

DESIGNING AND COSTING A HEALTH BENEFITS PACKAGE IN A LOWER MIDDLE-INCOME COUNTRY THE CASE OF HONDURAS

By Pamela Góngora¹ and Ursula Giedion². Based on the [webinar](#) hosted by the CRITERIA Network and presented by Pamela Góngora, Natalia Jorgensen, Rodrigo Muñoz, and Ursula Giedion on 18 May 2021.



“No country, no matter how rich, is able to provide the entire population with all the technologies or interventions that could improve health or prolong life”. (WHO, 2010: 21)

1. INTRODUCTION

Honduras is a small (population of 9.7 million) lower-middle-income country (LMIC) (GDP per capita US\$2,661) located in Central America on the Caribbean Sea (IMF, 2020). Some 61.9% of its population lives below the poverty line and 38.7% in extreme poverty (i.e. below the indigence line), according to official data from 2018 (INE, 2019). Life expectancy at birth is 73.8 years (year 2017), the infant mortality rate 14 per 10,000 live births, and the maternal mortality ratio 60 deaths per 100,000 live births (SESAL, 2019). Interpersonal violence, neonatal disorders, and ischemic heart disease are the three leading causes of death and disability. Worth noting, however, is the continued presence of communicable diseases such as tuberculosis, dengue, and Zika (IHME, 2020) (SESAL, 2018).

Like all LMICs, Honduras has faced substantial constraints to meeting the health needs of its population, often encountering difficulties providing even the most basic health services. Resources for health are always limited, but in LMIC countries such as Honduras, the budgetary constraint is even greater. Faced with the gap between available resources and health demands, the country has been prioritizing health resources based on the expenditure of providers or pressure from the various actors, depending on their political or economic clout. This implicit priority of resource allocation has resulted in long waiting lists to access health interventions, poor-quality services, and high out of pocket spending by citizens (Klein, Day, & Redmayne, 1997). At the end of

2019, for example, more than 13,000 patients were on the surgical waiting list due to lack of space, supplies, and necessary human resources. Many of the country's public health facilities are in poor condition (HRN, 2019), offering the population substandard health services (Carmenate-Milián, Herrera-Ramos, & Ramos-Cáceres, 2016). The lack of effective coverage explains the high out-of-pocket health expenditure reported each year, accounting for 48.7% of total health expenditure – a share above the average for Latin America and the Caribbean (28.2%) (WHO, 2020).

Faced with this situation, in 2018 the Government of Honduras requested the Inter-American Development Bank (IDB) to provide technical cooperation through the IDB CRITERIA Network to compile a Set of Prioritized Health Benefits for Honduras (CPPSH) as a path to universal health coverage (UHC) (Inter-American Development Bank, 2019).

Health benefits packages (HBP) are a tool for explicit priority setting in health, which involves the structuring of a series of processes and the design and implementation of a methodology to explicitly define the health services and products to be guaranteed and their cost. At their best, HBPs allow for greater efficiency in health expenditure, insofar as they help to allocate the limited resources to the healthcare services that provide the greatest well-being to the population. Designing an HBP also involves agreement among the different stakeholders on participation and deliberation mechanisms. Although this requires a major political and technical effort, it increases the likelihood of constructing an HBP that is considered legitimate, sustainable, and resistant to political cycles (Gutiérrez, Giedion, Muñoz, & Ávila, 2015). Thanks to its potential benefits as a tool for progress on the road to UHC, more and more countries around the world are adopting explicit health benefits packages³.

Under a technical cooperation agreement that Honduras signed with the IDB, a project to design an HBP for the

country was launched under the direction and supervision of CRITERIA, IDB's network on health benefits package design and explicit priority setting⁴. The project was structured to ensure: a) strong local insertion; b) a multidisciplinary team; and c) access to top specialists and health experts to resolve specific technical issues (see [Figure 1](#)).

How to prioritize health interventions? What interventions to prioritize? What is the cost of the prioritized interventions? The project team provided potential answers to these, and other questions raised by the Honduran authorities in 2019 in a lengthy effort involving six different steps, as seen in [Figure 2](#).

2. SIX STEPS TOWARD DESIGNING AN HBP

The design of the Honduran HBP, called **Conjunto Priorizado de Prestaciones en Salud para Honduras (CPPSH)**⁵ in Spanish, was carried out in six steps, as illustrated in [Figure 2](#). Beyond the technical and methodological elements, each step was marked by discussions and deliberations aimed at reconciling the technical recommendations in the international literature with the preferences and constraints of the local context. To that end, a broad and diverse interinstitutional team was formed with technicians from the Ministry of Health of Honduras (SESAL) and the Honduran Social Security Institute (IHSS). This interinstitutional team, in conjunction with the IDB CRITERIA Network and a group of local and international consultants hired by the IDB, labored for almost two years to design an HBP that guarantees the right to health on equal terms for the entire population of Honduras.

FIGURE 1

Project structure

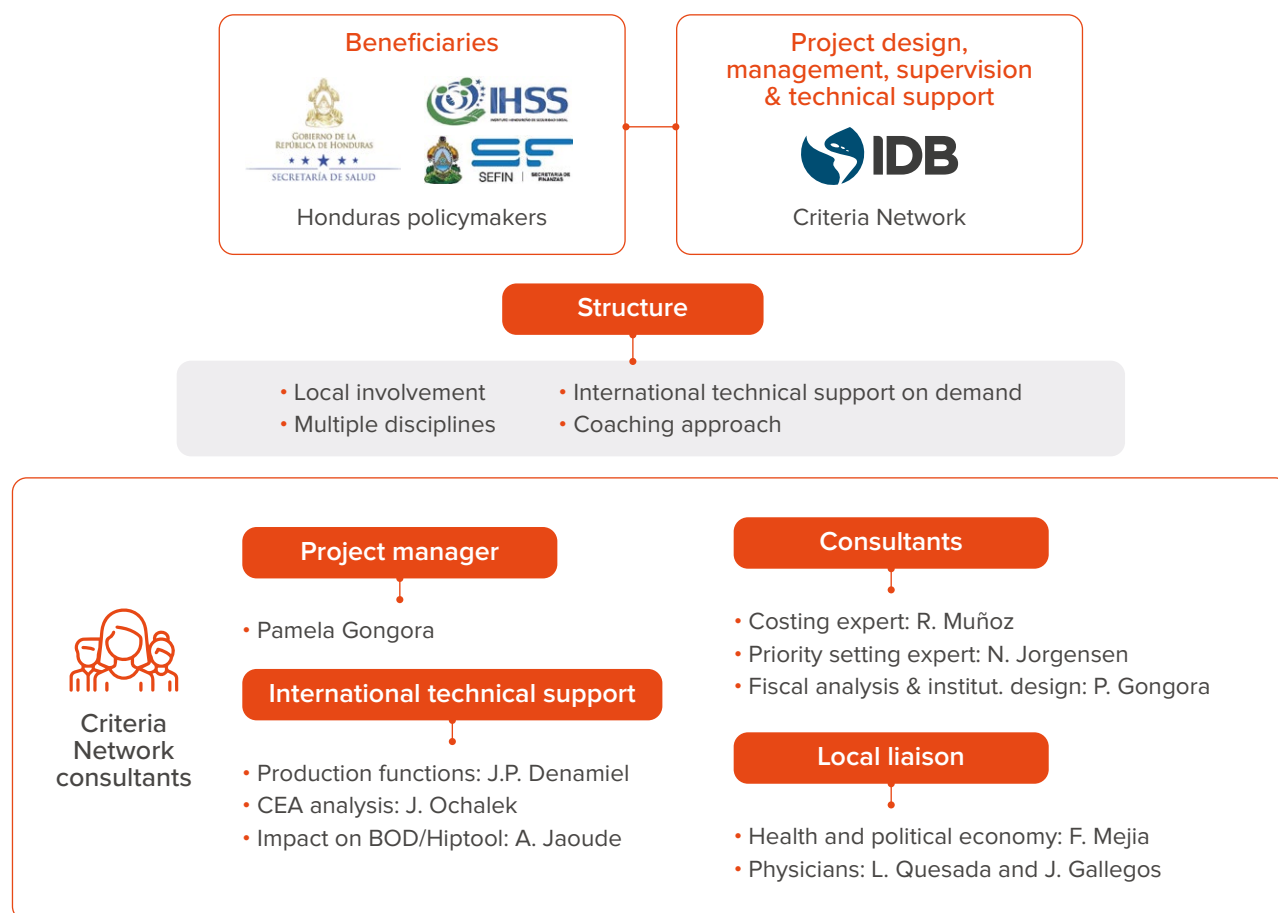
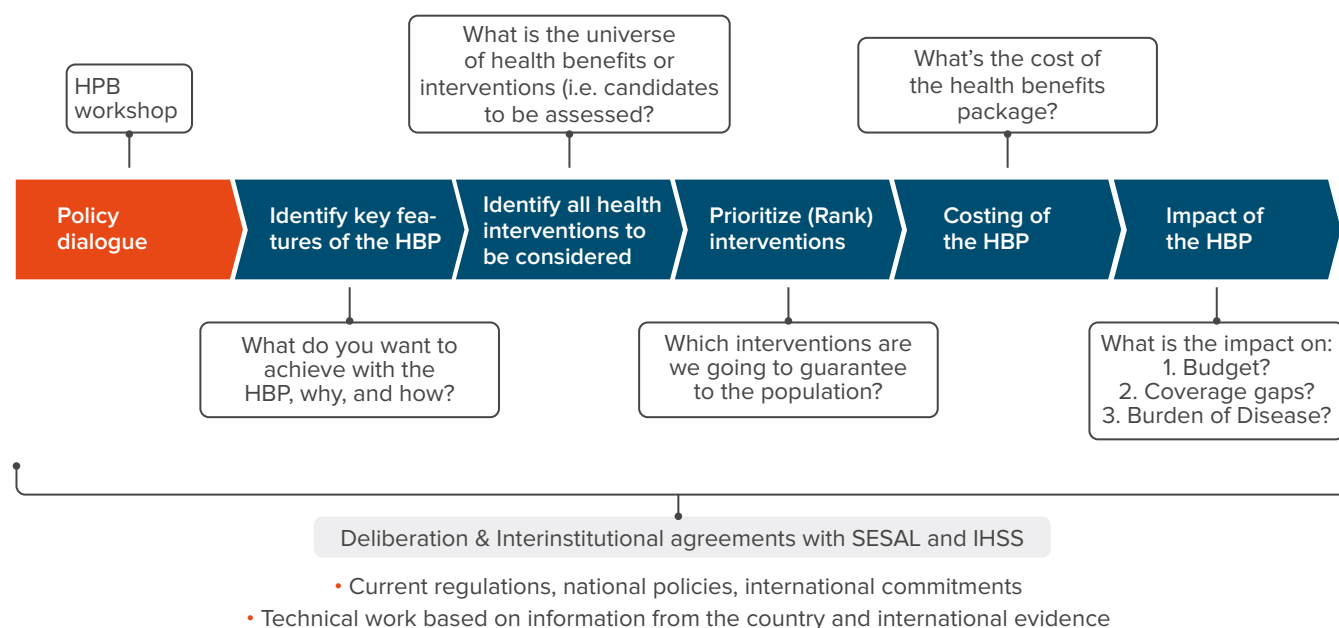


FIGURE 2**6 steps for the design of an HBP**

Each forum for deliberation and joint construction considered the country's previous technical work, its legal framework, and the multiple public policy documents describing the latest health sector reforms and presenting its plans of action for meeting the country's health targets.

2.1. STEP 1. POLICY DIALOGUE

The CRITERIA Network held a **weeklong training workshop on HBP policy** in 2017 as a prelude to the design of the HBP. This workshop introduced the reasons for adopting HBPs, priority setting, and costing methods, as well as an overview of governance and aspects of political economy associated with their design, modification, and implementation. Attended by technicians and managers from SESAL, IHSS, and SEFIN, it opened a policy dialogue around analytical methods for explicit priority setting, costing methods, and the basic elements of the design of a sustainable, legitimate, and coherent HBP (Glassman, Giedion, & Smith, 2017).

This workshop **demonstrated the usefulness of explicit priority setting for Honduras**. The participation of delegates from SESAL, IHSS, and, importantly, SEFIN, facilitated a smoother dialogue among these institutions – an essential element for the construction of a sustainable HBP consistent with the country's health and fiscal situation.



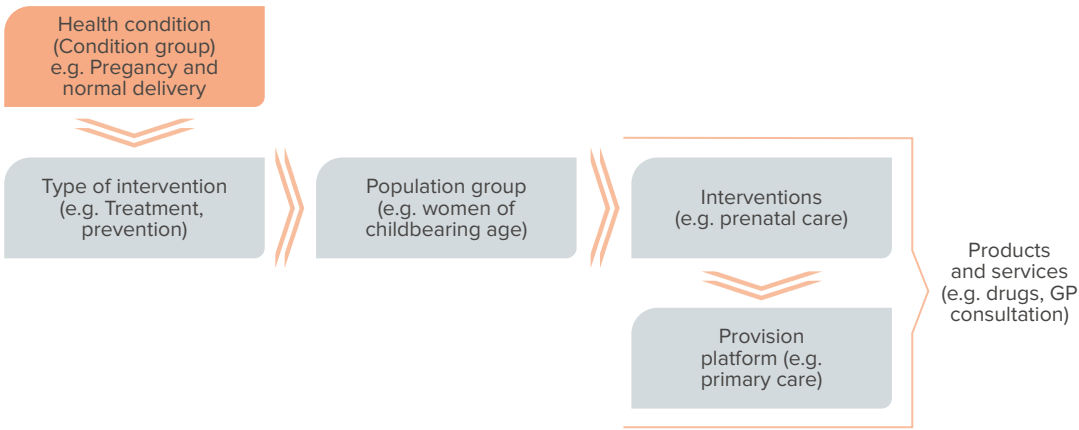
2.2. STEP 2. DEFINITION OF THE BASIC CHARACTERISTICS OF THE HBP

In 2019, once the technical cooperation agreement with the IDB had been signed, it became imperative to define the basic characteristics of the HBP for Honduras. Definition of the basic characteristics of an HBP, a key step that serves as a roadmap for the entire design process, is a procedure often neglected by practitioners and the literature alike. The objectives of the HBP, the reasons for adopting it, the scope of benefits and target population, the work already done in the country to set priorities, and the structure of the HBP were all elements discussed and agreed upon in the course of frequent meetings with the interinstitutional team. [Table 1](#) summarizes the basic characteristics of the HBP that Honduras wished to design.

The objective of the Honduran HBP incorporates the features of the definition of universal health coverage. It also indicates the social values that will guide the priority setting exercise. The HBP is a tool that helps to ensure the population's right to health and promotes efficient health expenditure. These two elements were part of what motivated the Honduran HBP, together with the need to address health inequities. Indeed, the interinstitutional team stressed the need to promote equity in the Honduran health system as the principal motive behind the HBP policy.

TABLE 1

Basic elements of the Prioritized Set of Health Benefits for Honduras

What?	General objective	Guarantee the entire population equitable, effective, timely, and quality access to essential health services and products (promotion, prevention, care, rehabilitation, and palliative care) throughout the life course, based on the operational and financial capacity of the health system.
Why?	Central motivation	<ul style="list-style-type: none"> • Guarantee the right to health, under equal conditions, for all inhabitants of Honduras (Article 145, Political Constitution of Honduras). The CPPSH represents the realization of the right to health and is seen as an opportunity to make progress in closing health gaps. • Develop a strategic policy tool that makes it possible to: (i) align health goals with the allocation of resources; (ii) improve the management of service delivery; and (iii) equitably increase the efficiency of health expenditure. • Comply with current regulations—in particular: the Law of the National Health System & the Framework Law of the Social Protection System.
Scope	Who?	100% of the population living in Honduran territory, regardless of the subsector to which they belong or the insurance regime.
	What?	Essential benefits throughout life; and services of public health interest.
	Where?	Individual health benefits at the primary and secondary levels of care.
Starting point		SESAL preliminary list of healthcare services (CGPSS, 2019).
		<p>Disease control priorities - DCP3 3rd edition, – (University of Washington, 2018) (Dean, y otros, 2018).</p> <p>Three benefit plans:</p> <ul style="list-style-type: none"> • Universal health coverage (UHC) • Essential universal health coverage (EUHC) • Highest priority package
Structure	Lines of watch out	<p>Health conditions prioritized in the Institutional Strategic Plan (PEI 2018-2022).</p>  <p>A high level of detail is requested: For each intervention, the necessary products or services should be identified, and for each product or service, the required inputs should be listed, and the frequencies of each health event defined.</p>

The scope of the HBP in terms of its **target population and benefits** was determined with the aim of advancing toward **universal health coverage**. A preliminary list of healthcare services drawn up earlier by SESAL was the starting point for the construction of the HBP (SESAL, 2019). This list of medicines, services, and other health technologies was supplemented and standardized with the healthcare packages identified by the DCP3 project (*Disease Control Priorities, 3rd edition*) and lists the priorities for disease control in lower-middle income countries around the world, based on economics assessments of health interventions (University of Washington, 2018) (Dean, y otros, 2018). Both sources were used to identify the universe of health services and products to be assessed.

Finally, during the interinstitutional team's sessions for deliberation and consensus, **it was agreed that the CPPSH would be structured around priority health conditions (e.g. pregnancy and normal delivery), as defined in the Institutional Strategic Plan (PEI 2018-2022), namely:** (a) Pregnant women, children under 5, and the elderly; (b) Communicable and non-communicable diseases previously prioritized by the country; (c) Morbidity in general, according to the life course, and vulnerability, focusing benefits on health promotion, disease prevention, and primary health care.

For each health condition, the necessary *types* of interventions (e.g. prevention), the target population groups (e.g. women of childbearing age), the related interventions (e.g. prenatal care), and the setting in which they are provided (e.g. primary care) would be defined. For each intervention, the *products and services* (for example, prenatal check-ups) necessary to deliver the intervention would be specified. Finally, for each product or service, the required *inputs* (e.g. medicines) would be listed and the frequencies of each health event defined (see [Table 1](#)).

2.3. STEP 3. IDENTIFICATION OF THE UNIVERSE OF POTENTIAL CANDIDATES FOR INCLUSION IN THE HBP

Once the basic characteristics of the HBP were agreed on, the universe of health interventions from which the benefits would be selected and evaluated was identified.

The universe of potential interventions consisted of the health services and products contained in SESAL's preliminary list of healthcare services. This list was drawn up by SESAL's General Directorate of Integrated Service Networks with a view to identifying all relevant health technologies for clinical practice in Honduras (SESAL, 2019).

This earlier list was merged with the two health benefits packages (the Essential Universal Health Coverage and Highest-Priority Package) developed by the DCP3 project. As a result, definition of the universe of potential health benefits did not start from scratch; the work that the country had already been doing was the starting point and was then supplemented with the best possible international evidence. In all, 112 health benefits were selected as the universe of benefits to be evaluated.

2.4. STEP 4. RANKING HEALTH INTERVENTIONS

The universe of health interventions was then evaluated, using criteria and an analytical method consistent with the group's objectives, which had been selected when defining the basic characteristics of the HBP (Step 1).

This process involved the identification of the priority-setting criteria, their operationalization, the selection of appropriate methods and information sources, and finally, the evaluation of each of the benefits of the universe.

PRIORITY SETTING CRITERIA

In line with the main objective of the HBP and as part of its deliberative process, **the interinstitutional team agreed to prioritize health interventions according to three criteria:** efficiency, equity, and financial protection in health.

- » **Efficiency:** Efficiency in the allocation of scarce health resources to obtain the best possible health benefit with the resources available locally.
- **Operationalization:** To incorporate this criterion in the evaluation of health interventions in Honduras, information was gathered on the cost-effectiveness of each intervention. Cost-effectiveness analysis relates the cost of interventions to their effectiveness in terms of health gains. This allows the interventions to be ranked in such a way that priority is given to those that provide the greatest possible health benefit for each lempira invested. To determine whether an intervention is cost-effective, we began by identifying the incremental cost-effectiveness ratio (ICER) from international databases and then compared it with cost-effectiveness thresholds that had been estimated for the Honduran context (Ochalek J et al., 2018) (Pichón-Rivière et al., 2017) (Woods B, 2016). To mitigate the problems of transferability in a context in which no resources were available to conduct local cost-effectiveness analysis (CEA) for the

universe of interventions that might be included in the HBP, we focused on ICERs derived from studies conducted in comparable contexts. The ICER is interpreted as the number of additional lempiras or dollars required to achieve an additional unit in health (i.e. disability-adjusted life year (DALY)). The cost effectiveness threshold, in contrast, indicates the maximum affordable ICER for a country. The threshold can be therefore understood as a summary measure of the opportunity cost, and its value depends on the size of the available budget. Hence, an intervention with an incremental cost per additional unit of health benefit above this threshold would be considered non-cost-effective. This means that the units of health that the intervention of interest generated were lower than the units of health that would have been gained had the resources required to implement the intervention of interest been used elsewhere.

» **Equity:** Closing equity gaps in health and improving the health conditions of people in situations of socioeconomic vulnerability is the main motivation behind the Honduran HBP. This is hardly surprising, since Honduras is one of the most inequitable countries in the world.⁶

- **Operationalization:** For this criterion, an analysis of the distribution of the burden of disease and access to health services by socioeconomic level *should* be conducted. However, as in many LMICs, this kind of information is not available in Honduras, and it soon became clear that there was a gap between the recommendations in the literature and what was feasible on the ground. After discussions with the interinstitutional team and an analysis of the available information, a pragmatic approach was adopted: The 14 indicators associated with Goal 3 (health and well-being) of the Sustainable Development Goals (SDG- 2030 Agenda) were taken as a proxy for the equity criteria and health benefits directly associated with any of these indicators took the value of 1 and 0 otherwise.⁷

» **Financial protection:** One of the goals of the Honduran HBP is to protect households from financial hardship when faced with a health need. Interventions whose cost exceeds the purchasing power of households in addition to occurring unexpectedly (i.e., not accounted for in the monthly household budget) usually put significant pressure on household health expenditure.

- **Operationalization:** To identify the degree of financial protection that the different health benefits can provide, a composite indicator was used that considers both the cost of each health benefit in relation to the average level of household income and the degree of predictability of requiring each health benefit. With regard to the former, the unit cost of each intervention calculated as part of the project was first compared with respect to 5 different levels of household income: daily, weekly, monthly, quarterly, and semiannual per capita income. The resulting subindicator could take six values:

- $C_A = 1$ if $\rightarrow C_i \leq \$6.55$ (daily per capita income);
- $C_A = 2$ if $\rightarrow \$6.55 < C_i \leq \49.79 (weekly per capita income);
- $C_A = 3$ if $\rightarrow \$49.79 < C_i \leq \199.17 (monthly per capita income);
- $C_A = 4$ if $\rightarrow \$199.17 < C_i \leq \597.50 (quarterly per capita income);
- $C_A = 5$ if $\rightarrow \$597.50 < C_i \leq \1195.00 (semi-annual per capita income); o
- $C_A = 6$ if $\rightarrow C_i > \$1195.00$ (semiannual per capita income).

The second subindicator takes the value 1 if it is an acute event and 0 otherwise. If a health intervention was surgical or an acute event, it was considered to be unpredictable, thus representing a greater financial risk to families. From these two subindicators, a composite indicator was developed that makes it possible to classify the benefits in three categories of financial protection (low, medium, and high). The composite financial protection indicator (pf value) is the sum of both subindicators. The indicator can take values of between 1 and 7, with 7 having the greatest impact on the financial protection of families. If this indicator is equal to 1 or 2, the intervention is considered to have either no or only a small impact in terms of financial protection; if it is equal to 3 or 4, the intervention is classified as having a medium impact; and if takes values equal to 5, 6, or 7, the intervention is classified as having a high impact.

EXAMPLE OF THE OPERATIONALIZATION OF CRITERIA

Figure 3 presents an example (health intervention No. 2304 “Management of HIV-positive patients at the first level of care”) of the evaluation of the health interventions assessed in terms of their equity, efficiency, and financial protection. In our example, the ICER is roughly US\$210 to US\$285, a value below the two thresholds that the literature has estimated for Honduras (US\$658 and US\$1,860), and the intervention is classified as cost-effective. In our example, this implies that intervention No. 2304 is able to generate a larger health benefit to Hondurans than other activities that could be funded with those same resources.⁸

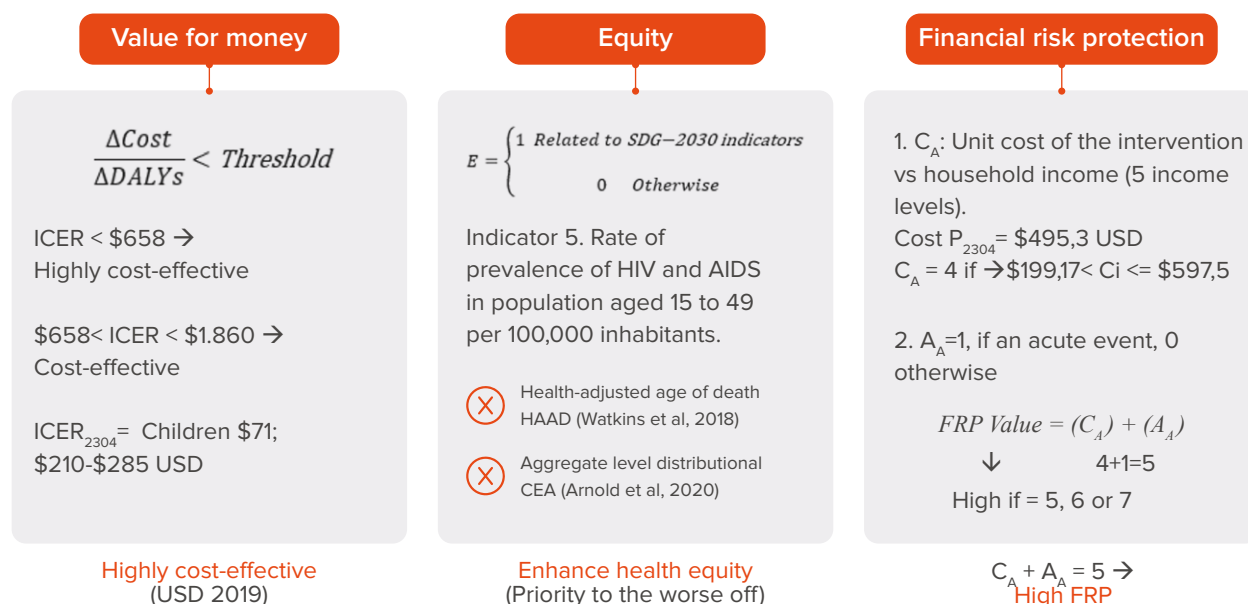
To determine whether the intervention has a positive impact in terms of *equity*, the list with the 14 indicators of Goal 3 of the UN SDGs – 2030 Agenda was consulted. In the case of our example, it was found that one of the 14 indicators is “Indicator 5. HIV and AIDS prevalence rate

The second subindicator related to financial protection takes value 1, as HIV/AIDS is considered to correspond to an acute non-predictable health event. In our example, the financial protection indicator is equal to 5. As a result, the “*Management of HIV-positive patient at the first level of care*” is considered an intervention that generates a high degree of financial risk protection. As a result, the intervention in our example is highly cost-effective, equity promoting, and provides a high degree of financial protection when included in the HBP.

Various national and international sources of information were used in the evaluation process. The data for the cost-effectiveness analysis came from the international literature and international databases—in particular, the [Tufts Medical Center Global Health Cost and Effectiveness Analysis](#). The information for the equity indicator is mainly from the “National 2030 Agenda of the Sustainable Development Goals” (AN-SDGs) (Secretaría de Coordinación General de Gobierno, 2019). Finally, the

FIGURE 3

Example: Evaluation of benefit No. 2304 “Management of HIV-positive patient at the first level of care”.



in population 15 to 49 years per 100,000 inhabitants.” Since “Management of HIV-positive patients at the first level of care” can contribute to a reduction in HIV/AIDS prevalence in the population, this provision is classified as promoting equity.

Finally, since the cost of intervention No.2304, “Management of HIV-positive patient at the first level of care” is US\$495.30, subindicator CA takes a value equal to 4 and exceeds a household’s *quarterly* income.

information for the financial protection indicator was taken from three sources: (i) The costing exercise conducted under this project (see [Step 5](#)), which is based on national and international sources; (ii) Household income data from Honduras (World Bank), and; (iii) Data provided by the [DCP3 study](#) on the degree of predictability of health benefits (i.e. a binary indicator equal to 1 if the health benefit is associated with an acute unpredictable health event) (University of Washington, 2018).

RESULTS OF THE EXPLICIT PRIORITY SETTING EXERCISE: CONTENT OF THE HEALTH BENEFITS PACKAGE

After evaluating each of the 112 interventions using the above-mentioned criteria, the interinstitutional team ranked and organized them into three sets of interventions (see [Table 3](#)).

The First Priority Set (Set 1) contains 74 interventions related to maternal and child care, immunizations, and care for infectious diseases with high prevalence and risk. Most of these interventions are related to health promotion and disease prevention, and some to diagnosis. Almost all interventions in this set are provided at the primary care level.

The Second Priority Set (Set 2) includes 16 health interventions for the treatment of noncommunicable diseases, such as acute myocardial infarction or schizophrenia. In this sense, this set includes more complex health interventions, some of which must be provided at the secondary care level (e.g. hospital services).

Finally, the Third Priority Set (Set 3) includes 22 interventions provided mainly at the secondary care level, such as care for cardiovascular disease, treatment of early childhood cancers, or the management of chronic kidney disease.

2.5. STEP 5. COSTING THE HEALTH INTERVENTIONS

To cost the HBP's three sets of interventions, a micro-costing methodology was used. The unit cost and expected number of cases were calculated for each health intervention. To do so, the most important thing was to estimate the utilization (i.e. the number of times that the intervention is provided in a year) and cost of each of the inputs that make up each priority health intervention.

One of the main goals of the costing exercise was to identify the gap between the current allocation of resources to the interventions included in the HBP and the resources that would be required to reach more adequate coverage levels. That is, for each intervention, the difference between the cost of what the country currently offers to its population (i.e. current coverage – observed cost) and what it would cost to offer the same intervention, with quality, to all those in need (i.e. effective coverage – normative cost) was calculated. This calculation provides policymakers with critical information about the additional resources they would have to mobilize (or reallocate) to provide effective coverage of the interventions included in the HBP. It also takes into account the fact that HBPs that are being designed in LMICs mostly include interventions that are already being provided, albeit with low quality and insufficient coverage.

TABLE 2

Content of the Prioritized Set of Health Benefits for Honduras (CPPSH)

Subset	Description	Examples of interventions
Set 1: First priority	<ul style="list-style-type: none"> • 74 health interventions (Primary care level). • The most cost-effective and interventions and simultaneously those with the highest impact on equity and financial protection. 	<ul style="list-style-type: none"> • High-risk prenatal care. • Management of severe acute malnutrition associated with acute infection. • MMR (measles, mumps, rubella) immunization.
Set 2: Second priority	<ul style="list-style-type: none"> • 16 health interventions (Secondary care level). • Cost-effective interventions with a high impact on equity and provide financial protection. 	<ul style="list-style-type: none"> • Intervención coronaria para infarto agudo de miocardio. • Diagnóstico de resistencia y tratamiento MDR para tuberculosis.
Set 3: Third priority	<ul style="list-style-type: none"> • 22 health interventions (Secondary care level). • Interventions that are non-cost-effective but have a high impact on equity and financial protection, and interventions with problems achieving effective coverage (due to current supply or institutional constraints). 	<ul style="list-style-type: none"> • Treatment of hypertension in patients with comorbidities (diabetes, kidney disease). • Management of adult patients with type 2 diabetes (for uncomplicated insulin dependence). • Management of kidney disease.

To conduct this exercise, the following steps were followed:

- » **Step 1. Calculate the cost of delivering the health interventions of the HBP to all those in need of them.** This cost, which we called the *normative* cost, requires (a) estimating the number of people in need of the intervention, or more precisely, the annual number of cases requiring the intervention (e.g. the expected incidence of diabetes in the case of the “Diabetes Treatment” benefit), and second, (b) estimating the average cost per case, or unit cost. Thus, the normative cost of a particular intervention is the result of multiplying the number of expected cases by the unit cost:

Normative cost =
Number of cases x Cost per case

An example is presented in [Table 3](#) (Intervention No.201, “Family planning (without implants).” To calculate the unit cost of the intervention, we began by identifying the products and services required to provide this intervention with quality. In our example, five products or services are needed, and for each, the amount required to provide the intervention in a year is defined. The frequency or percentage of cases that will require each product or service is also defined (e.g. 33% of women of child-bearing age will require oral contraceptives). Finally, the unit cost of each product or service must be estimated (e.g. the cost to SESAL of a consultation for contraception counseling in urban areas is L 68). The expected cost of each product or service is the product of the quantity, frequency, and unit cost. The sum of the cost of all products and services results in the cost per case (i.e. per woman) per year. Once the cost of the intervention is obtained, it is multiplied by the number of expected cases in a year (e.g. in the case of SESAL, 548,173 women of reproductive age who wish to access family planning) to obtain the total normative cost. This is what it would cost to deliver the benefit of “Family Planning (without implants)” to the population that needs it.

This exercise was conducted for Sets 1 and 2 of the HBP.⁹ As seen in the example, the exercise ultimately involves the design of a production function for each intervention, seeking clinical effectiveness and efficiency in the use of resources (e.g. it is not necessary for a doctor to provide contraception counseling, when the quality of this service provided by

a nurse is not only considered good and consistent with clinical practice guidelines but also more efficient).

- » **Step 2. Calculate the budget currently allocated to the interventions included in the HBP (i.e. Observed cost or budget currently allocated for each prioritized benefit).** Unfortunately, the *current* cost per case can be hard to estimate in countries with limited information systems, as is often the case in LMICs. One alternative for approximating the resources currently used is to take the normative cost of each case and use the number of cases attended, or *current* coverage, instead of the number of cases that actually *need* the benefit (i.e. expected cases). The latter data is obtained from monthly statistical records or existing surveys.

Current cost =
Number of cases attended x Cost per case

- » **Step 3. Calculate the gap between the normative and observed cost of each intervention:** Once the two types of cost have been estimated for each of the priority interventions, the yearly resource gap (i.e. incremental cost) for each of the interventions is calculated.

Resource gap =
Normative cost – Current cost

Continuing with the previous example, [Table 4](#) presents the estimate of the resource gap for the “Family Planning (without Implants)” intervention. In the case of SESAL, for example, the annual normative cost of this intervention is L 237 million; in this scenario, 100% of the women who need this intervention receive it. This figure contrasts with the current cost or the amount of resources currently allocated for this benefit (i.e. L 185 million). In this last scenario, a coverage rate of 78% is estimated (i.e. percentage of women who currently receive the family planning (without implants) intervention), according to the National Demographic and Health Survey (ENDESA). Therefore, it is estimated that for this intervention, the yearly resource gap for full coverage is L 52 million for SESAL and L 15 million for IHSS.

TABLE 3**Example of normative costing: Basket of services
"201. Family planning (without implants)"**

#	Product or service description	Quantity	Frequency	SESAL unit cost	IHSS unit cost	Total SESAL Cost	Total IHSS Cost
1	Contraceptive counseling in urban areas (professional nurse)	1	51%	L 68	L 90	L 35	L 46
2	Contraceptive counseling in rural areas (nursing assistant)	1	49%	L 41	L 61	L 20	L 30
3	Depo-provera 150mg/ml/IM. 1 ampoule IM stat. (continuous use)	1	50%	L 18	-	L 9	L 9
4	CONDOMS. 1 each day (continuous use)	365	16%	L 0.63	-	L 37	L 37
5	ORAL CONTRACEPTIVE (ACO), 1 tablet each day (continuous use)	365	33%	-	L 2.70	L 331	L 331
Cost per case:						L 432	L 453

Sector	SESAL	IHSS
Cost per case in 2021 (lempiras)	432	453
Expected cases in 2021	548,173	148,519
Normative cost in 2021 (million lempiras)	236.8	67.2

TABLE 4**Example of gap estimation: "Family planning
(without implants)" intervention basket**

Sector	SESAL	IHSS
Cost per case in 2021 (lempiras)	432	453
Expected cases in 2021	548,173	148,519
Normative cost for all women requiring this intervention, 2021 (million lempiras)	237	67
Current coverage rate	78%	
Cases attended in 2021	427,293	115,768
Current cost for all cases 2021 (million lempiras)	185	52
Resource gap in 2021 (million lempiras)	52	15

Once the normative cost and observed (or current) cost and the resource gap is calculated for each intervention, the total cost of the First and Second Priority Sets is calculated by adding up the cost of all the interventions.

The costing exercises for SESAL and IHSS were conducted separately in recognition of differences in the demographic structure of the populations served by each institution (i.e. sex and age are determinants of several health problems, and this structure is not the same for the two institutions), as well differences in the supply of health resources for each (e.g. the salaries of medical staff are different).

To apply this micro-costing methodology, various sources were considered. The estimate of need, or the probability that a member of the target population will require the benefit, was based primarily on the Global Burden of Disease (GBD) study, which contains incidence and prevalence data by sex and age for a set of health problems or conditions (IHME, 2020). For the number of current cases and the unit cost of the services or products that make up each intervention, local information from SESAL, IHSS, INE, and some hospitals and data from national surveys (e.g. ENDESA), among other international sources, were used.

RESULTS OF THE COSTING EXERCISE: COST OF THE HBP

The results of the costing exercise are presented in the table below. The annual per beneficiary normative cost of Set 1, is US\$73 for SESAL and US\$72 for IHSS.¹⁰ These values are higher than the estimated resources that the

health system currently allocates to the services included in Set 1 (US\$29 for SESAL and US\$33 for IHSS), resulting in a resource gap of approximately US\$40 per beneficiary. The resource gap is smaller in IHSS than in SESAL, as coverage levels are higher in the social security sector than the public sector. If the interventions of the second priority set are combined (i.e. Set 1+2), an even larger gap is observed (US\$69 for SESAL and US\$73 for IHSS). Interestingly, however, this time the gap for IHSS is larger.

This is due to the fact that the differences observed in the cost are explained not only by the differences in population coverage but differences in the cost of inputs. After reviewing and comparing the unit cost of each benefit in both institutions, potential inefficiencies emerged that explain, for example, why the gap in the case of Priority Set 1+2 is larger for the IHSS than for SESAL. On examination, we found that the difference in the gap is due mainly to a single drug, the aerosol (Formoterol+Budesonide) used to treat asthma and COPD (chronic obstructive pulmonary disease). This drug costs almost four times more in the IHSS than in SESAL. If the IHSS were to purchase this drug at the SESAL price, its drug costs in the first and second priority sets would be reduced by 31%.

As illustrated in [Table 5](#), the costing exercise goes beyond calculating the total cost of the interventions included in an HBP to determine the total resources needed to provide the HBP. Since most LMICs usually provide most of the services that will be prioritized in an HBP, albeit at low coverage levels, this exercise is much more useful when it provides information on the *additional* resources required to provide adequate coverage levels.

TABLE 5

Costs per beneficiary to achieve universal coverage of the Prioritized Set of Health Benefits for Honduras (CPPSH), by sector, in dollars

Sector	SESAL	IHSS
Set 1		
Current cost	\$29	\$33
Normative cost	\$73	\$72
Per beneficiary resource gap	\$44	\$39
Set 1+2		
Current cost	\$34	\$42
Normative cost	\$103	\$115
Per beneficiary resource gap	\$69	\$73

TABLE 6**Disease Burden Prevention Estimate for Honduras**

Group	Number of health interventions	DALYs addressed by the health interventions	DALYs addressed by the health lines included in the Set*
1	74	827,257	32.4%
2	16	172,276	6.7%
3	22	605,602	23.9%
Total	112	1,605,135	62.8%

*As % of total DALYs in Honduras.

Furthermore, costing becomes even more useful when it is routinely used as a tool for identifying potential inefficiencies and thereby optimizing production functions. This is consistent with the dynamic nature HBP processes; the design of an HBP is a never ending process that must constantly evolve with the changes to which health systems are exposed, the dynamics of the market and, of course, changes in the epidemiological profile of the population (Giedion, Gongora, Muñoz, & Godoy, 2021).

2.6. STEP 6. ESTIMATING THE IMPACT OF THE HBP

After the basic characteristics of the HBP and its content and cost were determined, **three impact analyses were conducted:** (i) The HBP's impact on health, in terms of the potential reduction in the burden of disease in Honduras; (ii) The fiscal impact of the HBP; and (iii) The impact of the HBP in terms of closing existing health coverage gaps for essential services and their associated cost.

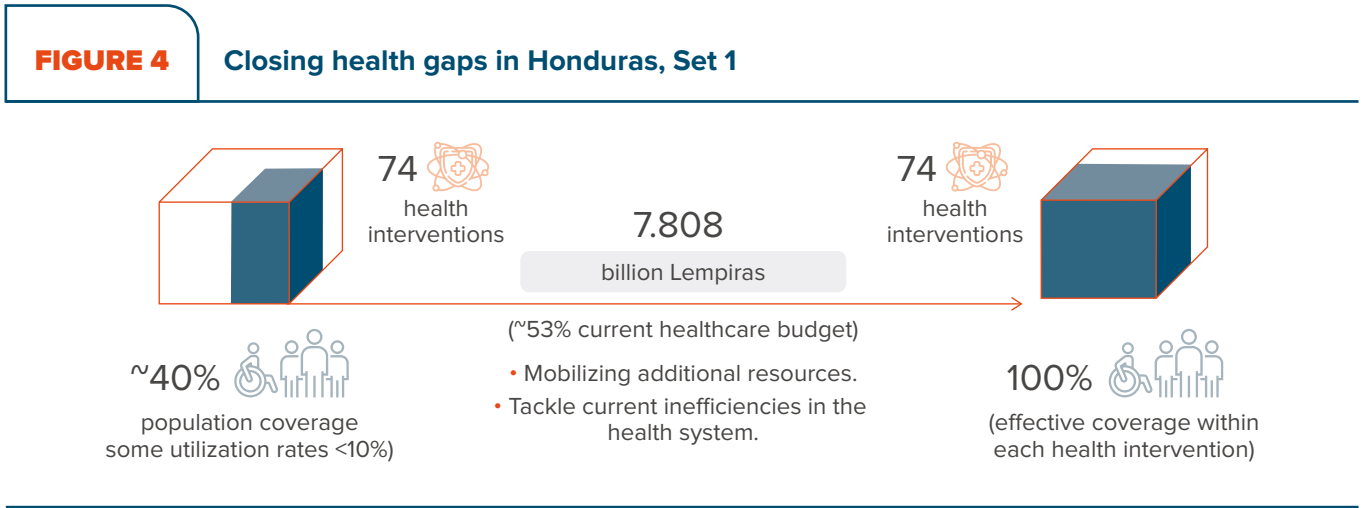
1. **The impact on the burden of disease in Honduras is estimated in terms of disability-adjusted life years (DALYs).**¹¹ According to data from the GBD, the burden of disease in 2019 was 2,557,292 DALYs (IHME, 2020). Also, as evidenced by the costing exercise, the country currently does not provide effective coverage of the interventions prioritized in the HBP. After matching each of the health interventions with its associated health condition, it was found that an HBP that included all three sets of interventions (112 interventions) would address 62.8% of the country's burden of disease (1,605,135 DALYs), with Set 1 (74 interventions) having the greatest impact on health, as illustrated in the table above.

2. **The cost of the HBP must be compared with the local fiscal space to make it financially sustainable.** The fiscal impact analysis shows that, in the case of SESAL, guaranteeing Set 1 to the entire population would absorb 87% of the ministry's health care delivery budget (61% in the case of the IHSS). If the interventions of Priority Set 2 were also included in the HBP, the budget required to provide effective coverage for these services would absorb 123% of the current SESAL healthcare budget (96% in the case of the IHSS).
3. **The gap analysis is designed to determine the additional resources that would be required to provide the HBP, since:** a) most essential health interventions are already being provided, albeit at low coverage levels; b) governments are unlikely to stop providing interventions that are currently being provided but have not been a priority. This gap analysis was made possible by the costing exercise, which revealed low coverage for many high-priority health interventions included in the HBP. Care for acute respiratory infections (ARI) in children under 5 at the primary care level, for example, had coverage of only 35%. This is a highly cost-effective intervention that also has a significant impact on equity in terms of access. Similarly, leishmaniasis management, another highly cost-effective intervention that would particularly favor vulnerable rural populations, is guaranteed to only 21% of the target population, according to the current use estimates of the costing exercise. When adding up all the interventions in Set 1, it is found that, in the case of SESAL, closing the coverage gap would require approximately L 7.8 billion, or almost 53% of the current healthcare delivery budget.

How can we close these coverage gaps and move toward UHC? Doubling the budget in the short term is highly unlikely, especially in LMICs, and even less so in the context of economic slowdown. Redirecting some of the current resources toward the prioritized health interventions is an unlikely scenario. A gradual scenario that begins by prioritizing the most vulnerable populations is perhaps the most appropriate approach. The country could make real budget increases of 4%-5% per year for example, allocating these additional resources primarily to the primary care level, which is where the Set 1 interventions are delivered. This path would close the coverage gap for these highly cost-effective services by more than 50% by 2025. At the same time, steps should be taken to identify opportunities for improvements in terms of technical and allocation efficiency, taking advantage of the information provided by the costing exercise, as seen

in the case of the aerosol used for asthma and COPD, for example.

In short, in order to move towards UHC, it is recommended that Honduras direct its efforts to guaranteeing effective coverage, in the short or medium term, of all health interventions included in the first priority package (i.e. Set 1). These are interventions that address a person's most pressing health needs throughout the life course and are primary care interventions. This approach, which is consistent from an ethical and rights standpoint, makes it possible to close gaps and meet the proposed health goals: before incorporating a set of medium- or low-priority interventions, it is essential to ensure universal coverage for the interventions with the highest priority for a population (Voorhoeve, Ottersen, & Norheim, 2016)¹².



3. LESSONS LEARNED ON HOW TO DESIGN AN HBP

The design of an HBP policy in Honduras was the result of teamwork that constantly had to reconcile the desirable with the possible, given the conditions of the Honduran context and the resource constraints common to most LMICs. **Of the many lessons learned, this policy brief would like to highlight six:**

1. **Designing an HBP goes beyond producing a ranked list of health interventions and conducting an HTA (health technology assessment).** Designing an HBP involves constructing a public policy that commits to the delivery of an explicit prioritized set of core health interventions that will be systematically adjusted as circumstances change.
2. **The gap between the methods recommended by academia and what can be accomplished in the context of an LMIC needs to be addressed with a substantial dose of pragmatism.** When choosing methods, it is very important to consider not only data and skill constraints but the importance of ensuring that the country will routinely use the methods in the future. Therefore, they need to be replicable by the country's institutions and communicated to the different actors that make up the health system. This is critical if the sustainability of HBP policy is truly to be ensured. The construction of an explicit policy for priority setting requires flexibility and adaptability.
3. **The construction of an HBP is an opportunity to discuss fundamental aspects of health policy on the road to UHC.** Lack of the human and physical resources associated with top priority interventions, inefficiency in the use of health

resources, inadequate financing mechanisms, etc. are issues that emerged during the design of the HBP in Honduras and sparked a debate on how to improve the efficiency of the health system on different fronts.

4. **The design of an HBP does not necessarily need to “start from scratch.”** It is not about reinventing the wheel. The process must be pragmatic. Furthermore, it is strategic to start with what already exists and recognize the benefits of the methods that others have already developed, as well as the progress that the country has already made.
5. **The work presented in this policy brief is not a finished product, as the results will be further reviewed and adjusted by the government.** Moreover, even after a final agreement emerges, the HBP must be updated periodically to keep it relevant.
6. **Finally, designing an HBP takes more time and commitment than policymakers envision.** Beyond the time devoted to quantitative analysis, it is critical to allow sufficient time for dialogue with the technical staff and leaders of the country's institutions, recognize the role of the various actors, and actively listen to concerns and proposals and include them, as appropriate. Since the design of an HBP is the construction of a public policy, it is imperative to invest time building trust and ensure that all relevant actors are involved in the joint construction exercise.

The experience with Honduras also shows that even when circumstances are difficult, **it is possible to use analytical methods to design a HBP in lower-middle income countries.** In fact, the Honduran government is interested in using the CPPSH for a pilot project that incorporates the results into the current results-based financing scheme, in yet **another example of the benefits of prioritizing and costing health services.**





GLOSSARY

ARI	Acute Respiratory Infection
DALY	Disability- adjusted Life Years
DCEA	Distributional cost-effectiveness analysis
DCP3	Disease control priorities
ECEA	Extended cost-effectiveness analysis
ENDESA	National Demographic and Health Survey
GBD	Global burden of disease
HBP	Health Benefits Plan
HTA	Health technology assessment
ICER	Incremental cost-effectiveness ratio
IDB	Inter-American Development Bank
IHSS	Honduran Social Security Institute
INE	National Institute of Statistics of Honduras
LMIC	Lower middle-income countries
CPPSH	Prioritized set of health benefits for Honduras, for its Spanish acronym
SDG	Sustainable Development Goals
SEFIN	Ministry of Finance of the Republic of Honduras
SESAL	Ministry of Health of the Republic of Honduras
UHC	Universal health coverage
WHO	World Health Organization



NOTES

- ¹ Pamela Gongora is a Consultant at the CRITERIA Network of the Social Protection and Health Division of the IDB.
- ² Ursula Giedion is Coordinator of the CRITERIA Network of the Social Protection and Health Division of the IDB.
- ³ Many countries on the European continent and at least 60 lower-middle-income countries have designed and introduced health benefits packages (Glassman, Giedion, & Smith, 2017).
- ⁴ Criteria Network: www.criteria.iadb.org/en
- ⁵ This translates as: Prioritized Set of Health Benefits (interventions) for Honduras.
- ⁶ Honduras is one of the most unequal countries in the world, with a Gini coefficient of 48.2 <https://data.worldbank.org/indicator/SI.POV.GINI?locations=HN>.
- ⁷ The “average health-adjusted age of death,” “health-adjusted average age of death,” or HAAD” is the indicator used by DCP3 to operationalize the equity criterion. In this framing, the worst off are those who, by virtue of having a particular disease or injury, have the lowest lifetime level of health. After several discussion sessions with the interagency team, this indicator was not used because the team considered that it fails to capture the country’s interest in closing socioeconomic health gaps.

⁸ The disability-adjusted life year (DALY) is a measure used to assess the overall burden of disease. It combines years of life lost due to premature mortality and years of life lost due to time lived in states of less than full health, or years of healthy life lost due to disability (Drummond, Sculpher, Claxton, Stodda, & Torrance, 2015). Hence, one DALY represents the loss of the equivalent of one year of full health.

⁹ Due to time constraints, the costing exercise was not conducted for Set 3.

¹⁰ This cost does not differ greatly from the estimated cost in similar exercises such as the DCP3, where the top priority set for low-income countries is estimated at US\$58. (University of Washington, 2018).

¹¹ A DALY represents one year of healthy life lost due to mortality and disability associated with specific diseases.

¹² “...some ways of making trade-offs are generally unacceptable (inconsistent with the principles outlined). They include: Choosing to expand coverage for low- or medium-priority services before there is near-universal coverage for high-priority services” (Voorhoeve, Ottersen, & Norheim, 2016).



BIBLIOGRAPHY

Banco Interamericano de Desarrollo . (2019). *Proyectos*. Retrieved 4 February 2020, from HO-T1293 : Apoyo a la elaboración del Plan Nacional de Beneficios en Salud (PNBS) en Honduras: <https://www.iadb.org/es/project/HO-T1293>

Carmenate-Milián, L., Herrera-Ramos, A., & Ramos-Cáceres, D. (2016). Situación del Sistema de Salud en Honduras y el Nuevo Modelo de Salud Propuesto. *Archivos de Medicina*, 12(4), 1-10.

Dean, J., Gelband, H., Horton, S., Jha, P., Laxminarayan, R., Mock, C., & Nugent, R. (Eds.). (2018). *Disease Control Priorities: Improving Health and Reducing Poverty* (third edition ed., Vol. Volume 9). Washington, D.C.: World Bank.

Dean, J., Rachel, N., Hellen, G., Susan, H., Jha, P., Laxminarayan, R., & Mock, C. (Eds.). (2018). *Prioridades para el control de enfermedades: Compendio de la 3 a edición*. Washington, D.C.: Banco Mundial.

Drummond, M., Sculpher, M., Claxton, K., Stodda, G., & Torrance, G. (2015). *Methods for the Economic Evaluation of Health Care Programmes* (4th Edition ed.). Oxford University Press.

Giedion, U., Bitrán, R., Tristao, I., & Cañón, O. (2014). Explicitar lo implícito: Análisis de siete planes de beneficios en salud de América Latina. In U. Giedion, R. Bitrán, I. Tristao, U. Giedion, R. Bitrán, I. Tristao, & O. Cañón (Eds.), *Planes de beneficios en salud en América Latina*. Banco Interamericano de Desarrollo.

Giedion, U., Gongora, P., Muñoz, R., & Godoy, H. (4 May 2021). The hidden beauty of costing health. Retrieved from <https://blogs.iadb.org/salud/en/the-hidden-beauty-of-costing-health/>

Glassman, A., Giedion, U., & Smith, P. (Eds.). (2017). *What's in, what's out: designing benefits for universal health coverage*. Washington, D.C.: Center For Global Development.

Glassman, A., Giedion, U., & Smith, P. (2017). *What's, what's out? Designing Benefits for Universal Health Coverage*.

Gobierno de la República de Honduras. (2016). *Hacia la salud universal: Logros y desafíos del Sector Salud de Honduras*.

Gutiérrez, C., Giedion, U., Muñoz, A. L., & Ávila, A. (July 2015). Serie de notas técnicas sobre procesos de priorización en salud: Nota 2: Un enfoque sistémico. *Banco Interamericano de Desarrollo, Nota Técnica No.838*.

HRN. (2019, Diciembre 9). *Más de 13 mil pacientes están en lista de espera quirúrgica en Honduras*. Tegucigalpa, Honduras.

IFM. (2020). *Honduras Country Data*. Retrieved 2 April 2020, from International Monetary Fund: <https://www.imf.org/en/Countries/HND#countrydata>

IHME. (2020). *Institute for Health Metrics and Evaluation*. Retrieved from Global Burden of Disease (GBD) : <http://www.healthdata.org/gbd>

INE. (2019). *Indicadores cifras de país 2018*. Instituto Nacional de Estadísticas. Tegucigalpa: Cifras país.

Klein, R., Day, P., & Redmayne, S. (1997). Managing Scarcity: Priority Setting and Rationing in the National Health Service. *BMJ*, 314:313.

Secretaría de Coordinación General de Gobierno. (2019). *Agenda Nacional 2030: Objetivos de desarrollo sostenible de Honduras*. Aprobado en Primera Sesión Ordinaria de la CN-ODS el 4 de diciembre de 2019.

SESAL. (2018, December). *Listado Nacional de Medicamentos Esenciales 2018-2020*. Gobierno de la República de Honduras, Secretaría de Salud. Tegucigalpa: Organización Panamericana de la Salud / Organización Mundial de la Salud.

SESAL. (2018). *Perfil epidemiológico de Honduras: 2010 al 2016*. Tegucigalpa: Gobierno de la República de Honduras, Secretaría de Salud.

SESAL. (2019). *Actualización de la razón de mortalidad materna y la tasa de mortalidad de mujeres en edad fértil en Honduras para el año 2015*. Secretaría de Salud, Unidad de Vigilancia de la Salud. Tegucigalpa: Gobierno de la República de Honduras.

SESAL. (2019). *Conjunto Garantizado de Prestaciones y Servicios de Salud*.

University of Washington. (2018). *DCP3*. Retrieved from Department of Global Health: <http://dcp-3.org/es>

Verguet, S., & Jamison, D. (2017). Benefits beyond Health Evaluating Financial Risk Protection and Equity through Extended Cost-Effectiveness Analysis. In A. Glassman, U. Giedion, & P. Smith (Eds.), *What's in, what's out: designing benefits for universal health coverage*. Washington, D.C.: Center For Global Development.

Voorhoeve, A., Ottersen, T., & Norheim, O. (2016). Making fair choices on the path to universal health coverage: a précis. *Health Economics, Policy and Law*, 11, 71–77.

WHO. (2003). Beyond Access and Utilization: Defining and Measuring Health System Coverage. In *Health Systems Performance Assessment. Debates, Methods and Empiricism* (pp. 221-234). Switzerland: World Health Organization.

WHO. (2014). *Making fair choices on the path to universal health coverage. Final report of the WHO Consultative Group on Equity and Universal Health Coverage*. Geneva: World Health Organization.

WHO. (2019). *Primary Health Care on the Road to Universal Health Coverage. 2019 Global Monitoring Report*. World Health Organization, Conference Edition.

WHO. (2020). *Universal coverage - three dimensions*. Retrieved from Health financing for universal coverage. World Health Organization: https://www.who.int/health_financing/strategy/dimensions/en/

Woods B, R. P. (2016). Country-level Cost-Effectiveness thresholds: Initial Estimates and the Need for Further Research. *Value in Health*.

World Bank. (2020, April). *Honduras: Overview*. Retrieved 2 April 2020 <https://www.worldbank.org/en/country/honduras/overview#1>

RELATED CRITERIA NETWORK DOCUMENTS

Ursula Giedion, U., Bitran, R., and Tristao, I. (Ed.) (2014). [Latin American Health Benefit Plans: A Regional Comparison. Inter-American Development Bank](#)

Sabignoso, M. (2017) [Health benefit plans and results-based financing: two allies for universal and effective health coverage](#). Webinar of the CRITERIA Network of the Inter-American Development Bank. 30 March 2017.

Giedion, U., Muñoz, A.L., and Ávila, A. (2015) [Series of technical notes on health priority setting processes. Note 1: Introduction](#). Technical Note No. 837. Inter-American Development Bank.

Sourdis, C., Giedion, U., Muñoz, A.L., and Ávila, A. (2015) [Series of technical notes on priority setting processes in health. Note 2: A systemic approach](#). Technical Note No. 838. Inter-American Development Bank

CRITERIA Network (2012). [Costing of health benefit plans, based on the presentation of Dr. Ricardo Bitrán](#). BRIEF No.2 of the CRITERIA Network of the Inter-American Development Bank. October 2012.

CRITERIA Network (2014). [Waiting lists: a mechanism for prioritizing health spending](#). BRIEF No.15 of the CRITERIA Network of the Inter-American Development Bank.

BREVE 26

Copyright © 2022 Inter-American Development Bank. This work is licensed under a Creative Commons IGO 3.0 Attribution-NonCommercial-NoDerivatives (CC-IGO BY-NC-ND 3.0 IGO) license (<https://creativecommons.org/licenses/by-nc-nd/3.0/igo/legalcode>) and may be reproduced with attribution to the IDB and for any non-commercial purpose. No derivative work is allowed.

Any dispute related to the use of the works of the IDB that cannot be settled amicably shall be submitted to arbitration pursuant to the UNCITRAL rules. The use of the IDB's name for any purpose other than for attribution, and the use of IDB's logo shall be subject to a separate written license agreement between the IDB and the user and is not authorized as part of this CC-IGO license.

Note that link provided above includes additional terms and conditions of the license.

The opinions expressed in this publication are those of the authors and do not necessarily reflect the views of the Inter-American Development Bank, its Board of Directors, or the countries they represent.

