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Lessons from the Revision Process of Ethiopia's Essential Health Services Package

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ABSTRACT

This chapter discusses Ethiopia's revision of its essential health services package in 2019 to achieve universal health coverage. The revision process involved 35 consultative workshops with experts and the public. It employed seven prioritization criteria, including disease burden, cost-effectiveness, and public acceptability. The process identified 1,018 relevant health interventions from an initial list of 1,749; further evaluation and ranking resulted in a package of 594 high-priority interventions (58 percent) assigned to health care delivery platforms and linked to financing mechanisms. The discussion in this chapter concludes that the process was participatory, inclusive, and evidence-based, leading to a comprehensive essential health services package.

INTRODUCTION

In 2015, Ethiopia signed on to the Sustainable Development Goals (SDGs), of which SDG target 3.8 relates explicitly to achieving universal health coverage (UHC) for all population segments. With that commitment, the Ethiopian Ministry of Health (MoH) needed to define the essential health services it would deliver to the population without incurring financial risk. Which services coverage should it scale up first? For which services should the government reduce direct costs?

How could it expand the range of services to be delivered in the future? (Refer to Glassman et al. 2016; Hogan et al. 2018; Reich 2016; Rieger, Wagner, and Bedi 2017; Wagstaff and Neelsen 2020.)

Ethiopia determined in 2018 that its essential health services package (EHSP), first defined in 2005, needed revision for three primary reasons. First, the country needed a package that matched the current disease burden. The 2005 EHSP constituted about 120 interventions focused on reproductive, maternal, newborn, and child health and on preventing and controlling major communicable and vaccine-preventable diseases (MoH 2005). In the first two decades of the twenty-first century, however, the disease burden profile of the country changed substantially. With the rise of injuries and noncommunicable diseases as important causes of mortality and morbidity, the 2005 EHSP no longer adequately addressed the current situation (Misganaw et al. 2017). Second, the country needed a package that matched the current population's health care demand. Because of economic growth, increased health literacy due to the expansion of health extension programs also markedly increased the demand for health services in Ethiopia. Third, the country needed to institutionalize a clear, transparent, and deliberative priority-setting process. Since the 2005 EHSP, several new interventions had been introduced to the (publicly funded) health care delivery system without proper cost-benefit and costeffectiveness evaluation (MoH 2015).

Therefore, in May 2018, the MoH executive council decided to revise the Ethiopian EHSP. It launched the revision process immediately in June 2018 and launched the final EHSP document in November 2019 (MoH 2018, 2019). This chapter describes the rationales, objectives, scope, process, methods, context, and challenges of Ethiopia's EHSP revision process, emphasizing the use of evidence from the third edition of *Disease Control Priorities* (DCP3). In addition, it discusses the relevance of Ethiopia's process for similar work in other countries.

ELEMENTS OF THE PRIORITY-SETTING PROCESSES

The priority-setting process for Ethiopia's EHSP was meticulously designed to ensure inclusiveness, transparency, and evidence-based decision-making. This section outlines the key components and steps involved in the process, highlighting the collaborative efforts and structured methodologies that guided the revision of the EHSP. It covers ownership and governance, scope and content, criteria used, and accountability and transparency measures.

Ownership and Governance

Ethiopia designed its EHSP revision process to be participatory and inclusive, and to follow an evidence-based prioritization process. The MoH leadership approved a detailed road map of the revision process and the methods to be used from June 2018 to November 2019 (figure 2.1).

Organize a team and define the scope

Identify relevant health services

Set prioritization criteria

Synthesize evidence

Compare and select priority packages

Conduct deliberations

Estimate cost and fiscal space

Adopt EHSP (final)

Figure 2.1 Road Map for the Revision of Ethiopia's EHSP

Source: MoH 2019.

Note: EHSP = essential health services package.

The MoH initiated the revision of the EHSP, holding eight inception meetings from June to August 2018 to outline the detailed revision plan, define the revision road map, and determine the scope and objectives of the revised EHSP (MoH 2018). It applied the existing MoH governance structure for decision-making and involved directorates at the MoH and representatives of all Regional Health Bureaus throughout the process to ensure inclusiveness and transparency. Additionally, national and international experts (that is, the World Health Organization [WHO] and Disease Control Priorities-Ethiopia) provided technical support throughout the process. The minister organized an EHSP core coordinating team comprising a health economist and a health systems specialist. The core team's role was to facilitate the development of the entire package, including developing a prioritization protocol, collating data, synthesizing evidence, engaging stakeholders, and conducting costing and fiscal space analysis. A Technical Working Group was established, comprising 30 senior experts on various health system dimensions. It supported the core team in preparing the revision road map, which helped develop a shared understanding of the steps necessary to achieve an evidence-based package revision.

Scope and Content

The primary objective of the revised EHSP is to reduce the burden of disease in Ethiopia by making high-priority interventions available and affordable. It also aims to protect people from catastrophic health expenditures, increase equitable access to health services, improve the efficiency of the health system, and increase

public participation and transparency in decision-making in the health sector. The scope of the revised EHSP reflects the national health policy and the country's SDG UHC commitments while considering the constraints of resource availability and economic growth. The EHSP has four fundamental features: (1) it was designed to address the health needs of the Ethiopian population across the whole life course regardless of income, gender, or place of residence (that is, urban or rural); (2) it was designed to be delivered at all service levels (that is, primary, secondary, and tertiary); (3) it was intended to serve for five years (2020–25); and (4) it includes promotive, preventive, curative, and rehabilitative interventions.

Criteria Used

The prioritization criteria arose from a review of the literature, national health policy documents, and relevant strategic health sector documents. The process also considered the criteria for the prioritization of health services recommended by WHO's Consultative Group on Equity and Universal Health Coverage, which include maximizing the total health gains for a given investment, giving priority to health services that target or benefit the less fortunate, and providing financial risk protection (FRP), particularly to the poor (WHO 2014). Broadly, such a prioritization approach is based on data, dialogue, and decisions (Terwindt, Rajan, and Soucat 2016). Ten consultations and deliberative meetings on the proposed criteria took place with the participation of global and local experts, public representatives, and professional associations.

Finally, the priority-setting process resulted in the selection of seven prioritization criteria: disease burden, cost-effectiveness, equity, FRP, budget impact, public acceptability, and political acceptability. Disease burden was used to identify the relevant conditions and risk factors of particular importance in the Ethiopian context. The cost-effectiveness criterion was used to rank and compare health interventions quantitatively according to the health gains they would yield per dollar spent. The equity and FRP criteria were used to compare health interventions further and give higher value to health benefits for the less fortunate and interventions that protect against catastrophic out-of-pocket health expenditures. In addition, the public and political acceptability of the interventions was considered through a qualitative deliberative process and dialogue with policy makers (figure 2.2).



Figure 2.2 Priority-Setting Criteria for Ethiopia's EHSP

Source: MoH 2019.

Note: EHSP = essential health services package.

Accountability and Transparency Measures

The EHSP's acceptability and legitimacy depend not only on the type and quality of evidence used in defining the package but also on the transparency and deliberativeness of the process. Legitimacy and trust crucially depend on a deliberative process that involves stakeholders (Daniels and Sabin 2008). Ethiopia actively engaged stakeholders from a wide range of groups in matters ranging from setting prioritization criteria and identifying health interventions to prioritizing and ranking the interventions. The stakeholders included local experts, such as primary health care practitioners, doctors, and specialists, and public representatives, including a women's association, a youth association, and various professional associations. Thirty-five consultative workshops were convened with experts and the public to define the EHSP.

The core team undertaking the evaluation presented the full results to policy makers at the MoH for review, discussing whether to include or exclude specific interventions, and for their approval. The MoH executive council, the higher-level decision-making body in the sector, made the final decision.

ANALYSIS AND TOOLS

This section delves into the methodologies and resources used in the revision of Ethiopia's EHSP. It covers the comprehensive data sources, analytical tools, and processes employed to ensure a robust and evidence-based approach. The detailed analysis includes cost-effectiveness evaluations, equity and FRP assessments, and the integration of expert opinions to prioritize health interventions.

Data Sources and Tools

The revision process involved an exhaustive search of the Ethiopian health sector's plans, strategies, and national publications along with reviews of international resources such as the volumes of DCP3² and various WHO documents, including a draft version of the WHO UHC intervention compendium.³ At a subsequent two-day workshop, 80 experts from various program areas—including primary health care practitioners, doctors, and specialists—came together to identify additional interventions. They jointly identified and proposed an extensive list of health services relevant to the Ethiopian context.

The 2019 EHSP has a total of 1,018 interventions. Cost-effectiveness was estimated using various methods, including a new context-specific analysis and a literature review. For 159 interventions, average cost-effectiveness ratios were calculated using the generalized cost-effectiveness analysis method and local input data (Eregata et al. 2021). The cost-effectiveness of 393 interventions was analyzed using evidence from the literature—such as DCP3, the Tufts Global Health Cost Effectiveness Analysis Registry,⁴ and peer-reviewed articles—after the application of appropriate

contextualization to Ethiopia by using general transferability criteria based on the Consolidated Health Economic Evaluation Reporting Standards (Husereau et al. 2013a). Searches for articles used keywords constructed with a combination of the intervention's name, the study location (with priority given to studies done in Ethiopia or another low-income setting), and time (prioritizing recent studies). Two independent reviewers appraised the studies. Those studies deemed to meet a minimum quality standard were accepted for inclusion in the evidence base. For the rest of the interventions, expert opinions were applied. The health system perspective was taken for the cost-effectiveness analysis, using only data transferable to the Ethiopian context (Hailu, Eregata, Yigezu, et al. 2021).

When a cost-effectiveness estimation found in the literature applied to a different setting, the currency difference was adjusted using the appropriate exchange rate and inflated to 2019 US dollars using a gross domestic product deflator. All costs were discounted at 3 percent per year. A study's reported health effects were analyzed and compared with the Ethiopian epidemiological context, with adjustments made as necessary. Primary health outcome measures—discounted at 3 percent per year—included healthy life years gained, disability-adjusted life years averted, and quality-adjusted life years gained (Drummond et al. 2009; Husereau et al. 2013b).

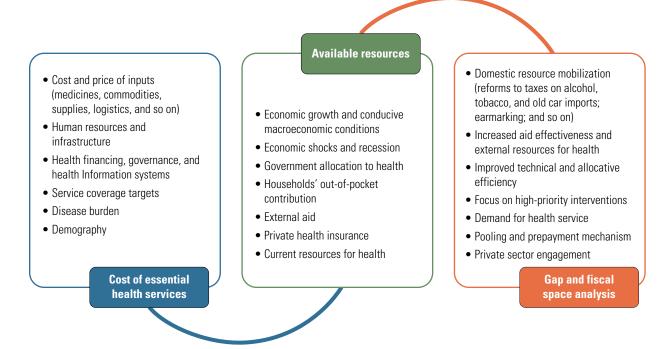
Equity and FRP scores were generated using the Delphi process involving four key steps: (1) defining the equity framework (established on the basis of local social values and policy commitments, prioritizing interventions for the socioeconomically disadvantaged, pregnant mothers, people in remote areas, and children under five years); (2) recruiting experts (a diverse panel of 30 experts from the MoH, academia, professional associations, and civil societies ensured a broad representation of expertise); conducting a Delphi workshop (in April 2019, involving individual scoring, group discussions, and validation) and two rounds of scoring to allow for adjustments based on feedback; and (4) feedback and validation (that is, analysis of scores using descriptive statistics, with summary results shared for further discussion and validation). Final equity and FRP scores, generated using the mean of individual scores, ranged from 1 (lowest) to 5 (highest), with 1 indicating no equity impact/no financial risk and 5 suggesting that not including the intervention would be inequitable and that people would pay large sums out of pocket. Equity and FRP estimates varied widely and were sensitive to the guiding framework of the Delphi process.

The interventions were first ranked according to cost-effectiveness. Next, the ranking was adjusted to account for interventions with high equity and FRP scores. Thus, all the interventions were ranked in descending order by their priority score; cost-effective, equitable, and financially protective health interventions were classified accordingly and included in the EHSP as high-, medium-, and low-priority interventions (MoH 2019).

The gap between aspirational targets and available financial and physical resources constitutes a rate-limiting factor in implementing EHSPs in many low-income countries. The expected available budget determined the set of services to be provided, which made conducting a costing exercise for the EHSP an important step. Figure 2.3 presents the conceptual framework linking costs, available resources, and financial gap analysis. The costing exercise used the OneHealth Tool,⁵ for which the default setup included 438 of the 1,018 interventions. The costs of the remaining 580 interventions in the EHSP were manually updated using an Excel spreadsheet. The OneHealth Tool's default data on the cost of drugs and supplies and Ethiopia's default population model were updated with local country-level data.⁶

Budget impact, and the number of interventions the health system needs and can provide, depends on the number of individuals in need and the intervention coverage. The population in need was estimated from the total number of individuals affected by a condition and the proportion of those affected who needed the appropriate intervention. The estimation used prevalence and incidence data estimates from national-level estimates and employed baseline UHC coverage data published by Eregata et al. (2019), supplemented by expert judgments when necessary.

Figure 2.3 Conceptual Framework of the Study, Linking Costs, Available Resources, and Financial Gap Analysis



Source: Hailu, Eregata, Stenberg, and Norheim 2021.

Summary of Analysis Findings

The first comprehensive list included 1,749 interventions for consideration. That initial list was then revised to avoid duplication and merged into 1,442 interventions. Various directorates of the MoH then commented on the intervention list. Interventions were further compared to the magnitude of the disease burden or the targeted risk factor. Removing interventions unmatched by the burden of disease or not relevant in the Ethiopian setting reduced the number of interventions to 1,223. Finally, regrouping and reorganizing health interventions yielded 1,018 interventions ready for evaluation and comparison based on the other criteria. Panel a of figure 2.4 presents the interventions by major program area.

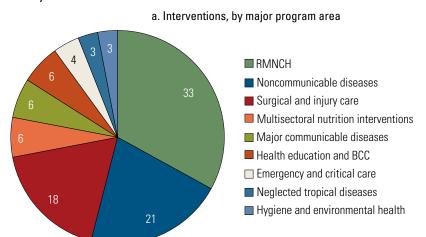
Compared with the 2005 Ethiopian EHSP, the revised EHSP includes a wide range of interventions in mental health, neurological disorders, emergency care, noncommunicable diseases, and injuries. For instance, it includes screening and treatment of cervical cancer, cardiac surgery for valvular heart disease, and the diagnosis and management of epilepsy.

Level of priority. The MoH decided to make all 1,018 interventions in the EHSP available. Using the agreed criteria, 594 (58 percent) of the interventions were categorized as high-priority, 213 (21 percent) as medium-priority, and 211 (21 percent) as low-priority interventions (figure 2.4, panel b).

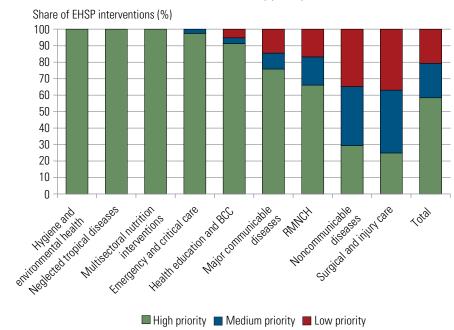
Cost of the EHSP compared to the budget constraint. Figure 2.5 presents the estimated cost per capita of delivering the EHSP interventions. Implementing the EHSP would require estimated per capita costs of US\$67, US\$94, and US\$132 for the low-, medium-, and high-coverage scenarios, respectively, in 2030. The resource needs steadily increase over the projection period. For example, the required resources for the medium-coverage scenario in 2030 (US\$94) would cost more than twice as much as in 2020 (US\$40).

The projected available resources in a business-as-usual scenario increase from US\$40 in 2020 to US\$63 in 2030, a resource gap ranging from 1 percent in 2020 to 33 percent in 2030. In general, the estimated required resources are comparable with DCP3, WHO, and Chatham House cost estimates for delivering essential UHC services in a low-income country. The DCP3 projections, using 2016 US dollars, range from US\$60 to US\$110 per capita (Watkins et al. 2020). WHO estimates indicate a range of US\$92 to US\$114 total per capita spending in 2014 US dollars, whereas the Chatham House report estimates US\$86 per capita in 2012 US dollars (McIntyre and Meheus 2014; Stenberg et al. 2017).

Figure 2.4 Share of EHSP Interventions in Ethiopia, by Major Program Area and Priority Level



b. Interventions, by priority level



Source: MoH 2019.

Note: BCC = behavioral change communication; EHSP = essential health services package;

RMNCH = reproductive, maternal, newborn, and child health.

Per capita cost (in 2019 US\$) 40 40 N

Medium coverage

- High coverage

Figure 2.5 Required Resources for Implementation of Ethiopia's EHSP, by Scenario, 2020–30

Source: Hailu, Eregata, Stenberg, and Norheim 2021.

Low coverage

EHSP IMPLEMENTATION PLANS

About 60 percent of the 1,018 interventions can be delivered through primary care (that is, community-based interventions, health posts, health centers, and primary hospitals), about 20 percent at the secondary level of care, and about 20 percent at the tertiary level hospitals (figure 2.6, panel b). When interventions are disaggregated by program area, 70 percent of the reproductive, maternal, newborn, and child health interventions can be delivered at the primary care level. In comparison, only 30 percent should be provided at the secondary or tertiary level of care. In all, 84 percent of the interventions for hygiene and environmental health, and 86 percent of interventions for health education and promotion, can be delivered at the primary care level. By contrast, 53 percent of the more advanced noncommunicable disease and surgical interventions should be delivered at secondary and tertiary hospitals.

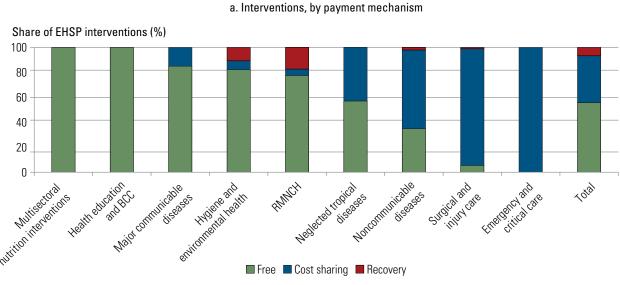
According to the revised EHSP, the MoH would provide 570 of the 1,018 interventions (56 percent) free of charge. The remaining services would come with cost-sharing (38 percent) and cost-recovery (6 percent) mechanisms (figure 2.6, panel a). All interventions under the multisectoral and health education program should be provided free of charge, whereas all emergency and critical care interventions should be provided with cost-sharing arrangements. Work is ongoing to practically implement insurance mechanisms that allow for sustainable financing and guaranteed access to these services.

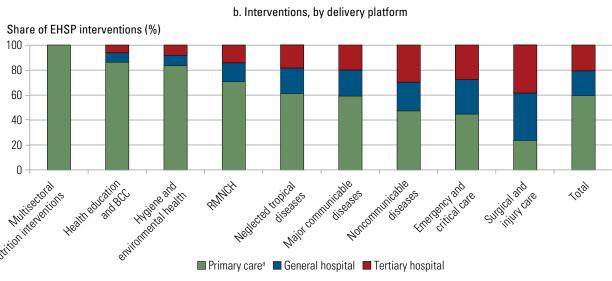
The ability to take corrective action during implementation and to document the lessons learned in implementation will require linking the implementation, monitoring, and evaluation system with the theory of change (Norheim 2018). Launched in November 2019, the revised EHSP serves as a policy goal for the health sector. So far, the country has used the revised EHSP as the basis for the health sector transformation plan (2020) and the human resources for health plan

(2020), and to inform the optimization of the health extension program (2021) and the primary care planning process.

A well-designed EHSP can help decision-makers better organize the health care system in terms of delivery platforms and payment mechanisms (MoH 2015; Glassman, Giedion, Smith 2017). Interventions in the EHSP are linked to clearly defined levels within the current service delivery platform, and the prioritization process informs funding needs and financing arrangements.

Figure 2.6 EHSP Interventions in Ethiopia, by Payment Mechanism and Delivery Platform





Source: MoH 2019.

Note: BCC = behavioral change communication; EHSP = essential health services package; RMNCH = reproductive, maternal, newborn, and child health.

a. Primary care includes community-based interventions, health posts, health centers, and primary hospitals.

LIMITATIONS AND FUTURE DIRECTIONS

Data availability represented the most critical challenge in revising the EHSP. A Delphi technique, using expert opinions, was applied to systematically generate equity and FRP scores. That approach can synthesize expert opinions when other data are not available. Although the Delphi technique provided the opportunity to explore equity impact and FRP from a broader perspective (that is, by including socioeconomics, geography, gender, age, and so on), it is prone to various types of biases—highlighting the need to conduct more studies on equity impact and FRP.

Furthermore, method development could advance the Delphi method and other nominal group techniques to better estimate interventions' equity and FRP impacts. In addition, despite the availability of cost-effectiveness information for most of the interventions from peer-reviewed articles of good quality and a comprehensive systematic review provided by DCP3 and others, the transferability and standardization of the results remain imperfect because of factors including inconsistent design (discounting, perspective, currency, and so on) and irregular and nontransparent reporting. More relevant evidence would have been available if more cost-effectiveness analyses were published.

The other significant challenge related to the general approach to EHSP design. Of the three approaches to defining an EHSP—positive listing, negative listing, and a mix of the two techniques—Ethiopia's process applied a positive listing approach. The existence of significant data limitations on the cost and impact of several interventions might have suggested the use of a hybrid system. A negative list could include high-cost interventions with modest health impacts (for example, new immunotherapies for cancer) based on evidence from high-income countries and could have informed decision-makers about what not to invest in (Tangcharoensathien 2019). Because health needs, disease patterns, and health care technology change quickly over time, the MoH has started preparing a road map to institutionalize a health technology assessment mechanism to continuously review new technologies and update the list of interventions in the EHSP on an ongoing basis.

The fiscal space analysis on the Ethiopian EHSP indicates relatively high package costs and the need for substantial additional resources. Linking the EHSP plan with the health care financing strategy will leverage implementation of the package at national and regional levels. Therefore, domestic and external resource mobilization should remain vital components of the EHSP implementation strategy (Hailu, Eregata, Stenberg, and Norheim 2021). The ongoing work of revising the health benefits package for social health insurance and mandatory community-based health insurance provides another example of such an effort to narrow the gap between what the EHSP promises and what it can deliver within existing financial resource constraints.

Finally, overall limited expertise in health economics and the lack of a formal health technology assessment agency in the country present another challenge. The capacity-building activities in the Disease Control Priorities–Ethiopia project have played an important role. Continuous capacity strengthening through the

training of health economists is crucial to supporting the use of evidence in strategic purchasing for UHC in Ethiopia (Evans and Palu 2016).

LESSONS LEARNED

In principle, the priority-setting approach for designing an EHSP should employ evidence-based, open, deliberative, participatory decision-making processes. Comparing the approach of the Ethiopian EHSP revision process with normative recommendations offers some lessons for similar future work in Ethiopia or other low- and middle-income countries (Chalkidou et al. 2016; Daniels 2000; Glassman, Giedion, and Smith 2017; Kieslich et al. 2016; Norheim et al. 2014; WHO 2014).

Ensure political commitment. Involving policy makers of all levels from the beginning is essential. Exemplary political commitment and country ownership in Ethiopia drove the revision of the EHSP, which was well embedded in the existing governance system and structure of the MoH. The MoH leadership was actively engaged from the top to medium and even low levels.

Have a road map for the revision. Road map preparation for revising the EHSP was crucial in shaping the process. Starting by preparing a road map for a revision makes the process more transparent and robust. In Ethiopia, the road map included the scope, objective, expected outcomes, methodological details, timeline, governance structure, communication plan, and roles and responsibilities of various stakeholders.

Ensure timeliness. The timeliness of the revision is an essential factor for the uptake of an EHSP. An EHSP should be prepared ahead of national strategic plans (for example, the health sector transformation plan in Ethiopia). The revision of the Ethiopian EHSP aligned with the national health sector transformation plan. Participants should have a clear understanding of the time needed for the revision. Although Ethiopia's road map proposed an initial timeline of 6 months for the revision, the whole process took 18 months (from May 2018 to November 2019).

Design a participatory process. Ethiopia's EHSP revision process was open, participatory, and inclusive (Daniels 2000). It allowed many internal and external stakeholders to actively engage from the inception to the finalization of the EHSP. Five workshops involved health sector policy makers at regional and federal levels, including ministers, state ministers, director generals, directors, technical experts, and regional health bureau heads and deputy heads. Those individuals, responsible for technical and policy decision-making in the health sector, discussed and defined the scope and goal of the revised EHSP, the selection criteria, the proposed payment mechanism, the level of health care delivery, and the budget impact of the package. The same group approved the final, prioritized list of interventions (MoH 2019).

Aim for a comprehensive package. The Ethiopian EHSP was defined comprehensively. Some countries have prepared separate packages for primary and tertiary health care, whereas other countries have separated the noncommunicable diseases package from the reproductive, maternal, newborn, and child health package. Having a single

comprehensive package, like Ethiopia's, that encompasses all levels of care and all types of diseases and health conditions is vital for various reasons, such as allocating the available resources for the health sector. Therefore, it is recommended that other countries aim and work toward a more comprehensive package.

Use multicriteria decision-making. Many countries have long used cost-effectiveness as the most commonly applied prioritization criterion in defining EHSP decision-making processes (Blumstein 1997; Jamison et al. 1993). Recently, however, using multiple criteria, as in Ethiopia's EHSP revision, has become a widely accepted approach because of the recognition that UHC is about more than maximizing health (Baltussen and Niessen 2006). The process must also consider FRP, equity and budget impacts, and public and political acceptability. However, using a multiple-criteria approach for priority-setting decisions presents certain challenges. For instance, Ethiopia's design process did not assign specific weights to each criterion but instead employed the criteria holistically. Furthermore, it was difficult to obtain precise data regarding the number of interventions that were either included or excluded because of specific criteria or because of applying a single criterion.

Account for local values. Prioritization criteria should be defined by country context rather than by using generic criteria. Every country decides on national policy goals and the criteria for defining its essential health services. A legitimate, fair decision-making process begins with transparent and inclusive identification of local values, and the criteria-selection process should include all appropriate stakeholders.

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