Research Article

Priority Setting for Health Service Coverage Decisions Supported by Public Spending: Experience from the Philippines

John Q. Wong1, Jhanna Uy 1, Nel Jason L. Haw 1,*, John Xavier Valdes1, Diana Beatriz S. Bayani 1, Charl Andrew P. Bautista2, Manuel Alexander Haasis3, Raoul A. Bermejo III3 and Willibald Zeck3

1EpiMetrics, Inc., Paranaque City, Philippines
2Health Policy Development and Planning Bureau, Department of Health, Santa Cruz, Manila, Philippines
3UNICEF Philippines, Makati City, Philippines

Abstract—Achievement of universal health coverage requires better allocative efficiency in health systems. Countries like the Philippines, however, do not have quality local data for these decisions. We present a method that applies existing global data, e.g., Global Burden of Disease and Disease Control Priorities project, into creating a local priority list of diseases and interventions that may be useful in providing a rational plan for expanding coverage of health services paid by public financing. In the context of the Philippines, this refers to the Department of Health for vertical programs like immunization and disease control, and the Philippine Health Insurance Corporation for inpatient and outpatient health services. We found that the top 48 (or 22%) of diseases account for 80% of total disability-adjusted life years (DALYs), reflecting a well-known concept in management, the Pareto principle. Due to its simplicity and widespread applicability, the Pareto principle facilitated interest in rational priority setting among high-level officials in the Philippine health sector. Priority setting must not be limited to disease burden and cost-effectiveness criteria. Our lists can be used after further deliberation and stakeholder consultation. Priority setting is a complex, value-laden process, and a purely utilitarian approach to prioritization may lead to further deterioration in the health status of vulnerable populations. We recommend that DOH and PHIC set up a joint, independent agency primarily responsible for implementing a sustainable, transparent, and participatory priority-setting process that will advise them on future service coverage expansions.

INTRODUCTION

As countries aspire to achieve Universal Health Coverage (UHC), policymakers are faced with the challenge of
efficiently allocating finite resources across competing and infinite demands for health services. In most low- and middle-income countries where priority setting is especially important, decisions about what services to cover, who to cover, and what proportion of costs to cover are done on an ad hoc and nontransparent manner. The lack of institutional mechanisms for priority setting in developing countries allows interest groups to put forward their own priorities and divert resources away from investments that may have produced better gains in health system performance and health outcomes. The Philippines is facing these problems of priority setting as it works toward UHC.

Since 2010, the Philippines has been taking significant steps to achieve UHC by strengthening the Philippine Health Insurance Corporation (PHIC), an agency attached to the Department of Health (DOH). PHIC is the national health insurance agency of the Philippines. It is mandated to provide social health insurance coverage to all Filipinos, helping ensure affordable and quality health care services in the country while maintaining financial sustainability.

In the context of the devolved health system of the Philippines, the DOH represents the national government as a policy making and regulatory body for health. PHIC, an attached agency of the DOH with the Secretary of Health as the chair of its board of directors, acts as the national purchaser of health services. The DOH retains and manages a select number of specialized tertiary hospital and vertical disease programs. Local governments and the private sector on the other hand are the main providers of health services for primary, secondary, and tertiary care. PHIC does not deliver any health services, but instead reimburses accredited health providers for selected health services rendered to Filipinos enrolled in PHIC.

PHIC boasts several milestones in contribution to UHC. It has rapidly increased population coverage from 60% in 2010 to 91% of the population in 2016, with automatic coverage of the poor in the remaining 9% at point-of-care in health facilities. Mechanisms to minimize out-of-pocket health expenditures were also installed, albeit with limited impact and gaps in implementation. These reforms include the shift from fee-for-service to case-based payment for medical and procedural services in 2013 and the implementation of “No Balance Billing” or a zero co-pay scheme for poor patients availing of inpatient services in 70 DOH-retained public hospitals in 2014.

Accompanying the expansion of population coverage, PHIC has expanded benefit package delivery for some preventive services, high-cost illnesses such as cancers and end-stage renal disease, and interventions to help achieve the Sustainable Development Goals (SDGs) like maternal and child health, human immunodeficiency virus (HIV), tuberculosis (TB), and malaria. Earmarked sin taxes implemented in 2015 expanded PHIC fiscal space. Accordingly, total benefit claims paid by PHIC has grown fourfold, from 30.5B PHP ($635.5M USD) in 2010 to 101.75B PHP ($2.11B USD) in 2016.

However, because PHIC and DOH have no explicit and systematic process by which diseases, conditions, and health interventions are prioritized, there is still great emphasis on expensive curative and inpatient care while coverage of cost-effective interventions such as primary care services is limited. Consequently, despite the government’s increasing investments and benefit payments, financial risk protection has not followed. Incidence of catastrophic health expenditure leapt from 2.5% to 7.7% from 2000 to 2012. The Philippine National Health Accounts show that out-of-pocket health spending as a proportion of total country health expenditure increased from 52.7% in 2010 to 55.8% in 2014.

In September 2015, senior officials in PHIC recognized its inefficiencies in decision making and requested that UNICEF-Philippines commission a consultancy to make priority setting for expanding service coverage more systematic. This study was designed to introduce and provide proof of concept for a rational and transparent method of priority setting using burden of disease and cost-effectiveness criteria to high-level policymakers in both PHIC and DOH. We aimed to ease them away from making decisions primarily based on stakeholder demand.

We applied the Pareto principle, first described by Juran in 1951, on the 2013 Global Burden of Disease (GBD) data on disability-adjusted life years (DALYs) in the Philippines to develop a list of priority health conditions and cost-effective interventions that PHIC and DOH may wish to prioritize for public financing and reimbursement.

Inspired by the economist Pareto’s observation that 80% of Italy’s wealth then was owned by only 20% of the population, Juran described the Pareto principle as the “vital few”—where around 20% of causes are responsible for the bulk, or about 80%, of the effects. First described in the management field, the Pareto principle has been observed empirically in many disciplines, and similarly holds true using Philippine data on burden of disease. Given limited resources, prioritizing the few top causes of disease burden, or the 20%, for future benefit packages is theoretically expected to result in the most efficient way to reduce the country’s burden of disease.

We discovered, however, that the value of the Pareto principle extended beyond concerns of efficiency to matters of communication and research translation. Philippine policymakers easily understood the Pareto principle due to its simplicity and wide use as a rule of thumb in management and...
other fields. This facilitated the acceptance of our study results and sparked interest in health technology assessment (HTA) among high-level officials in PHIC and DOH. As a result, further studies were commissioned by PHIC and DOH to create a priority setting mechanism to guide financing and service coverage decisions in the health sector.

We hope that documenting the Philippine experience in this article will help inform UHC reforms in developing countries that are beginning to build HTA mechanisms and rational priority setting processes.

MATERIALS AND METHODS

We used secondary data from the Global Burden of Disease (GBD) Study in 2013 and the 2010 Census of Population and Housing (CPH) of the Philippine Statistics Authority (PSA) to project the burden of disease profile of the Philippines from 2015 to 2035. The Pareto principle was applied to formulate a list of diseases that contributed to the top 80% of disease burden, measured in terms of DALYs. Then, an extensive search of global literature was conducted to identify cost-effective interventions under each disease cause in the list. Finally, through further review of literature, a supplemental list of disease conditions was created from excluded causes that may be considered for inclusion based on equity considerations. The equity criteria were defined as vulnerable populations which may be disproportionately affected by the excluded causes. The 5 vulnerable subpopulations considered were adopted from the WHO Conceptual Framework for Action on the Social Determinants of Health. They are: sex, income level, occupation, educational level, and membership in an indigenous group. Figure 1 shows a flowchart of how each of the data sources was used for this study.

Twenty-Year Disease Burden Projections

To project the country burden of disease profile for 2015 to 2035, the study modeled standardized DALYs using changes in the Philippine population’s age and sex structure. Standardizing by population age and sex structure only accounts for fertility rates, mortality rates, and population aging. We did not account for other factors that may affect the country’s burden of disease profile over time such as advances in medical technology, improvements in the health system, and changes in life expectancy.

Demographic structure data were obtained from the Census of Population and Housing (CPH) 2010, the methods of which are described elsewhere. The 2010 CPH was the 13th census of population and the 7th census of housing in the country. Official population projections are created every other census round. For 2010, this included yearly forecasts from 2010 to 2020, and 5-year interval forecasts until 2035. The projections were made using the cohort-component method, and detailed technical notes are found elsewhere.

We adopted the medium assumption estimates of the reported forecasts, while yearly forecasts for 2021 to 2024, 2026 to 2029, and 2030 to 2034 were interpolated by assuming constant exponential growth rates for each sex and age group between the available reported years.
Burden of disease data were obtained from the GBD 2013 Study through its Global Health Data Exchange (GHDx). The methods for calculating GBD 2013 DALYs are described elsewhere. The GBD classifies disease causes in mutually exclusive categories across a hierarchy of 4 levels. Level 1 classifies disease causes into 3 broad categories (communicable, maternal, neonatal, and nutritional disorders; non-communicable diseases; and injuries) and branches out as the level increases. We used the DALYs of the lowest available classification of the disease causes, which may be Level 3 or Level 4, disaggregated by age group and sex.

We computed age and sex-specific DALY rates for each cause (DALYs per 100,000 population) using 2013 as the baseline year. These age and sex-specific rates were applied to the Philippine age and population structure from the years 2015 to 2035 to calculate the annual burden of disease in DALYs contributed by each cause for each age group and sex.

**Identifying Priority Causes**

The annual burden of disease in 2015 for each cause was summed, and the causes were ranked based on percent contribution to total DALYs in the Philippines. Following the Pareto principle, causes aggregating to the top 80% were included in the list of priority causes. Some classifications comprising the top 80% aggregated many low-burden diseases which, if taken separately, would not have made it to the cut-off. These classifications had mostly headings with the word “Other,” and were excluded, reducing the total cause categories to 221. Examples of excluded categories were “Other Neoplasms,” “Other Neonatal Disorders,” and “Other Drug Use Disorders.” Descriptive trends for 2015–2035 were also analyzed to present changes in disease burden over time.

**Review of Global Literature to Identify Cost-Effective Interventions for Priority Causes**

For each of the top causes, a list of preventive and therapeutic interventions was identified with the help of a clinical consultant reviewing medical textbooks, international and local clinical practice guidelines, and WHO intervention guidelines. This served as the checklist for a literature search of cost-effectiveness studies for interventions addressing these causes.

The primary literature consulted first for each of the top causes of burden was the Disease Control Priorities in Developing Countries (DCP) second edition and available volumes of the third edition as of December 2015. The DCP is a project managed by the University of Washington in collaboration with other international institutions that assesses and recommends cost-effective interventions for low- and middle-income countries with limited resources to conduct primary economic evaluations.

If the disease or health condition was not covered in the DCP, a literature search for cost-effectiveness studies was done using the list of preventive and therapeutic interventions identified by the clinical consultant. The literature search involved databases such as Google Scholar, EBSCOHost, and the Cost-Effectiveness Analysis (CEA) Registry of the Tufts University to find economic evaluations of interventions.

Cost-effectiveness results and study design characteristics were abstracted from the DCP and studies from literature searches using a Google Spreadsheet. Specifically, the following variables and information were abstracted: intervention name, description of intervention, level of prevention (primary, secondary, tertiary), target population, level of delivery (primary health care, secondary care, tertiary care), the cost-effectiveness ratio (ICER), the incremental cost-effectiveness ratio (ICER), currency unit used, year of currency unit, health gain, unit used (e.g., DALYs, Quality Adjusted Life Years, Years of Life Saved), comparator interventions, country where study was conducted, cost-effectiveness threshold used, income group of country where study was conducted, year of study, age discounting, cost discounting, time horizon of analysis, perspective of analysis (e.g., society, health system, payer, provider), funding source, and availability of sensitivity analyses. It was also noted if the intervention was currently provided or financed by PHIC or DOH. After data abstraction, a final check for the completeness of the interventions found in the database was assessed. Further search for literature and data abstraction was done on interventions not covered by the initial search. The entire review was cross-checked by the principal investigator, also a senior clinician, for data quality assurance.

Interventions were classified as cost-effective only in comparison to the cost-effectiveness of comparator interventions and in the country context where the study was done, as recommended by the authors of the studies included. Our list is not an explicit recommendation of cost-effective interventions in the Philippine context, but rather serves as the initial database of interventions for consideration of future cost-effectiveness studies.

**Diseases Included for Equity Considerations**

Finally, an equity screen was applied to the causes excluded by the Pareto principle. A literature review using the databases of Google Scholar and EBSCOHost was used to identify which health conditions disproportionately affect certain...
vulnerable groups. Specially, there were five vulnerable group categories adapted from the WHO Conceptual Framework for Action on the Social Determinants of Health: sex, income level, occupation, educational level, and membership in an indigenous group. 19

The same clinical consultant working on the list of cost-effective interventions conducted the equity screening, while the principal investigator cross-checked the results.

RESULTS

Population and Burden of Disease Projections 2015–2035

As shown in Figure 2, the Philippines will be experiencing a demographic window within the next 20 years, meaning a large and growing proportion of the population will be of working age during this period. The population pyramid will be expanding from 2015 before becoming early stationary by 2025, and late stationary by 2035. By 2035, there will be a slight increase in the aging population because of declining fertility rates, evidenced by the narrowing of the base of the population pyramid.

Only 48 out of the 221 categories or 22% of the causes account for the top 80% of the total DALYs in the Philippines. Figure 3 shows the complete list of the top 48 causes, and the cumulative percent of DALYs they represent for the year 2015. Majority of the top 48 are noncommunicable diseases (27) followed by communicable, maternal, and nutritional diseases (13), and injuries (8).

As shown in Figure 4, the top 10 causes account for about 40% of the total burden of disease, and are expected to remain to be the top 10 causes for the next 20 years. Six of the 10 diseases are noncommunicable diseases. Ischemic heart disease, lower respiratory infections, and tuberculosis are in the top three, and they are projected to remain as the top three for the next 20 years.

Though the top 10 causes of DALYs remain stable, the overall disease burden profile is expected to change in the next 20 years. Noncommunicable diseases are projected to increase their share of DALYs by 5.9 percentage points, from 60.6% in 2015 to 66.5% in 2035. Correspondingly, communicable, maternal, neonatal and nutritional diseases are projected to decrease their share by 5.3 percentage points, from 30.8% to 25.5%, while injuries account for the remaining 0.6 percentage point decrease, from 8.6% to 8.0%.

Cost-Effective Interventions based on Global Literature for the Most Burdensome Causes

Table 1 lists the top ten health conditions ordered by rank, cost-effective interventions according to the literature, and whether the intervention is currently provided or financed by PHIC or the DOH. Supplement 1 shows an expanded version of the table below, with more details for each recommended intervention. If available, at least one cost-effective intervention from the primary, secondary, and tertiary levels of prevention were shown.

Some health conditions did not have cost-effectiveness studies available. These were conditions pertaining to injuries, collective violence and legal intervention, and exposure to forces of nature and disasters. Additionally, not all interventions across the levels of prevention and continuum of care had cost-effectiveness data.

PHIC covers and finances most curative, hospital-based, and inpatient interventions in the International Classification of Diseases (ICD-10) through case based payments.

FIGURE 2. Demographic Structure of the Philippines, 2015–2035. Data Source: 2010 Census of Population and Housing Projections
Meanwhile, DOH covers more population-based programs such as vaccination, tuberculosis treatment, maternal and child health interventions, and in general, primary care services. However, both PHIC and the DOH lacked coverage on outpatient services, home-based and community-based interventions, and interventions for mental health disorders.

**Causes Included as Potential Priorities due to Equity Considerations**

A total of 68 causes were selected for possible prioritization due to equity considerations. Many of the causes were found to affect multiple vulnerable subpopulations. Fifty-two (52) of these diseases were associated with poverty, 19 with gender inequality, another 19 with educational inequality, 12 with inequalities in occupation, and 5 disproportionately affecting indigenous groups. Supplement 2 lists the causes and the vulnerable groups affected.

**DISCUSSION**

Our analysis shows that the disease burden profile of the Philippines follows the Pareto principle—48 diseases (22%) comprised the top 80% of DALYs. Majority of DALYs are caused by NCDs (61%), and the share of NCDs is projected to increase for the next 20 years as the country experiences a demographic transition. This is a reflection of global trends, where the NCD burden is steadily increasing and fertility rates are decreasing. The rise of NCDs puts a greater strain on the health system, as chronic care is required. Insufficient investments in addressing risk factors and preventive care exacerbate the problem. Economic productivity is also affected, with an estimated $70 million USD foregone because of NCDs in 2015.

Additionally, there are 68 diseases that were excluded from the list of conditions ranked by disease burden, but may be important to prioritize because of equity considerations. The longer list of possible priorities due to equity criteria suggests that investments in social determinants also need to be increased to reduce the strain on the health system. Furthermore, only some cost-effective interventions identified in literature are partially covered by PHIC and DOH. PHIC currently provides coverage for mostly curative services, but most cost-effective interventions for these diseases are preventive. To achieve necessary health outcomes for universal UHC, the Philippine government’s health priorities need realignment, both in the diseases covered and the interventions that address these diseases. This list helps in that exercise.

In any priority-setting exercise in health policy, it is essential that the process is transparent with broad stakeholder support. While we admit that the cutoff of 80% is arbitrary,
it is an improvement from the current system of ad hoc decision making in PHIC. Until a more formal mechanism of priority setting is established, the Pareto threshold is a useful way of prioritizing service coverage decisions based on disease burden criteria. Moreover, applying the well-known Pareto principle on publicly available health data was a novel approach in making disease burden priorities easier to communicate to high-level policymakers and a wider audience. Therefore, we chose the 80% cutoff because it is what the Pareto principle is commonly associated with and what is familiar to a wide audience. We can attest to the ease in communication as our results were accepted by the PHIC board of directors, the Secretary of Health, and other senior officials in both organizations. Our results also became widely circulated in the Philippines health sector. Multiple policies for health financing and strategic are currently being formulated by the DOH and PHIC based on the disease priorities we have recommended. Other countries considering developing priority setting processes should consider the approach we have taken in this study.

Only a handful of countries have the capacity to generate their own national disease burden and cost-effectiveness estimates, including the United States, Mexico, Australia, New Zealand, Thailand, Singapore, and Japan.26–32 High-income countries such as Australia and Japan have used their disease burden data to better prioritize health services delivery.28,32 Latin American and African countries, such as Peru, Chile, Tanzania, and Botswana, have used burden of disease as a basis to construct a benefit package of essential and cost-effective interventions guaranteed to be provided to the entire population.33–35

In many low- and middle- income countries where epidemiological and cost data are scarce,36 this is not possible. There is a dearth of available local data to make these kinds of decisions. We overcame this limitation by demonstrating how global data such as the GBD and DCP can help bridge this evidence gap. The use of IHME’s GBD database, which provides the most robust estimates of disease burden available for these countries,17 and the DCP and secondary cost-effectiveness analyses can help fill this evidence gap and help countries like the Philippines move forward with making sound policy decisions. This does not imply that countries should rely solely on globally available data for their decision making. Rather, global data can serve as a credible, temporary solution to support evidence-based decision making while countries continue their efforts in developing local capacity to generate data.

The list of priority health conditions we have created in this study is not meant to be used without modification in the Philippine context. It is merely a necessary first step to start a more formal priority setting process. This list should be reviewed by different stakeholders in the Philippine health sector, which includes government agencies such as the DOH and PHIC, professional medical and allied health associations, academic and research institutions, non-government organizations and civil society groups, international agencies, and the public.

In the Philippines, this means that DOH and PHIC must move to jointly create an independent agency whose primary task is to provide policy guidance on service coverage decisions, similar to the UK’s National Institute for Health and
| 2015 Rank | Cause                          | Potentially Cost-Effective Interventions                                                                 | Corresponding Current Financing or Delivery by PHIC or DOH |
|-----------|-------------------------------|---------------------------------------------------------------------------------------------------------|----------------------------------------------------------|
|           |                               |                                                                                                         |                                                          |
| 1         | Ischemic heart disease        | Medical treatment of acute myocardial infarction (aspirin, atenolol, streptokinase)                    | PHIC medical case rates for International Classification of Disease (ICD)-10 codes I20 to I25 |
|           |                               | Percutaneous coronary intervention (surgery) for event-free and angina-free conditions                  | PHIC surgical case rates (Revised Value Scale [RVS] codes 92980 and 92981) |
| 2         | Lower respiratory infections  | Pneumococcal conjugate vaccine 10 (PCV10)                                                               | DOH National Expanded Program on Immunization             |
|           |                               | PHIC surgical case rates (Revised Value Scale (RVS) codes 92980 and 92981)                              | PHIC primary care package (“TSeKaP”)                     |
| 3         | Tuberculosis                  | Bacillus Calmette–Guérin (BCG) vaccine                                                                  | DOH National Expanded Program on Immunization             |
|           |                               | Tuberculosis - Direct Observed Treatment Short course (TB-DOTS)                                          | DOH National TB Control program; PHIC TB-DOTS package     |
| 4         | Preterm birth complications   | Improved overall quality of care with nutritional supplements; enhanced prenatal and delivery care at primary and secondary care | DOH Maternal, Newborn, Child Health, and Nutrition Strategy; PHIC Maternal and Newborn Care Package (MCP, NCP); PHIC Z Benefit Package for Preterm and Low Birth Weight Infants |
| 5         | Hemorrhagic stroke            | Anticoagulants for chronic non-vascular atrial fibrillation and mitral stenosis (outpatient)             | None                                                     |
|           |                               | Highest excise taxes for alcohol and tobacco                                                             | Republic Act 10351 (Excise taxes on tobacco and alcohol)  |
|           |                               | Prothrombin complex concentrate (a mean 5 mg of vitamin K and a mean of 30 units/kg) to treat intracranial hemorrhage | PHIC medical case rates for ICD-10 codes I60.0 - I62.9     |
| 6         | Diabetes mellitus             | Lifestyle changes in diet and exercises                                                                  | None                                                     |
|           |                               | Smoking cessation programs                                                                               | None                                                     |
|           |                               | Glycemic control                                                                                        | None                                                     |
|           |                               | Blood pressure control                                                                                  | None                                                     |
|           |                               | Angiotensin converting enzyme (ACE) inhibitors                                                           | PHIC primary care package (“TSeKaP”)                     |
|           |                               | Foot care for people at high risk of foot ulcers                                                         | PHIC primary care package (“TSeKaP”)                     |
| 7         | Low back pain                 | Physiotherapist-led pain management classes                                                              | None                                                     |
|           |                               | Spinal stabilization classes                                                                             | None                                                     |
|           |                               | Individual outpatient physiotherapy                                                                       | None                                                     |
| 8         | Chronic obstructive pulmonary disease | Inhaled salbutamol, ipratropium bromide, corticosteroid fluticasone propionate (outpatient primary care) | None                                                     |
|           |                               | Prolonged mechanical ventilation for patients with respiratory failure                                   | PHIC medical case rates for ICD-10 codes J44.0 - J44.9    |
|           |                               | Education and exercise programs                                                                         | None                                                     |
| 9         | Iron-deficiency anemia        | Food fortification                                                                                      | DOH “Sangkap Pinoy”                                      |
|           |                               |                                                                                                         | Seal Program and Food Fortification Programs              |
| 10        | Ischemic stroke               | Aspirin for daily dose maintenance therapy                                                               | PHIC primary care package (“TSeKaP”)                     |
|           |                               | Carotid endarterectomy (for prevention of secondary stroke within 2 years of first stroke)             | PHIC medical case rates for ICD-10 codes I63.0 - I64 and surgical case rates RVS code 35301 |
|           |                               | Aspirin given within 48 hours of stroke                                                                  | PHIC medical case rates for ICD-10 codes I63.0 - I64     |
|           |                               | Domiciliary care (patients managed at home under care of stroke physician and general practitioner with support from district nurse and social services) | None                                                     |

**TABLE 1.** Potentially Cost-Effective Interventions for Top 10 Causes of DALYs in the Philippines
Care Excellence (NICE) or Thailand’s Health Intervention and Technology Assessment Program (HITAP). This agency could be steered by a working committee representing different sectors of society, both public and private, who will meet on a regular basis to deliberate on new services that will be added to the scope of PHIC reimbursements or DOH vertical programs, or delist current services that may be cost-ineffective and expensive for the current health budget. Vega and Frenz have highlighted the importance of these institutions based on the experience of Latin American countries. Such an institution needs many technical, human, and financial resources, as well as sustained political and technical leadership, founded on a legal framework. Strict regulatory frameworks are also needed to balance the viewpoints and power of various, often conflicting interests from different stakeholders.\(^\text{37}\)

In Thailand, the Health Intervention and Technology Assessment Program (HITAP) is an example of an institution following the model of Vega and Frenz. It is an autonomous unit under Thailand’s Ministry of Health and it conducts health technology assessments (HTA) to inform the universal health coverage benefit plan, as well as the national list of essential medicines. HITAP was established through a block grant, and is financed with $1 million USD per year from domestic and international sources. HITAP is an apolitical body, whose role is to inform policy development.\(^\text{38}\)

PHIC and DOH also need to situate this list in a clear protocol for service coverage decisions. In Thailand, this protocol is participatory, transparent, evidence-based, and contestable. Their process gathers multiple stakeholders and researchers to nominate, prioritize and appraise interventions for inclusion in the universal health care benefit package. Disease burden and cost-effectiveness are only two criteria being considered.

Countries with an explicit priority setting process for health service delivery funded by government resources include disease burden and cost-effectiveness as criteria.

As was the case in Thailand, the process involved consultations with policy makers, health workers, civil society, and the general population. Methods included interviews, focus group discussions, workshops, ranking through surveys (discrete choice experiments), and others. The preferences of the public were thus allowed to influence priorities.\(^\text{28}\)

The list of cost-effective interventions should also be treated as an initial list for further review. Although regional cost-effectiveness estimates were used when they were available, most cost-effectiveness data came from high-income countries, where more economic evaluations are done. These results pose a question on generalizability and transferability to the Philippine context due to variations in epidemiologic profile, costs of medicines, supplies and services, the capacity of the health system, and socio-demographic determinants. Experience from Latin American and African countries show that final priority lists did not reflect original lists after consultations with local experts and the public.\(^\text{25}\)

The joint agency may commission their own primary economic evaluation, or may elicit evidence from other external stakeholders like academia and the private sector. For external studies, it will be the committee’s purview whether local or global, critical appraisals and consultations with key stakeholders are required to assess the merits of the evidence.

Priority setting must not solely be limited to disease burden and cost-effectiveness criteria, as this oversimplifies the complex, value-laden decision-making involved.\(^\text{39}\) Often, setting the criteria for prioritization involves consultation with several stakeholders at the national level to elicit societal values.\(^\text{139}\) However, the criteria used in this exercise were limited to what the funders and researchers deemed appropriate at the time of the study. Equity considerations, such as prioritizing the worse off and financial risk protection, are not yet accounted for. These are relevant factors that should be included in the priority-setting process. However, the definition and methods of measurement of these equity considerations are currently outside the scope of the current study. The supplementary list we created is a demonstration that diseases arising from inequalities are not always captured among those with high burden. Tromp and Baltussen provide a framework of 31 criteria for priority setting, which also includes feasibility, responsiveness, financial protection, and efficiency.\(^\text{40}\) Our list of criteria is not exhaustive but nonetheless demonstrates the value of including an equity screen in the priority-setting process. Therefore, any future service coverage decision will be vetted on at least these two criteria, a feature that is common in many established priority setting processes worldwide.\(^\text{41-43}\)

Although IHME’s 2013 GBD study has comprehensive data on disease burden, it relies on statistical models to make up for variable data quality, and thus our disease rankings carry the same level of uncertainties inherent in the GBD 2013 estimates.\(^\text{17}\) The projections are also limited to changes in the age and sex structure of the population, thus they do not account for changes in socio-demographic status, advances in technology, changes in life expectancy, economic development, and nutritional and epidemiologic transitions. Our projections are also extrapolations. Thus, we anticipate that as more variables and data are included in future models, cause rankings and the top 48 diseases may change.

In summary, burden of disease information accompanied by cost-effectiveness data on interventions provide a good
foundation to set priority interventions in the health sector. The 48 conditions identified in this study, based on the GBD 2013, provide a good starting point for planning the expansion of service coverage in the country. Although the emerging use of disease burden data paves the way for more rational decision making, other criteria such as equity must also be considered and the entire process must be: (1) sustainable as an HTA agency mandated by a law, publicly funded, and with plans for capacity-building; (2) transparent with decisions and their rationale documented and open to the public; and (3) participatory with stakeholder input in crucial aspects of building the institution for priority setting (e.g., choosing decision criteria, developing the processes). Furthermore, an explicit mechanism for setting priorities of the DOH and PHIC with specific principles, criteria and procedural steps that involve more stakeholders in the process should be established. There is also a need to develop capacity in conducting cost-effectiveness analysis and health technology assessments to refrain from heavy reliance on secondary literature.

DISCLOSURE OF POTENTIAL CONFLICTS OF INTEREST
No potential conflicts of interest were disclosed.

ORCID
Jhanna Uy http://orcid.org/0000-0002-5353-2903
Nel Jason L. Haw http://orcid.org/0000-0003-2602-4214
Diana Beatriz S. Bayani http://orcid.org/0000-0002-0042-8547

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