Appendix 1

Health Financing Template

1. *Health insurance scheme*
    a. Population coverage: eligibility criteria – what are they?
    b. Benefit package: what diagnostics are included, and for which conditions (e.g., health visits, hospitalisation related services)? Is there a primary care component, and whether preventive and promotive services are included? Are diagnostics included primarily with vertical disease programs?

2. *Financial protection mechanisms:* especially with regards to community-based service delivery
    a. What is in place for those not eligible for insurance schemes and require diagnostics?
    b. If not provided, but planned to be provided and by whom and are they actually provided?

3. *Purchasing mechanism*:
    a. Can the insurance schemes contract with civil society/community-based organisations or private laboratories to provide diagnostics? Any covered by external partners? Accreditation and workforce requirements?

4. *Other financing streams/cross-subsidisation:*
    a. Is there collaboration with other financing streams/institutions in the country to finance diagnostics?

5. *Role of external partners*:
    a. Is there work underway to integrate any vertical programmes of diagnostics into UHC?

6. *Scheme Innovations*
    a. Initiatives implemented*?* Learning from others? Initiatives to improve performance, e.g., performance-based financing, legislation

7. Performance of the insurance scheme
    a. What challenges exist in the country to integrate diagnostics into SHI to support UHC?
    b. How might better performance of the insurance scheme be incentivised?
    c. Are there actors that can be better leveraged/catalysed?
    d. Is accountability an issue? What mechanism(s) could improve accountability?
    e. Is coordination an issue? What mechanism(s) could improve coordination?
    f. Is program oversight/understanding an issue? How might better oversight be implemented?

8. *Information/Data on diagnostics*:
    a. Insurance Scheme breakdown:
        i. Population eligible for insurance coverage (national, sub-national)
        ii. Claims information of access to diagnostics (national, sub-national)
        iii. Performance reports of facilities or secondary information
    b. Financing map
        i. Points of resource mobilisation (insurance contributions, taxes, etc.)
        ii. Pools – which actors hold the funds
        iii. Purchasing – who pays (insurance, MoH, sub-national governments, etc.)
    c. Delivery
        i. Points of delivery (e.g., care setting)
        ii. Provider payment mechanisms
        iii. Financial/non-financial incentives for delivery
        iv. Reporting and monitoring access of diagnostics (reliability of data, collector and who they report to)

SEARCH TERMS:

Search for Diagnostic imaging (DI), or diagnostics AND	• And benefit package
	• And Health insurance
	• And UHC coverage
	• And Health Financing
	• And Health system
Search for Pathology and laboratory medicine (PALM) or laboratory medicine AND	• And benefit package
	• And Health insurance
	• And UHC coverage
	• And Health Financing
	• And Health system

Appendix 2

Cambodia

Scheme development: The Health Equity Fund (HEF) was started in 2000 in two districts and by 2015 provided national coverage (1). Households identified as poor through the triennial national IDPoor survey by the Ministry of Planning (2, 3) are eligible and receive an Equity Card. Individuals who become impoverished between rounds of IDPoor can be post-identified as poor at public health facilities and receive a Priority Access Card (4). With either card, clients can receive free preventive or curative care as outpatients or inpatients or in emergencies, transportation costs to referral hospitals and funeral expenses for inpatient deaths (5). ID cards are valid until the next round of IDPoor enrolment. Budget is jointly funded by the Government of Cambodia (71% contribution in 2019) and external donors through a pooled funding mechanism, with the government planning to increase funding to 100% by 2025 (6).

Policy rationale: Although coverage for diagnosis is include in the service packages, the range of specific diagnostics covered is not specified and no criteria for their inclusion are mentioned in the relevant documentation (36).

Population coverage: As of the 2018-2020 survey, 3.2 million people (24%) were identified as poor and so were eligible for HEF (7). The number of people post-identified as poor at health facilities is unclear.

Financial coverage: Unlimited access to the full range of services at each level of the health system (5). Non-medical benefits include reimbursement for transportation costs, food allowances and funeral support.

Co-payments or premiums: None.

Diagnostics included in the scheme: In both primary care and in hospital settings, all types of available diagnostics are covered but the range of available diagnostics is not specified (5, 8).

***Lancet* Commission tracer conditions**: Diagnostics for diabetes, HIV and TB are included; those for syphilis are also included, though it is unclear if they are provided to pregnant women. Diagnostics for hypertension and hepatitis B for pregnant women are not specified but may be included in general service packages covering investigations as indicated by consultation (5).

Purchasing arrangements: The HEF reimburses facilities using payment rates associated with each service package, which are set by the HEF (5).

Alignment with vertical programs: The National Malaria Program is a standalone vertical government-funded programme that includes diagnostics and is not integrated with the HEF (9).

Performance of the scheme: In 2017, HEF-funded households had decreased out-of-pocket expenditure per illness compared with non-HEF households (10). A 2019 study found that the implementation of HEF was associated with increased utilisation of primary and secondary care services by the poor (11). A benefit incidence analysis from 2019 suggested that health spending in primary care is distributed in favour of the poor, with 32% of PHC spending going to the poorest population quintile (12).

Access to diagnostics: No published data is available on access to diagnostics through HEF.

India

Scheme development: The Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (PM-JAY) was launched in 2018, replacing Rashtyira Swasthya Bima Yojana (RSBY), the previous government-funded scheme that primarily focussed on migrant labour (13), which enrolled 41 million families but did not significantly reduce

out-of-pocket payments (14-16). Under PM-JAY, households identified as poor or vulnerable in the Socio-Economic Case Census 2011 (approximately 40% of the population or 500 million people) are eligible. It is a cashless non-contributory scheme providing e-cards which allow eligible households to receive secondary and tertiary hospitalisation at public and private empanelled hospitals anywhere in India up to a cost ceiling (13). Financing comes from a combination of federal and provincial governments. Tariffs for each benefit package are set by the National Health Authority (17).

Policy rationale: PM-JAY aims to support progression to UHC by covering the large uninsured poor population of India. States can extend the benefit package and population coverage at their discretion. In 2019, India became the first country to publish a National EDL (NEDL), based on the WHO EDL (18), but it is not yet clear how the NEDL relates to diagnostics available through PM-JAY.

Population coverage: By 2021, 164 million e-cards had been issued (32%) (19).

Financial coverage: Up to INR 500,000 ($6074) per family per year (13).

Co-payments or premiums: Once the annual cap is exceeded, patients must pay OOP (17). India has one of the highest rates of OOP expenditure in the world, accounting for two-thirds of total health expenditure, with diagnostics accounting for 10% of OOP payment (20).

Diagnostics included in the scheme: PM-JAY covers up to three days pre-hospitalisation and 15 days post-hospitalization expenses including diagnostics. Hospital expenses incurred outside this period primarily for diagnostic purposes are not included (17). Primary care and outpatient services are not included. A full list of the diagnostics available under PM-JAY is not available, and while some are listed (e.g., HIV, TB, hepatitis), and it is unclear how diagnostics in the scheme correspond to the NEDL.

***Lancet* Commission tracer conditions**: All included in the NEDL (21) but unclear if widely available under PM-JAY.

Purchasing arrangements: Services are reimbursed via 920 fixed-rate packages split into 1,669 procedures in 26 specialities with a provision for 77 additional procedures (17). In 2020-21, 53% of participating hospitals were public, with the rest private (19). States either purchase services directly, utilise insurance companies, or a mixture of both (22).

Alignment with vertical programs: No details available.

Performance of the scheme: Studies performed in three states suggest that PM-JAY has not prevented OOP expenditure completely for hospital care that should be covered under the program. Additionally, weak regulation allows private hospitals to seek co-payments or upfront payments not allowed in the scheme, while the hospital awaits claim reimbursement, which occurs more slowly than is proposed in guidelines (16, 23).

Access to diagnostics: No published data is available on access to diagnostics through PM-JAY. To prevent abuse, certain service packages are only available in private hospitals if patients have been referred from public hospitals (23). A pilot survey performed shortly before the introduction of the NEDL and PM-JAY identified major gaps in access to essential diagnostics in three Indian states (24).

Indonesia

Scheme development: The Jaminan Kesehatan Nasional (JKN) was established in 2014 after the consolidation of earlier schemes. All individuals are eligible for primary care, inpatient and outpatient care (25, 26). Those formally working are registered by their employers while informal workers must enrol themselves and pay a monthly contribution fee to receive a membership card (25). The poor and near-poor have their contributions partially or fully subsidized by national and district authorities (25, 27). Financing comes from government budget allocations, loans from the World Bank (28) and premiums received.

Policy rationale: JKN is the major pillar in the government's progression towards UHC and covers most of the health service delivery landscape, including diagnostics (29). However, no criteria for the inclusion of diagnostics are mentioned in the relevant documentation.

Population coverage: In 2019, 83% of the population was covered (29, 30).

Financial coverage: Unlimited access with no cap (29).

Co-payments or premiums: No co-payments. A regulation was introduced in 2018 to allow co-payments for some services but these have not yet been defined or implemented (29).

Diagnostics included in the scheme: The benefit package includes diagnostics offered in primary, outpatient and inpatient settings (26). The full list of available diagnostics is not available.

***Lancet* Commission tracer conditions**: No details available.

Purchasing arrangements: The scheme contracts with all public providers and most private providers, including private hospitals, clinics and individual clinicians (29).

Alignment with vertical programs: No details available.

Performance of the scheme: During the scheme expansion between 2014 and 2019, population coverage improved from 53% to 83%, OOP expenditure as a share total heath expenditure fell from 53% to 32% (29). However, the poorest quintile's share of OOP payments remained constant, suggesting that the poorest citizens are not making full use of the financial protection provided by JKN (27).

Access to diagnostics: Little published data is available on access to diagnostics through JKN, though primary care clinics often lack basic diagnostics, particularly in remote areas (29).

Nepal

Scheme development: The Health Insurance Program of Nepal, currently managed by the Health Insurance Board (HIB) of the Government of Nepal, started in 2016 in three districts and now covers all 77 districts of the country (31, 32). All citizens are eligible. It is a cashless system requiring annual membership fees. With an ID card, members can receive outpatient, inpatient and emergency care up to a cost ceiling (33). Financing comes from government budget allocations and premiums paid by enrolees (34, 35).

Policy rationale: Although numerous diagnostics are included in the benefit packages, no criteria for their inclusion are mentioned in the relevant documentation (36).

Population coverage: As of April 2022, 5.3 million people (20%) were enrolled in HIB, up from 15% in 2021 (32). Coverage varies and in half of the provinces is less than 10%.

Financial coverage: Benefit packages are available at public and contracted private PHC centres and registered hospitals up to an annual limit of NPR 100,000 ($806) for a family of five, with an extra NPR 20,000 ($161) per additional family member up to a maximum of NPR 200,000 ($1,611). People aged >70 years are eligible individually for an additional NPR 100,000 annually; up to NPR 100,000 annually is also available for members suffering from eight specified diseases: cancer, cardiovascular disease, renal failure, head and spinal injury, sickle cell anaemia, Parkinson's disease and Alzheimer's disease (33, 35). Costs for each included service are set by the Government of Nepal (36, 37).

Co-payments or premiums: A family of five must pay NPR 3,500 ($28) per year, with an extra NPR 700 ($6) per additional family member. 100% subsidy for: ultra-poor families certified by the local government, people aged >70 years, families of patients with HIV, MDR-TB, leprosy, or those who are severely disabled. A 50% subsidy is in place for families of female community health volunteers. (35).

Diagnostics included in the scheme: HIB covers 152 laboratory tests and 72 radiological and other diagnostic services, though official documents do not distinguish the levels of the health system at which different diagnostics are available (38, 39).

***Lancet* Commission tracer conditions**: Diagnostics for diabetes and hypertension are included; those for hepatitis B and syphilis are also included, though it is unclear if they are provided to pregnant women. Those for HIV and TB are provided through vertical programs (38).

Purchasing arrangements. HIB contractual arrangements can include private medical colleges, private nursing homes, and community-based health care facilities, though these have not widely been put into place.

Alignment with vertical programs: Diagnostics for visceral leishmaniasis, malaria, HIV, TB, influenza, leprosy, maternal and child health and family planning are provided free through vertical programs which have been integrated into PHC and are not provided through HIB for reimbursement (38).

Performance of the scheme: Enrolment remains low, with high dropout rates commonly attributed to a lack of drugs, unfriendly service provider behaviour and a preference towards private clinics (35, 40). No breakdown on claims and reimbursements for diagnostics is publicly available.

Access to diagnostics: No published data is available on access to diagnostics through HIB but access to specialised diagnostics is likely to be limited because private diagnostic facilities are not yet integrated into the scheme.

Notes: Citizens seeking foreign employment, who often travel alone, need to submit proof of enrolment of their family in HIB, ensuring the family retains access while they are abroad.

Pakistan

Scheme development: The Sehat Sahulat Program (SSP) was established in a single province in 2015, with the Prime Minister Heath Insurance Scheme in place in other regions between 2015-2018 (41), and has since expanded stepwise through most provinces and territories (42). Initially only families earning less than $2 per day were covered (41) but this later expanded to include all permanent residents of participating provinces and territories (42). It is a cashless non-contributory scheme providing ID cards which allow free access to inpatient and emergency, but not outpatient, health services in so-called empanelled hospitals up to a cost ceiling (42, 43). Financing comes from a combination of federal and provincial governments.

Policy rationale: The SSP aims to protect against catastrophic inpatient health expenditure as part of Pakistan's plan for UHC (44) . The benefit package covers select high cost and high burden diseases. No criteria for the inclusion of diagnostics are mentioned in the relevant documentation.

Population coverage: 207 million (89%) as of 2022 after the scheme was extended to all of the population with a national ID card, although uptake has been low in Baluchistan and Sindh provinces (45, 46).

Financial coverage: Rs 300,000 ($1387) per family per year for priority diseases and Rs 60,000 ($277) per family per year for secondary diseases (44). Additional coverage up to the same amount for both categories is available for life saving or stabilising treatment, for all maternity and maternity-related services and for continuing treatment related to a specific admission if the limit is exceeded during that admission (43).

Co-payments or premiums: Reserve funds are available for treatments once the financial limits are met for renal dialysis and transplants, oncology, neuro surgical, cardiology, rheumatology, while national steering committee approval is required for other treatments (30). The most recent estimate from 2019 puts OOP at more than half or 54% of current health expenditure (47). Older data from the 2017/18 OOP Health Expenditure Survey reported that almost 75% of total OOP expenditure were incurred on outpatient services, while inpatient care was 20% (48).

Diagnostics included in the scheme: Primary care services are not included in the program (42) and admission to hospital primarily for diagnostic purposes is excluded (49). No information on diagnostics found from the Government of Pakistan but the Government of Punjab province states that lab tests and other diagnostics are covered but does not specify which in English (50).

***Lancet* Commission tracer conditions**: Syphilis is excluded. Hospitalisation required for the treatment of diabetes, hypertension, HIV, TB and hepatitis B are included, but it is unclear whether this includes diagnostics (44).

Purchasing arrangements: Costs for each service are set by the Government of Pakistan (41).

Alignment with vertical programs: No information available.

Performance of the scheme: The SSP has spread rapidly across Pakistan, which is an important milestone towards UHC (41). However, one analysis found that OOP payments and catastrophic health expenditure increased between 2015 and 2018 (51). A limitation of SSP is that the cost caps for treatment set by the government are incompatible with those charged by some private hospitals, resulting in patients being asked to pay the difference out-of-pocket (41). An actuarial analysis conducted in 2019 suggested that the future financial sustainability of SSP could require increasing the premium provided per family (52). Not all hospitals are empanelled in the scheme, restricting provision of services with variation across the country.

Access to diagnostics: No published data is available on access to diagnostics through SSP.

Philippines

Scheme development: The Philippine Health Insurance Corporation (PhilHealth) was created in 1995 and expanded in 2019 so that all citizens are automatically eligible for the program (53). Financing comes from government budget allocations and premiums paid by registered members.

Policy rationale: In June 2021, the Department of Health announced the aim of creating a Philippine Essential Medical Device List to guide procurement of diagnostics and other devices and guide the costing and development of PhilHealth benefit packages (54). This has not yet occurred and no criteria for the inclusion of diagnostics are mentioned in the relevant documentation.

Population coverage: As of June 2021, 94.8 million people (86%) were registered members or their dependents listed in the PhilHealth database (55).

Financial coverage: Annual cap of PHP 32,000 ($600). Benefit packages are available for primary care and inpatient and outpatient services in accredited or contracted public or private facilities (56). Each included service has a published case rate, set by PhilHealth, which is subtracted from the payments required by patients (57, 58). Services beyond these case rates, or those not covered by PhilHealth, are paid out of pocket. A No Balance Billing provision prevents accredited hospitals from charging poor patients more than the case rates for each service. Diagnostic tests required for inpatient treatment but supplied by providers outside the hospital are also covered (59, 60).

Co-payments or premiums: For those formally employed, the monthly PhilHealth premium in 2022 is 4% of their basic monthly salary up to a maximum of PHP 3,200 ($61), increasing by 2025 to 5% with a maximum of PHP 5,000 ($95) (61, 62). Those informally employed can qualify for means-tested subsidies for the premiums. Co-payment is not required for basic or ward accommodation but is required for non-basic accommodation (63).

Diagnostics included in the scheme: The primary care benefit package covers CBC, urinalysis, fecalysis, sputum microscopy, fecal occult blood, pap smear, HbA1C, fasting blood sugar, oral glucose tolerance test, lipid profile, creatinine, ECG and CXR (64, 65). However, PhilHealth PHC also includes facilities with inpatient beds for stays

of 1-3 days (66) and the medical benefit package for PHC covers diagnostics for a broad range of medical conditions based on ICD-10 codes (57).

The benefit package for hospitals covers diagnostics for a much wider range of medical conditions than the equivalent PHC package (58, 67). Separately, diagnostics for certain specific diseases, including some types of cancer, are available through the Z Benefit Package, which is designed to cover conditions that require prolonged hospitalisation, expensive therapies or other care that can lead to catastrophic health costs (68, 69). Diagnostics for HIV, malaria and TB are available through a Sustainable Development Goals (SDG)-related benefit package.

***Lancet* Commission tracer conditions**: Diagnostics for diabetes, hypertension, HIV and TB are included; those for hepatitis B and syphilis are also included, though it is unclear if they are provided to pregnant women.

Purchasing arrangements: The primary care benefit provider can put in place a Memorandum of Agreement with another health facility to provide diagnostic tests not available in their facility.

Alignment with vertical programs: No information available.

Performance of the scheme: In 2021, diagnostic service providers accounted for 2% of claims. However, diagnostics are also included in other categories such as hospitals with no breakdowns by service provided so the total amount claimed for diagnostics is likely to be higher (55). PhilHealth payments for medicines and laboratory tests for inpatient treatment provided by external pharmacies and diagnostic centres increased more than tenfold between 2013 and 2017 (7).

Access to diagnostics: Diagnostic availability varies widely by geographic region, with even essential diagnostics unavailable in remote regions (70, 71).

Vietnam

Scheme development: The Social Health Insurance (SHI) scheme was introduced in 1992 and has gradually expanded into a nationally compulsory scheme requiring member premiums (72). Coverage includes inpatient and outpatient hospital care in public and government-approved private facilities and other health facilities, as well as transportation services in poor and mountainous areas, up to a cost ceiling (72-74). Financing comes from government budget allocations and premiums.

Policy rationale: The SHI scheme aims to support the government's move towards UHC (75). No criteria for the inclusion of diagnostics are mentioned in the relevant documentation.

Population coverage: 92% enrolment in 2022 (76) exceeding the target of 80% of the total population set in 2012 (72) but missing the revised target of 100% by 2020 (74).

Financial coverage: The cost ceiling for the treatment of each episode is the equivalent of the total minimum salary over 40 months (72). Costs for each included service are set for all hospitals at the same level by the Ministry of Health (72).

Co-payments or premiums: For employees, pensioners, students and other groups, premiums equal 4.5% of basic monthly salaries. 100% subsidy for 13 groups including people over 90 or under 6 years of age, the poor, army and police force and relatives. 70% subsidy for the near poor, students and farmer households (72, 73). Co-payments are set at 20%, except for groups subsidised 100%, paid directly to the hospital.
(73, 77). A ceiling on co-payments equivalent to six months' basic salary exists for those with five years of continuous membership (72). A cap is in place for high-cost technical services (77).

Diagnostics included in the scheme: The benefit package explicitly includes diagnostics (74, 78), with the full list of available diagnostics published (79).

***Lancet* Commission tracer conditions**: All Lancet tracer conditions available: diabetes, hypertension, hepatitis B, syphilis, HIV and TB are included for all, including pregnant women (79).

Purchasing arrangements: Contracting arrangements are in place with both public and private providers, though the public sector predominates. Registered facilities are reimbursed via benefit packages (80). Unregistered facilities can be reimbursed if a reference letter from a registered facilities is provided before patient transfer (81). Each health facility has its own cap of health insurance budget that accounts for previous expenditures and changes in the costs of services and new services based on an approved cost for each service (77).

Alignment with vertical programs: Donor-led HIV programmes are integrated into SHI (62).

Performance of the scheme: Population coverage has gradually increased over the years of the scheme. OOP expenditure remains at about 40% of total health expenditure but there is some improvement in financial protection (82, 83). There remain challenges to cover the entire population, mitigate against perverse incentives for the reimbursement of high-cost technologies, and protect patients from the increasing financial burden if they access hospitals outside their region (80, 84).

Access to diagnostics: No published data is available on access to diagnostics through SHI.

Appendix 3
(Figure 1 and 2 separately attached as pdf)

Figure 1. Universal health coverage index, 2017 and 2019

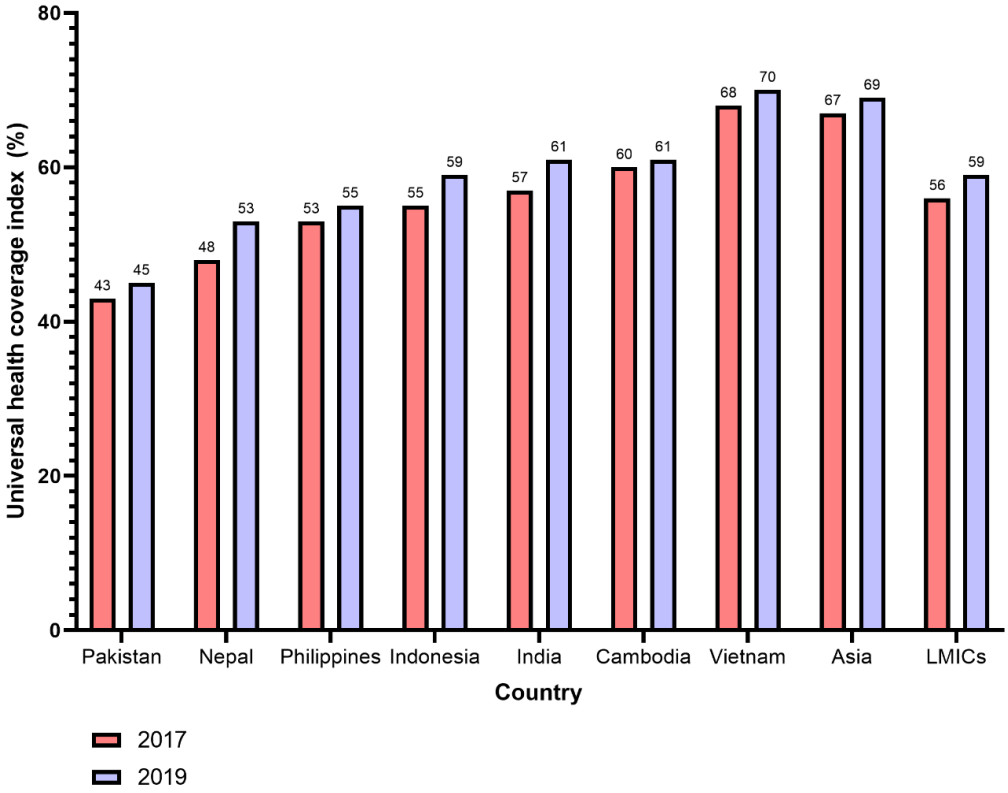

Figure 2. Current annual health expenditure per capita, 2019

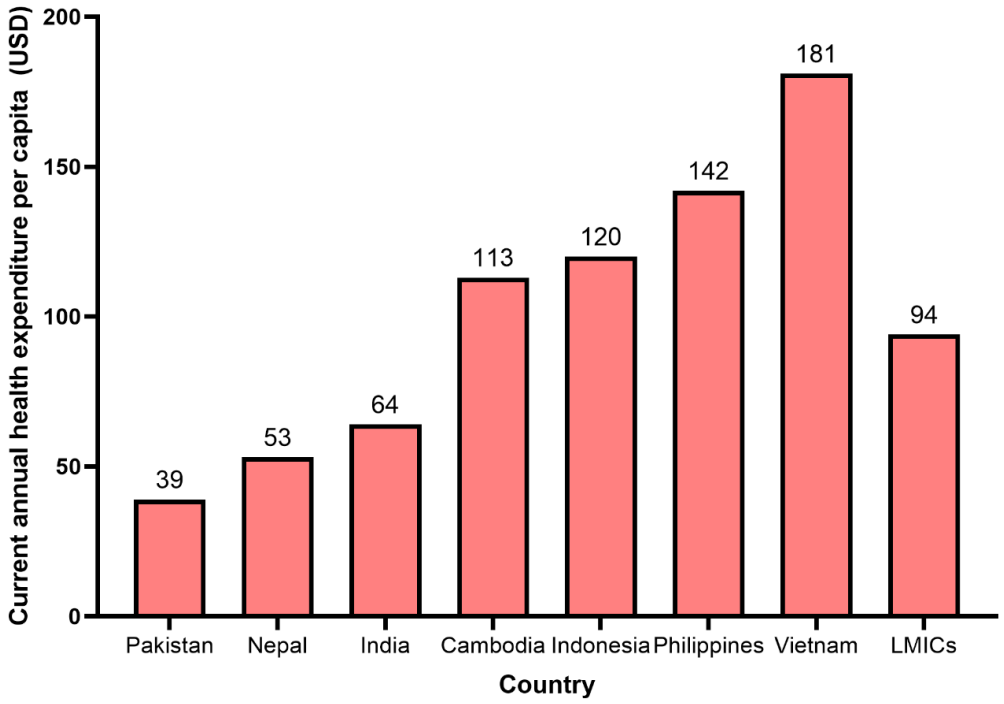

Table 1. Health financing indicators, 2019

	Cambodia	India	Indonesia	Nepal	Pakistan	Philippines	Viet Nam	LMIC
Government health expenditure as % GDP	1.7	1.0	1.4	1.1	1.1	1.7	2.38	1.4
General government health expenditure as % general government expenditure	7.0	3.4	8.7	4.0	4.9	7.6	10.1	5.7
General government health expenditure per capita (current US$)	27.5	20.9	58.8	13.2	12.6	57.7	79.2	36.8
General government health expenditure as % current health expenditure	24.3	32.8	48.9	24.8	32.0	40.6	43.8	39.1
Out-of-pocket spending as % current health expenditure	64.4	54.8	34.8	57.9	53.8	48.6	43.0	48.1
External as a % current health expenditure	6.5	0.8	0.6	11.9	7.1	0.4	1.0	2.9

Source: Global Health Expenditure Database, 2022. Note: Data point for general government health expenditure as a % general government expenditure for LMIC is from 2018