audits by having 5-10% of all audits verified by senior auditors. The NHSO's Bureau of Claims and Medical Audit (BCMA) also conducts targeted post-payment coding audits based on prescribed criteria.	ICD10 2016 (Thai modification) for diagnosis and ICD9CM 2015 for procedures. Thai Medicines Terminology and Thai Medical Laboratory Terminology are used to audit drug and laboratory claims. NHSO's BCMA regularly revises and updates the country's audit policy and country-specific coding guidelines.

Source: World Bank staff. For Thailand: Pannarunothai, S, personal communication, July 5, 2021.

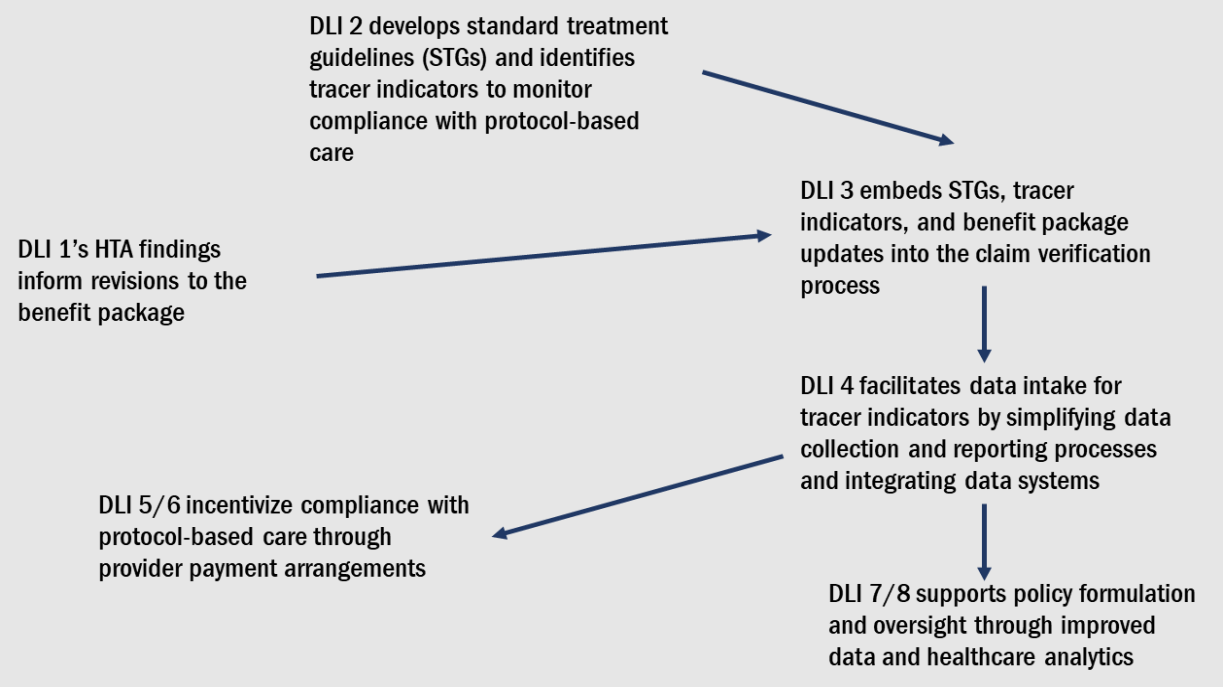
30. **DLI 7 aims to improve the implementation of hospital payments by increasing the accuracy of clinical coding and revising the INACBG tariffs based on standardized more representative cost information**. To improve the accuracy of coding it will revise clinical coding guidelines and audit protocols; develop a clinical coding training course and certification process; support the training of at least one certified medical record professional per hospital; and carry out coding audits on a random sample of hospitals. To improve the representative of tariffs, it will develop a standardized cost accounting template and assess utilization at hospitals by age, gender, diagnosis, and INACBG. Based on this it will support the revision of INACBG tariffls. Ideally revising the DRG tariffs should also include a hard budget or ceiling as implementing a close-ended hospital payment has the greatest potential to curb expenditure growth as most JKN spending occurs in hospitals. While it is unlikely that the GOI would have introduced a global budget or cap to DRG hospital payments by the end of the PforR as such reforms take several years to design, pilot, and rollout, the intention of operation is to introduce the preliminary activities needed to lead to such a change. The PforR also expects to see a substantive improvement in the implementation of DRGs through its strengthened cost and coding data and improved claims and fraud prevention processes.

DLIs 8 & 9 – Improve the management and coordination of JKN, including policy formulation and oversight

31. **DLI 8 and 9 focus on strengthening coordination across JKN stakeholders to improve policy formulation and oversight of JKN**. DLI7 will be led by DJSN, in its role to oversee the performance of BPJS-K and to report on JKN's overall performance. It will agree on a list of key performance indicators. An internal and external dashboard will support policy formulation and inform the public externally for greater accountability. Capacity building activities on key topics related to health insurance, healthcare analytics, and public accountability will also support the production of an annual report summarizing JKN performance. DLI9 enables the creation of a coordination mechanism at the MOF, that engages with a technical working group comprised of all the stakeholder teams involved in the design and implementation of JKN reforms. It also enables a pool of technical expertise being procured by this secretariat, and the regular production of synthesized policy inputs.

32. **All activities and DLIs reinforce each other in improving the quality and efficiency of service delivery.** For example, DLI 3's HTA findings inform revisions to the benefit package. Any changes to the benefit package are updated in BPJS-K's claims verification process under DLI 4. DLIs 1 and 2 develops standard treatment guidelines (STGs) and identifies tracer indicators to monitor compliance with protocol-based care. These are also embedded into BPJS-K's claims verification process under DLI 4. DLI 5 facilitates compliance with STGs and eligibility of services by ensuring data on tracer indicators and benefit package entitlements are collected in simplified reporting processes and integrated data systems. DLIs 4 and 5 are also needed to support DLIs 6 and 7 that incentivize compliance with protocol-based care through provider payment incentives. Finally, DLI 5 supports policy formulation and oversight under DLIs 8 and 9 through improved data and healthcare analytics (Figure 16).

Figure 16. DLIs reinforce quality and efficiency through financial (provider payment incentives) and non-financial (monitoring) means.



Expenditure Framework

33. **Figure 17 summarizes the GOI's health sector and JKN programs and specifies the areas that are supported by this PforR.** The government program boundary expenditure amounts to US$ 41 billion over five years. It includes budgets from all stakeholders that are responsible for achieving the PforR's disbursement linked indicators (DLIs).

34. **An important distinction between the government program and the Program boundary is that the Program only includes the MOH's premium contributions for covering the poor and near poor beneficiaries under JKN.** It excludes all other financing sources for JKN – the largest among which are the premium contributions from the employers and employees in the formal sector. Other financing sources for JKN, not included in the Program boundary, include contributions from the subnational governments, and premium payments made by informal sector workers. The downstream claims payments made by BPJS-K, as the end-use of all the premium collected under JKN, are also not included in the Program boundary. All the administrative costs incurred by the relevant units in MOF, MOH, BPJS-K and DJSN are included in the government program as well as in the Program boundary as summarized below (Table 5). A more detailed breakdown is provided in Annex 2.

    (a) **MOH:** Accounting for over 90% of the Program boundary, the budget lines for MOH include those pertaining to the Center for Health Financing and Health Insurance to pay the JKN premium contribution for *Penerima Bantuan Iuran* (PBI) beneficiaries (comprising of the poor and near poor), as also for their role in carrying out health technology assessments (DLI 3), improving the design and implementation of provider payments (DLIs 6 and 7) and to support Pusdatin and the Digital Transformation Office in MOH for their contributions to the DLI on strengthening information systems (DLI5). It also includes the budget from the MOH's Directorate for Health Services for improving the quality of care and clinical pathways for primary health centers and referral hospitals (DLIs 1 and 2).

    (b) **BPJS-K:** The Program boundary includes BPJS-K's budget lines for their own administrative costs, primarily on account of human resources and operational costs, which are included in the Program boundary in respect of their central role in carrying out claims administration for JKN (DLI4); the Program boundary for BPJS-K excludes the downstream payments made by BPJS-K to health facilities, and also excludes any capital expenditure including construction related expenditure. As more granular information on BPJS-K's expenditure becomes available, the exact budget lines on administrative costs currently included in the Program boundary will be further streamlined to specifically cover the HR costs and operating costs of BPJS-K.

    (c) **MOF:** Relevant line items from the MOF's Fiscal Policy Agency, Directorate of General Budget, and Directorate General Financing and Risk Management for the overall coordination and support of JKN implementation (DLI 9).

    (d) **DJSN:** DJSN's budget for JKN policy implementation and coordination under the Coordinating Ministry for Human Development and Cultural Affairs (DLI 8) is included in the Program boundary.

35. **The beneficiaries of the system strengthening dimensions of the Program are the implementing agencies** – MOH, BPJS-K, DJSN, and MOF – and frontline health providers; however, the resulting improvements in the quality of care will be felt by all JKN beneficiaries, especially poor and near poor households who make up 60 percent of JKN beneficiaries.

Table 5. Program boundary for five years (2021-2026) based on 2021 National Budget.

		In IDR in 000	In US$
Government program	Total MoH (include PBI)	245,274,962,590	17,211,070,282
	Total MoF	44,540,260	3,125,413
	Total Kemenko PMK	60,761,985	4,263,700
	Total BPJS (exclude PBI)	338,892,600,000	23,780,268,051
	Total 3 Ministries and 1 Agency	**584,272,864,835**	**40,998,727,446**
PforR Program boundary	Program Boundary MoH	245,274,962,590	17,211,070,282
	Program Boundary MoF	44,540,260	3,125,413
	Program Boundary DJSN/Kemenko PMK	60,761,985	4,263,700
	Program Boundary BPJS	21,820,535,000	1,531,158,164
	Total boundary from 3 ministries and one agency	**267,200,799,835**	**18,749,617,559**
World Bank contribution	**PforR World Bank**		**400,000,000**
	PforR as shared of program boundary		**2.1%**

36. **As part of this PforR, a recipient executed grant in the amount of US$2.33 million will also be made available to the GOI**. It is contributed through the World Bank's Indonesia Human Capital Acceleration multi-donor trust fund by the Bill and Melinda Gates Foundation. This grant will be available until December 31, 2023. The purpose of the IPF Component is to strengthen the implementation and coordination capacity of the JKN PforR Secretariat, which will be hosted in the Ministry of Finance to support key ministries and organizations involved in the PforR.

37. **The PforR expenditures include only areas needed to achieve the PDO and DLIs.** The main expected expenditure items under the recipient-executed grant are likely to be the hiring of additional consultants and incremental operational expenditures needed to support implementing agencies as well as the Program Secretariat. There is no duplication of expenditures under other World Bank operations in Indonesia. No civil works or large contracts needing Operations Procurement Review Committee (OPRC) approval are anticipated. It is estimated that total expenditures for procurement will not exceed 10 percent of the Program financing (Table 6). The sustainability of investments also does not represent a major risk as various activities are already being financed with GOI's own resources. The activities have been strategically selected to exploit synergies among stakeholders' investments to ensure achievement of the PDO. They support the development of essential processes required for delivering results in the sector.

Figure 17. Government's program in related to the PforR.

Government JKN program

Key health priorities from RPJMN

- Maternal and child health, including nutrition
- Communicable diseases (TB, HIV)
- Prolanis conditions (diabetes mellitus, hypertension, cardiovascular disease, asthma, chronic obstructive pulmonary disease, stroke, lupus erythematosus syndrome, epilepsy, chronic mental health problems)

JKN priorities based on RPJMN 2020-2024	Supported by PforR	
Improving the quality of primary care, including referral pathways	RA1, RA2	✓
Improving disease prevention	RA1, RA2	✓
JKN roadmap 2020-2024		
Expanding membership		X
Improving member satisfaction	RA1	✓
Enhancing system's monitoring and evaluation and reducing inefficiencies	RA2, RA3	✓
Cross-cutting		
Improving system governance and accountability	RA3	✓
Redefining the benefit package	RA2	✓
Accelerating the integration of information systems	RA3	✓
Strengthening purchasing arrangements (capitation, KBK, INACBGs)	RA2	✓

Total GOI program: US$ 41 billion (5 years)

Program boundary supported by JKN PforR

Program Development Objective: To strengthen the quality and efficiency of the government program – JKN.

Results Area 1: Strengthen the quality of care

DLI 1+2: Improve the quality of care and referral pathways

- Develop clinical pathways/processes of care for FKTPs (DLI1) and hospitals (DLI 2) for most common conditions
- Train front line providers in use of clinical decision support tool
- Assess provider competence
- Identify tracer indicators to monitor compliance with clinical guidelines

Results Area 2: Improve the efficiency of JKN spending

DLI 3: Incorporate findings from health technology assessments into the benefits package

DLI 4: Improve claims management and fraud detection processes

DLI 6: Improve capitation design to reflect need and service availability at FKTPs

DLI 7: Improve INACBG implementation

Results Area 3: Support JKN policy formulation and implementation

DLI 5 Improve use of data in decision making to support:

- quality of care improvements
- claims management and fraud detection
- revisions to the base capitation formula
- revisions to hospital tariffs

DLI 8 Improved policy formulation and oversight of JKN

DLI 9 Improved management and coordination of JKN across stakeholders

Program supported by PforR: US$18.7 billion (5 years)**; IBRD: US$ 400 million; RETF grant: 2.33 million**

Table 6. Illustrative expenditure items by DLI.

Disbursement Linked Indicator (DLI)	Illustrative expenditure items needed to achieve DLI
DLI 1 – More informed benefit package MOH: APBN/donor Rp. 1,200,000,000/year or 6 billion for 2022-2026	1. Staff time or consultant fees to revise HTA guidelines 2. Fees to commission additional HTA studies (for example, to universities) 3. Cost of meetings, consultations, workshops, per diems during the HTA production process 4. Cost of dissemination and communication of HTA findings
DLI 2 – Improved quality of care and referral pathways MOH: APBN/WB Rp.8,215,829,000 for 2021-2024	1. Staff time or consultant fees to develop/translate diagnostic, treatment, and referral guidelines into clinical decision support tools for front line workers, including training materials/job aides 2. Staff time or consultant fees to develop training materials/job aides 3. Cost of training workshops, printing, and communication 4. Remuneration for trainers and facilitators/per diems 5. Staff time/ consultant fee for additional personnel required 6. Staff time / consultant fee for updating the information systems, and for data entry, to enable routine data collection to monitor the impact of implementing guidelines
DLI 3 – Improved claims management BPJS:	1. Staff time or consultant fees to develop/revise claims adjudication and fraud investigation guidelines and develop claims audit protocols, including training materials/job aides 2. Cost of training workshops, printing, and communication 3. Remuneration for trainers and facilitators/per diems 4. Additional staff time and/or consultant fee/ remuneration for personnel to conduct enhanced claims management and claims audit functions 5. Staff time / consultant fee for updating the information systems/ databases, and for data entry, to enable routine data collection to monitor the impact of implementing guidelines
DLI 4 – Improving the use of data in decision making BPJS: MOH: WB Rp. 16 billion for 2021-2024	1. Staff time or consultant fees to simplify/revise data intake forms/applications, including training materials/job aides for filling out and submitting claims and medical resume forms 2. Staff time or consultant fees to develop curriculum for analyzing claims data, including training materials/job aides 3. Staff time or consultant fees to develop data integration roadmap 4. Cost of training workshops, printing, and communication 5. Remuneration for trainers and facilitators/per diems 6. Staff time / consultant fee for updating the information systems/ databases; costs for additional internet bandwidth and for enhanced data security protocols.
DLI 5 – Improved primary health care payment methods (capitation and KBK) MOH: APBN/donor Rp. 250,000,000/year or Rp. 1.5 billion for 2021-2026	1. Staff time or consultant fees to develop risk-based capitation payment and simulate the potential budget impact 2. Staff time or consultant fees to develop enhancements to KBK related to prolanis and back-referral program and simulate the potential impact 3. Cost of meetings, consultations, workshops, per diems during the HTA production process 4. Cost of dissemination and communication of changes to capitation

Disbursement Linked Indicator (DLI)	Illustrative expenditure items needed to achieve DLI
	5. Staff time / consultant fee for updating the information systems/ databases; costs for additional internet bandwidth and for enhanced data security protocols.
DLI 6 – Improved implementation of hospital payments (INACBGs) MOH: APBN Rp. 1,900,000,000/year or 11.4 billion for 2021-2026	1. Staff time or consultant fees to develop standardized cost accounting template, revise existing coding guidelines, and develop coding audit protocol, including training materials/job aides 2. Cost of training workshops, printing, and communication 3. Cost of meetings, consultations, workshops, per diems during the INACBG revision process 4. Remuneration for trainers and facilitators/per diems 5. Staff time and remuneration for additional personnel to conduct coding audits 6. Staff time / consultant fee for updating the information systems/ databases; costs for additional internet bandwidth and for enhanced data security protocols.
DLI 7 – Improved policy formulation and oversight of JKN DJSN	1. Staff time or consultant fees to design and develop dashboard for internal management, external dashboard for public 2. Staff time or consultant fees to produce analysis to inform and develop JKN policy 3. Expert health staff in actuarial science, data science, health financing
DLI 8 – Improved coordination, impact, and sustainability of JKN MOF	1. Staff time or consultant fees to support JKN PforR implementation and technical assistance 2. Staff time / consultant fee for updating the information systems/ databases; costs for additional internet bandwidth and for enhanced data security protocols.

Results Framework and Monitoring and Evaluation Capacity

38. **The theory of change (Table 1) describes how the Program activities aim to achieve the PDO's twin objectives of improved quality and efficiency in service delivery. Seven out of nine DLIs are directly reflected in the results framework.** Output and intermediate outcome indicators help measure important milestones in the implementation of DLIs. Many focus on establishing and strengthening institutional capacity and system processes needed to monitor improvements in the quality of care and efficiency of spending.

a) **Measuring quality:** DLIs 1 and 2 measure essential missing outputs needed to improve the competence of front line workers who struggle to diagnose common conditions such as diabetes, hypertension, and high risk pregnancies. The development of a clinical decision support tool for all adult conditions treated at the FKTP level and training in the use of the clinical decision support tool (DLI 1), and clinical pathways for most common conditions at FKRTL level (DLI 2) will increase providers' competence and compliance with clinical protocols. The latter is measured by several outcome indicators (e.g., increase in the % of ANC visits in-line with clinical protocols; increase in the % of adults who have been screened for diabetes and hypertension as per clinical protocols; the

number of maternal deaths caused by hypertension) including improved provider competence in primary care – a PDO indicator directly linked to DLI 1. Improvements in provider competence at the primary care level are also expected to increase demand for outpatient care and patient satisfaction overall albeit more distally. Together, these three PDOs are used to measure improvements in quality.

b) **Measuring efficiency:** DLIs 3, 4, 6, and 7 aim to decrease waste and inefficiency in service delivery – freeing up more resources for JKN to cover and treat additional members. Here too, DLIs focus on essential changes to processes, outputs, and the design of provider payment methods that are essential to reducing unnecessary and inappropriate hospital claims and improving the overall management of claims. This will contribute to a more sustainable JKN claims ratio. Improving the quality of primary care and realigning clinical pathways and payment incentives to promote FKTPs as the first point of entry into the health care system is also expected to increase demand for outpatient care and contribute to a more sustainable JKN claims ratio.

39. **The monitoring and evaluation plan, including indicator definitions, frequency of collection, data source, and responsible agency, is described in annex 3**. Indicators will primarily come from existing MOH information systems, BPJS-K administrative data, and claims systems. While some indicators in the results framework may not currently be collected, they can be calculated using existing claims and administrative data. These will be important indicators to establish as part of BPJS-K's internal operations and claims management processes. However, processes for collecting indicators on hospital coding accuracy, provider competency, and tracer indicators to measure compliance with protocol-based care will need to be established as they currently do not exist. However, even though tracer indicators to monitor compliance with STGs may not currently be reported, existing applications like PCare may already have the ability to collect this data (i.e., the data entry fields exist in the software but reporting may need to be prioritized, monitored and incentivized). This is the case for blood pressure, blood hemoglobin, and glucose levels for example. As part of DLI 4 on improving the use of data in decision making, existing reporting processes and systems will be explored to determine whether tracer indicators can be embedded within existing systems.

40. **The Program Secretariat will be responsible for timely collection of all documentation supporting achievement of the DLIs as well as results framework indicators**, ensuring that the respective lead agency/unit responsible for each DLI have documented and verified the indicators. The MOH will be responsible for the achievement of DLIs 1, 2, 3, 6, and 7; BPJS-K for DLI 4; DJSN for DLI 8; and MOF for DLI 9. DLI 5 will require strong coordination and collaboration between MOH and BPJS-K. BPJS-K will also be required to share relevant data and information to inform the design of provider payment reforms under DLIs 6 and 7. Responsibility for data collection for PDO and intermediate outcome indicators is also listed in annex 3.

41. **The PforR will also supports data quality improvements**. In general, claims data is standardized and has high reporting compliance as it is linked to provider payment. However, because primary care providers are paid by capitation, and thus not directly linked to services provided, the quality of the primary health care claims system (Pcare) is not as good the hospital claims system (Eklaim). However, activities under DLIs 4, 5, and 7 will support BPJS-K and clinical coders to improve the validity and completeness of data

under both systems. While the prevalence of electronic medical records is low in Indonesia, the PforR could also be the catalyst to incentivize greater uptake of standardized electronic medical records or even more streamlined medical resumes. In the absence of widespread electronic medical records, introducing additional indicators to claims intake forms, requiring additional claims forms for certain conditions, or mandating the submission of medical resume forms would also work as it would enable checking adherence to guidelines and protocol-based care. Box 3 summarizes the main health information systems in Indonesia.

42. **Disbursements will be made against achievement of DLI targets**. Verification of DLI achievement will be done by Indonesia's Finance and Development Monitoring Agency (*Badan Pengawasan Keuangan dan Pembangunan* or BPKP) as per agreed verification protocol. BPKP has been the independent verification agency for several PforR investments across multiple sectors and has been credible and timely in its verification role. Upon achievement (or partial achievement) of a DLI, the Program Secretariat will provide the World Bank and BPKP with evidence that the DLI has been met. Following review of documentation and BPKP's verification report, the World Bank will send an official communication to the Program Secretariat as to the achievement of the DLI(s) and the level of financing to be disbursed against each DLI.

Box 3. Indonesia's main health information systems.

Currently there is no system that can provide a full population view of health system performance or that can track a patient's journey through the health care system. Pcare and Eklaim have high compliance as they are tied to payments, covers BPJS-K contracted public and private providers, are aggregated centrally, but only collect information on JKN patients. SIKDA-generic and SIRS have low compliance, are used predominantly by public facilities, and collect information on JKN and non-JKN patients. However, they do not collect information in a standardized way that can be easily aggregated and compared centrally. Although Pusdatin has started pulling information from both datasets into an internal dashboard (supported by I-SPHERE).

Pcare and Eklaim have the most potential for providing a population wide view of patients' journey through the health care system as there is high reporting compliance of among puskesmas and hospitals, the two systems can be linked through unique patient identifiers, and they cover 83 percent population (i.e. JKN members).

Primary Care (>10K public; >3K private; >40K GPs)		Hospital Care (~930 public; ~1,800 private)	
SIKDA-generic Pusdatin, MOH	Pcare BPJS-K	SIRS DG Medical Services, MOH	Eklaim MOH
- 109 variables (unknown) entered at puskesmas - Only reported by public providers - ~2,000 puskesmas report online and data is stored centrally (real-time) - ~7,800 puskesmas report offline in non-standardized form and data is stored in districts (monthly) - Data is JKN and non-JKN patients	- 10-15 variables entered at puskesmas on type of visit, type of services, symptoms, diagnosis, treatment, discharge status - Used by 95.2% of all providers (public and private) - Data is only for JKN patients - Produces internal dashboard	- Unknown number of variables entered at hospitals related to administration, human resources, average length of stay, bed occupancy, and services/utilization - Hospitals not contracted with BPJS-K (452) send aggregated data to DG Medical Services - Data is JKN and non-JKN patients	- 20 variables entered at hospitals - Only hospitals that are contracted by BPJS-K (2,218) - Data is only for JKN patients - Software developed/owned by MOH so hospitals must submit data to MOH before they can submit to BPJS-K (pre-verification) - BPJS-K then transfers information into their own system (V-klaim) in order to verify claims - Produces internal dashboard based on verified data

Source: WB Staff. Mission 09/2017.

Economic Justification

43. **Globally, poor-quality care is a bigger barrier to reducing mortality than is lack of access to health services.** The Lancet Global Health Commission estimated that 60 percent of deaths or over 8 million people die each year from conditions that are amenable to health care. While there is no universally accepted definition of quality, a shared understanding of the basic precepts of quality define it as being effective, safe, and people-centered. The high mortality rates in low- and middle-income countries for maternal and childcare, cardiovascular disease, and vaccine preventable conditions is worrisome because treatment is widely accessible, evidence-based, and among the most cost-effective interventions available (Kruk, et al., 2018).

44. **The economic implications of premature deaths and morbidity due to poor-quality are also substantial**. Between 2015 and 2030, the Lancet Commission projected the cumulative loss due to poor-quality care to be upwards of US$11 trillion in 91 LMICs. In 2015 alone, the impact of mortality on the labor force and physical capital accumulation amounted to economic losses of US$ 6 trillion (Kruk, et al., 2018).

45. **Beyond the economic losses from premature mortality, poor-quality care can also lead to significant waste and inefficiency**. Misdiagnosing a patient or prescribing the wrong treatment, doing unnecessary caesarean sections, over-prescribing antimicrobials are all examples of inappropriate or low-value care because additional resources are spent on services that produce reduced or no added health benefit. It is estimated that adverse events[6] add between 13% and 16% of hospital costs – 28% to 72% of which are considered avoidable. Data on adverse events in primary care settings is much more limited but according to one study around 80% of errors are classified as potentially avoidable process errors. While few studies have estimated the economic impact of antimicrobial resistance globally, it is estimated to cost the US healthcare system between $21 billion and $34 billion (Slawomirski, Auraaen, & Klazinga, 2017) (Couffinhal & Socha-Dietrich, 2017). Unnecessary caesarean sections are estimated to cost an additional US$2.32 billion, far exceeding the cost of needed caesarean sections (Kruk, et al., 2018).

46. **The potential savings from improvements in the quality of care and more efficient health seeking pathways is substantial**. Globally, potential efficiency savings at hospitals in middle-income countries have been estimated at between 5 and 11 percent of total spending. Applying these percentages to JKN hospital-based expenditures yield potential efficiency savings of between IDR 3.6 trillion and IDR 7.9 trillion in the hospital sector alone. And high-quality primary care can prevent the need for hospital admissions altogether.

47. **To quantify the economic impact of the PforR, the potential savings from improvements in JKN's overall claims management were estimated**. JKN claims data can help monitor adherence to clinical guidelines and protocol-based care, helping to improve the quality of service delivery (i.e., detecting inappropriate or low-value care). Claims data could also identify high cost and frequency items, which could be used to inform additional areas for improved service delivery and fund management. Using historical JKN

[6] Most common adverse events are related to health-care associated infections (e.g. post-operative sepsis), venous thromboembolism, pressure ulcers, medication error, and wrong or delayed diagnosis.

expenditure data from 2016-2018, JKN spending was forecasted to 2026 under a status quo scenario. Next, it was assumed that incremental improvements in claims management between 2022 and 2026 would decrease total expenditures by 5% (low), 7.5% (middle), and 10% (high) by the end of the operation. Finally, the net present value of expected savings was calculated by taking the difference between the status quo and the low, middle, and high scenarios. Under the middle scenario, the operation will generate savings of over US$890 million. Given the loan amount of US$ 400 million, the operation is deemed a very good investment (Table 8).

Table 8. The operation will generate a positive benefit to cost ratio, making it a good investment.

Scenario	Expected savings (in US$)	Cost benefit ratio
Low (5%)	535,868,373	2.12
Middle (7.5%)	892,375,429	3.53
High end (10%)	1,190,305,511	4.71

48. **The assumptions used in the cost-benefit analysis are listed below**:

- **Basic discount rate**. Costs and savings are discounted at 6%. A good rule of thumb to derive a country's annual discount rate is to double its GDP growth rate per capita. Indonesia's per capita growth rate is currently 3.1% (The World Bank, 2016).
- **Period considered**. The cost-benefits of the intervention are calculated only over the time-span of the operation given that health and JKN policy change often and it is considered difficult to predict healthcare utilization and expenditure beyond 4-5 years.
- **JKN expenditures.** All JKN expenditures are considered given the scope of the PforR is national and tackles improvements in the quality of care at FKTP and FKRTLs as well as interventions to enhance JKN claims management processes.
- **Benefits.** The benefits are likely an underestimate of the PforR's impact given that the economic analysis does not consider the benefits from premature death, reduced morbidity, and increased quality of life – nor the broader welfare costs associated with increased health and productivity. As these will be difficult to quantify during the life of the operation, the cost benefit analysis was restricted to the more measurable improvements in service delivery and the management of JKN funds.
- **Reductions in JKN expenditures**. The estimates used in the three scenarios were deemed reasonable given a recent review that found insurers that could enforce protocol-based care, build automated and streamlined workflows, and leverage data to provide actionable information could achieve 4-8 percent reductions in annual expenditures. Insurers that adopt advanced fraud detection tools and techniques that identify claims with a high propensity for fraud can achieve additional savings on the order of 5-10%. Overall, leveraging technology enablement and advanced analytics with the proper training to develop new skills can reduce claims and increase productivity by as much as 20-25 percent (Deloitte, 2011).

Key risks

49. **The overall risk to achieving the PDO is substantial; the main risks include (a) sector strategies and policies; (b) the institutional capacity for implementation, (c) the technical design of the project, (d) stakeholders, (e) fiduciary aspects, (f) data privacy, and (g) other**.

(a) Risks associated with sector strategies and policies are rated substantial. Health sector strategies and policies are often not fully grounded in the practical actions needed to ensure their success. They also often lack a strong theory of change linking activities to outcomes, unrealistic timelines for achieving big policy reforms, and unclear accountability arrangements. To mitigate these risks, the PforR has embedded in its design the development of roadmaps for two of the biggest sector reforms – improving the design and implementation of primary care payments (DLI 6) and the integration of health management and information systems (DLI 5). The verification protocol will ensure that these roadmaps are evidence-based, building in requirements for simulating budget and equity impacts where relevant and piloting. It will also require roadmaps show a clear theory of change, with feasible timelines for achieving key milestones, and delineated roles and responsibilities.

(b) Risks associated with the institutional capacity for JKN implementation are rated substantial. Many of the tasks related to running a national health insurance scheme (e.g. prioritization of the benefit package, clinical coding, claims management, costing of services, and determination of tariffs for reimbursement) are both complex and relatively new for Indonesia. The knowledge and skills may not be adequate. For example, despite the relatively large number of clinical coders (~3,000), claims verificators (~900), and fraud detection specialists (~300), the potential for detailed processing of over 9 million JKN claims a month remains limited. Regularly updating tariffs, assessing the quality of service delivery, and other key oversight functions (e.g., coding audits, claims audits) will also require a dedicated government budget and staff as these are not one-off activities. The ability to augment such technical staffing is also affected by the fiscal constraints in the aftermath of the COVID-19 pandemic. The operational systems needed to inform decision making may also be under-developed and under-financed. For example, the low prevalence of electronic medical records and fragmented information systems overall limit more advanced predictive and machine-learning based healthcare analytics. The PforR incorporates in its design several activities to build capacity and strengthen institutions involved in quality of healthcare provision, clinical coding, health technology assessment, provider payment design, costing studies, and claims analysis. BPJS-K and DJSN are also new implementing agencies for World Bank operations, and are not entirely familiar with World Bank processes and the PforR instrument. To mitigate these risks, the PforR will be supported by in-kind technical assistance, hands-on workshops, and knowledge exchange events to build the capacity of MOH, BPJS-K, MOF and DJSN staff to carry out activities under the PforR. A recipient-executed trust fund also allows the PforR Secretariat to hire technical experts to be embedded within implementing agencies.

(c) Risks associated with technical design are rated substantial. Provider payment reforms (DLIs 6 and 7) and the integration of health information systems (DLI 5) are large, complex, and politically sensitive reforms. On average they take between 7 and 10 years to implement in resource constrained and low capacity settings. For example, there are many preliminary steps needed to move from an input-based capitation formula towards a risk-based capitation design or from a DRG-based hospital payment arrangement towards a DRG plus global budget payment method. Reforms rely on the analysis of representative utilization and expenditure data; the ability to simulate and assess budget impact of any changes; and the buy-in of health care providers, medical professional associations, and patients. These reforms are also typically piloted for several years before nationwide rollout. Similarly, successful data integration reforms first need to map out what data is needed, why, and whether

existing information systems are able to provide the data in the right frequency and level of aggregation. It is often the case that new data intake and reporting processes need to be introduced or streamlined to reduce the burden on frontline providers. And even when existing information systems can provide the needed data, standardizing definitions and applying coding and data standards can take several years. To mitigate these risks, the PforR breaks down these ambitious reforms into key nuts and bolts activities (DLI 7) that are needed to incrementally move the reform agenda forward. Getting the GOI to develop and agree on a more structured roadmap (DLIs 5 and 6) with a prioritized list of indicators of progress has been shown to be helpful in other settings where the GOI's own strategy documents do not necessarily spell out reform objectives and timeline.

(d) Risks associated with stakeholders are rated substantial. In the past, key regulations with regards to JKN and service delivery have been developed in silos with little data and stakeholder engagement. The fragmentation of health information systems further hindered evidence-based reforms. The PforR has mapped out the roles and responsibilities of various stakeholders involved in JKN implementation. Throughout the PforR's preparation, DLIs were chosen to reinforce the collaborative actions needed by the MOH and BPJS-K to leverage results. For example, the MOH to develop standard treatment guidelines and quality standards that BPJS-K could then hold providers accountable through its claim verification, contracting, and reimbursement processes. However, there remains a risk that delays in developing clinical decision tools under DLI 1 will lead to delays in automating and embedding tracer indicators to monitor adherence to clinical guidelines within MOH and BPJS-K claims systems under DLIs 4 and 5. Introducing additional quality tracer indicators under the pay-for-performance scheme under DLI 6 may also be impacted. To mitigate the risk of coordination challenges across entities and sectors, the team has been working with all key stakeholders. The PforR secretariat at the MOF is expected to coordinate, and where needed, act as an arbitrator between DJSN, BPJS-K and the MOH, and champion the reforms needed to ensure institutions have the appropriate discretion and authority to carry out their functions. The World Bank will also support the GOI through a substantive analytics and advisory work program.

(a) **Risks associated with data privacy are rated substantial.** Indonesian legislation does not stipulate the definition of anonymized health data. Currently, Indonesia does not have rules or regulations for digital health care systems and patient confidentiality and safety regulations have not yet been issued. Within the context of electronic service providers, no express regulation covers the liability of a provider for a leak of patient data owing to a failure of its electronic system. Appropriate actions for data security are being listed as an action item in the PAP and protection of personal data is also proposed as a legal covenant.

(b) **The fiduciary risk is rated as substantial**. BPJS-K Director Regulation no. 309 FY 2018 limits access to documentation needed for the FSA, and during implementation stage, the public access to audit report of BPJS-K pertaining to the Program boundary needs to be provided. The implementing agencies may award a contract under the Program to World Bank sanctioned firms and may not adhere to the requirement of the Bank's anti-corruption guidelines on the reporting of fraud and corruption under the program. To mitigate this risk, the Program Action Plan will stipulate the requirement for BPJS-K to provide public access of its annual audit report with disclosure on the Program and submit to the Bank full annual audit report (including management letter); IAs Procurement teams will also need to check the Bank's debarment (www.worldbank.org/debarr) and temporary suspension lists to ensure that no contract under the Program is awarded to a firm or individual that is under debarment and/or temporary suspension by the World Bank and that IAs shall inform the Bank promptly of all credible and material allegations or other indications of Fraud and Corruption (F&C) in connection with the Program that come to its attention as well as any related investigations and actions taken; Improvement on the capacity of internal audit unit to conduct IT

audit, continuous audit and monitoring of external audit findings and requirement for BPJS-K to prepare general policy on records management. Appropriate mitigation measures will be agreed with IAs based on the final FSA and included in the PAP.

(c) **Other risks, namely the ongoing COVID pandemic, are also rated substantial**. The overall financial and human resource constraints in the health sector are exacerbated as the pandemic response competes for the same resources. The pandemic has also created demand-side challenges in people accessing timely care, which may increase longer term costs. The pandemic's impact on employment can also affect JKN contributions and beneficiary base. There may also be implications for JKN to cover the costs of booster vaccine doses in the future. Specifically related to the proposed PforR interventions, the ongoing COVID pandemic may limit or prevent the number of face-to-face trainings needed to train front line workers in the use of clinical decision support tools and clinical coding certification courses. The increasing vaccination rates in Indonesia should help reduce the magnitude of resources needed for the pandemic response. To mitigate this risk, a virtual training, facilitation, and dissemination plan is being developed as a back-up option should in-person trainings/workshops not be permitted due to ongoing mobility restrictions.

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Annex 1 – Overview of disbursement linked indicators

Category (including Disbursement Linked Indicator as applicable)	Disbursement Linked Result (as applicable)	Amount of the Loan Allocated (expressed in USD)	Formula
(1) DLI #1: Improved quality of care in primary care health facilities/ FKTPs	DLR 1.1: MOH has developed, approved and adopted a clinical decision support tool for FKTPs in Year 1;	20,000,000	DLR 1.1: $20,000,000 by the end of Year 1
	DLR 1.2: MOH has trained 90% (cumulative) of all FKTPs on the clinical decision support tool.	27,000,000	DLR 1.2: US $300,000 for each one percentage point increase in FKTPs trained, up to the maximum of $27,000,000.
(2) DLI #2: Improved quality of care at referral hospitals/ FKRTLs	DLR 2: MOH has formulated and issued at least twenty (20) new clinical diagnostic, treatment, or referral guidelines into processes of care for FKRTLs.	40,000,000	DLR 2: $2,000,000 per each clinical diagnostic, treatment, or referral guideline formulated, up to the maximum of $40,000,000
(3) DLI #3: HTA findings incorporated into the Benefit Package	DLR 3.1: MOH has developed, approved, and formally adopted the Revised HTA Guidelines;	5,000,000	DLR 3.1: Paid in full on achievement of the DLI target
	DLR 3.2: MOH has completed at least fifteen (15) additional HTA studies in accordance with the Revised HTA Guidelines and disseminated the findings of such studies to the public;	15,000,000	DLR 3.2: $1,000,000 per HTA study up to the maximum of $15,000,000
	DLR 3.3: At least five (5) of HTA studies completed under DLR 3.2 have informed the revision of the Benefit Package.	15,000,000	DLR 3.3: Paid in full on achievement of the DLI target
(4) DLI #4: Improved claims management and prevention of ineligible and unnecessary claims	DLR 4.1: BPJS-K has revised and adopted the specified manuals, guidelines, and/or protocols for claims management, prevention of ineligible and unnecessary claims, and audit processes;	20,000,000	DLR 4.1: Paid in full on achievement of the DLI target

	DLR 4.2: (a) Based on the FKTP's clinical decision support tool developed under DLR 1.1, BPJS-K has embedded and automated at least fifteen (15) of the recommended tracer indicators into the claims verification software within 12 months of MOH's issuance of guidelines under DLR 1.1; and (b) Based on the FKRTL's processes of care formulated under DLR 2, BPJS-K has embedded and automated at least 10 of the recommended tracer indicators in the claims verification software within 12 months of MOH's issuance of guidelines under DLR 2; DLR 4.3: At least 250 FKRTL claims have been subjected to the detailed claims audit in each calendar quarter of Years 2-4, using the revised claims audit protocol developed under DLR 4.1.	(a) 10,000,000 (b) 20,000,000 20,000,000	DLR 4.2(a): Paid in full on achievement of the DLI target DLR 4.2(b): $2,000,000 per tracer indicator embedded and automated within 12 months of MOH's issuance of guidelines under DLR 2, subject to the maximum of US$ 20 million DLR 4.3: $2,000,000 for each calendar quarter in years 2, 3 and 4 in which at least 250 FKRTL claims have been subjected to the detailed claims audit, up to the maximum of 10 quarters, or $20,000,000
(5) DLI #5: Improved use of data in decision making	DLR 5: MOH has ensured that (a) Roadmap for data system integration developed and approved; and (b) Information systems are integrated as per the target identified in the roadmaps for Years 2 and 3.	(a) 10,000,000 (b) 20,000,000	DLR 5(a): Paid in full on achievement of the DLI target DLR 5(b): $10,000,000 for each year in which information systems are integrated as per the targets identified in the roadmaps, up the maximum of $20,000,000

(6) DLI #6: Improved design and implementation of primary health care payment methods (capitation and PKBK)	DLR 6.1: MOH has developed and approved the roadmap for revising primary care payment system (capitation) design; DLR 6.2: MOH has ensured that at least ten (10) additional performance and quality indicators are included in the primary care payment system in line with the roadmap approved under DLR 6.1; DLR 6.3: MOH has ensured that at least 90% of FKTPs are implementing the revised capitation as per the roadmap approved under DLR 6.1 by Year 4	20,000,000 20,000,0000 18,000,000	DLR 6.1: Paid in full on achievement of the DLI target DLR 6.2: From the baseline of 3 in Year 2, $2,000,000 paid for each additional performance and quality indicator included in the primary care payment system, up to the maximum of $20,000,000 DLR 6.3: From the baseline of 0 in Year 2, $200,000 paid for each additional percentage point of FKTPs which are implementing the revised capitation, up to the maximum of $18,000,000
(7) DLI #7: Improved implementation of hospital payments	DLR 7.1: MOH has developed and adopted (a) clinical coding guidelines and audit protocol; (b) clinical coding training course; and (c) standardized cost accounting template; DLR 7.2: MOH has arranged for training and certification of at least one coder in at least 1,800 FKRTLs (cumulative) by Year 4; DLR 7.3: MOH has randomly assessed at least 40 FKRTLs for coding accuracy during Years 3 and 4;	(a) 10,000,000 (b) 5,000,000 (c) 10,000,000 18,000,000 10,000,000 25,000,000	DLR 7.1: Amount allocated to the respective DLR sub-target paid in full upon achievement of the respective DLR sub-target DLR 7.2: From the baseline of zero, $ 10,000 per each FKRTL where the coders are trained and certified, up to the maximum of $18,000,000 DLR 7.3: $25,0000 for each one of FKRTLs randomly assessed during Years 3 and 4, up to the maximum of $10,000,000 DLR 7.4: Paid in full on achievement of the DLI target

	DLR 7.4: MOH has revised, adopted and published on its website INACBG tariffs in line with cost accounting data and any other relevant evidence.		
(8) DLI #8: Improved policy formulation and oversight of JKN	DLR 8.1: DJSN has developed a dashboard of key monitoring indicators from JKN and other relevant data sources, and such dashboard is in use by DJSN; DLR 8.2 DJSN has produced and published on its website an annual performance report on JKN in each of Years 2-4.	10,000,000 12,000,000	DLR 8.1: Paid in full on achievement of the DLI target DLR 8.2: $4,000,000 for each report published in Years 2-4, up to the maximum of $12,000,000
(9) DLI #9: Improved coordination, impact, and sustainability of JKN	DLR 9.1: Program Secretariat is strengthened with additional technical experts and consultants in accordance with the Operations Manual; DLR 9.2: Program Secretariat compiles and analyzes JKN data and provides recommendations on the JKN-related objectives for the new RPJMN in Year 4.	10,000,000 10,000,000	DLR 9.1: Paid in full on achievement of the DLI target DLR 9.2: Paid in full on achievement of the DLI target
TOTAL AMOUNT		400,000,000	

Annex 2 – Expenditure boundary detail

BPJS-Kesehatan			
	BPJS-Kesehatan	Operational cost	4,364,107,000
Ministry of Health			
Secretary General			
	Center for Health Financing and Assurance		
	024 01 DG Health Service and Insurance (JKN) program		
		5610 QEA Insurance subsidy (PBI)	48,787,200,000
	024 01 WA Management support		
		4398 ABG Health policy	2,295,000
		4398 AEA Coordination	1,444,080
		4398 FAE Monitoring, evaluation and reporting	1,281,420
		4398 PBG Health policy	4,140,905
DG Health services			
	Director of Quality of Health Services		
	024 04 DG Health Service and Insurance (JKN) program		
		5836 BDB Facilitation and institutional development	6,617,823
	Director of Primary Health Care		
	024 04 DG Health service and insurance (JKN) program		
		2087 AEA Coordination	984,892
		2087 AEF Dissemination and Socialization	3,000,000
		2087 FAE Monitoring, Evaluation and Reporting	514,050
		2087 PEA Coordination	940,953
		2087 UAE Monitoring, Evaluation and Reporting	84,600
		2087 UBA Facilitation and Local Government Development	6,089,655
	Directorate of Referral Health Services		
	024 04 DG Health service and insurance (JKN) program		
		2090 AAG Ministerial regulation	1,564,256
		2090 AFA Norms, Standards, Procedures and Criteria	1,021,361
		2090 BAA Public services	36,517,205
		2090 BDB Facilitation and institution development	190,359,643
		2090 FBA Facilitation and local government development	1,209,745
		2090 PAG Ministerial regulation	548,768
		2090 PEA Coordination	1,262,879
		2090 PFA Norms, Standards, Procedures and Criteria	262,360
		2090 QDB Facilitation and institutional development	7,652,923

Ministry of Finance			
Fiscal policy agency			
	Center for state budget policy		
	015 12 CE Program fiscal policy		
		4763 AAC Government regulation	392,982
		4763 PBA Policy in economics and finance	700,000
	Financial sector policy center		
	015 12 CE Program fiscal policy		
		4764 ABA Policy in economics and finance	4,415,929
		4764 PBA Policy in economics and finance	915,227
Directorate General of Budget			
	Directorate of harmonization of budgeting regulation		
	015 03 CB Program management of government expenditure		
		6202 AAD Presidential regulation	175,800
		6202 AAG Ministerial regulation	809,730
		6202 AAH Other regulation	27,300
Direcotrate General Financing and Risk Management			
	Directorate of state financial risk management		
	015 07 CD Treasury, Sovereign wealth and risk management program		
		4809 FAE Monitoring, Evaluation and reporting	1,471,084
Coordinating Ministry for Human Development and Cultural Affairs			
DJSN			
	Secretariat		
	036 01 CL Program policy implementation and coordination		
		6336 EAC General services	5,443,032
		6337 ABN Social policy	964,515
		6337 PBN Social policy	5,744,850

Annex 3 – Results framework

	Indicator name	Definition	Frequency	Data source	Method for data collection	Responsibility for data collection
#	**PDO indicators**					
1	Improved provider competency score in FKTPs (quality)	Average score of FKTP providers' competencies on select tracer conditions	At beginning and end of operation	New Baseline in year 2	Assessment will be based on survey/clinical vignettes before and after the implementation and training of clinical decision support tool	DG primary health care, MOH
2	Improved member satisfaction rate and its continued use as a BPJS-K performance monitoring indicator (quality and citizen engagement)	Average score resulting from exit polls The levels of participants' satisfaction are based on scores from exit polls measured at all service levels using a Likert scale as follows: (1) Dissatisfied; (2) somewhat dissatisfied; (3) somewhat satisfied; (4) satisfied; (5) very satisfied.	Annual	BPJS-K administrative data Baseline: 81.5% in 2020 according to website Target: Above 82%	Third party carries out exit poll surveys	BPJS-K
3	Increase in the % of outpatient utilization among bottom two quintiles (efficiency and equity)	Numerator: Outpatient utilization among bottom two income quintiles Denominator: Total outpatient utilization	Annual	Baseline 2020 quintile 1 and 2 average: 13.2 Target: 15.2	Susenas	BPS
4	More sustainable claims ratio (efficiency)	Numerator: Total JKN expenditures Denominator: Total contributions	Annual	BPJS-K administrative data Baseline: 102 in 2019 Target: below 98%	To be calculated by BPJS-K from administrative data	BPJS-K
	Intermediate indicators					
Results Area 1: Improving quality						

1	Improved provider competency on maternal care disaggregated	Assessment of provider competence based on pre/post survey/clinical vignette	At beginning and end of operation	New Baseline in year 2	Assessment will be based on survey/clinical vignettes before and after the implementation and training of clinical decision support tool	DG primary health care, MOH
2	Share of FKTPs enabled in using the clinical decision support tool (DLI 1)	Numerator: Number of FKTPs enabled in using clinical decision support tool Denominator: Total number of FKTPs	Annual	Baseline: 0 Target: 90%	To be provided by MOH	DG primary health care, MOH
3	Number of clinical diagnostic, treatment, or referral guidelines formulated into processes of care for FKRTLs (DLI 2)	Number of clinical diagnostic, treatment, or referral guidelines formulated into processes of care for FKRTLs	Annual	Baseline: 0 Target: 20	To be provided by MOH	DG Referral Health Services, MOH
4	Increase in the % of antenatal care visits in-line with clinical protocols disaggregated by province (gender and equity)	Numerator: Number of ANC visits in-line with clinical protocols Denominator: Total number of ANC visits	Semi-annual	PCare Baseline in year 2	To be generated by PCare	BPJS-K
5	Number of maternal deaths caused by hypertension disaggregated by province	Number of maternal deaths caused by hypertension during the preceding year	Annual	MOH administrative data Baseline: 1,066 (see annex for provinces)	To be provided by MOH	Family Health Directorate, MOH
6	Increase in the % of adults screened for diabetes and hypertension in-line with clinical protocols	Numerator: Number of adults screened for diabetes and hypertension Denominator: Total number of eligible adults (i.e., all adults above 15 years old as per Permenkes on Minimum Service Standard of Care/SPM 2019))	Semi-annual	PCare Baseline in year 2	To be generated by PCare	BPJS-K
Results Area 2: Improving efficiency						
7	Recommended tracer indicators embedded and automated in the claims verification software to monitor compliance with evidence-based care (DLI 4)	Based on FKTP and FKRTL clinical pathway adopted under DLIs 1 and 2, the number of recommended tracer indicators embedded and automated in the claims verification software to monitor compliance with evidence-based care	Annual	Baseline: 0 Target: 23 (15 for FKTP and 8 for FKRTL)	PCare and Eklaim/vklaim	BPJS-K

8	Decrease in the % of hospital claims that are rejected/not verified (by reason…e.g. incomplete, error, ineligible expenditure, abuse)	Numerator: Number of hospital claims that rejected/not verified in a month Denominator: Total number of hospital claims submitted in a month	Monthly	Vklaim Baseline: TBD	To be generated by Vklaim	BPJS-K
9	Number of additional performance and quality indicators included in primary care payment system (DLI 6)	At least 5 additional performance and quality indicators included in primary care payment system in line with roadmap	Annual	Baseline: 3 Target: 7	PCare	BPJS-K
10	Cumulative number of FKRTLs with trained and certified clinical coders (DLI 7)	Number of FKRTLs with trained and certified clinical coders	Annual	New Baseline: 0 Target: 1,800	TBD as this will be a new activity	PPJK, MOH
Results Area 3:						
10	Number of information systems integrated as per roadmap target (DLI 5)	Number of information systems integrated as per roadmap target	Annual	Baseline: 0 Target: TBD by roadmap	To be provided by MOH	MOH
11	Improved policy formulation and oversight of JKN (DLI 8)	DJSN has produced and published an annual performance report on JKN on its website	Annual	New Target: 1 report per year	To be produced by DJSN	DJSN

Notes: TBD=to be determined