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iProSE: A Scale for Assessing Progress on Institutional Use of Evidence to Inform Priority-Setting in Health

ADRIAN GHEORGHE · SOPHIE GULLIVER · ABHA MEHNDIRATTA · JAVIER GUZMAN · PETER BAKER

Abstract

Rigorous, explicit, evidence-informed priority-setting (EIPS) in healthcare is an essential instrument for achieving value for money in Universal Health Coverage (UHC). Growing pressures on healthcare budgets, combined with the post-COVID-19 fiscal crises and a plateauing of development assistance for health, make institutionalising of EIPS a particularly critical and timely policy goal. We introduce iProSE—the iDSI Progression Scale for institutionalising EIPS in healthcare. iProSE is a self-assessment scale aiming to help countries understand how far they have progressed in institutionalising EIPS and what can be their future priorities and to help development partners better tailor their country support in this area. We propose an index resulting from the assessment of eight aspirational statements on EIPS: two statements relate to key spending decisions ("What health technologies to cover from public funds?" and "At what prices to procure health technologies from public funds?"), and six statements relate to enabling factors for institutionalising EIPS. Statements are scored on the basis of information available in official documents against the extent to which the statements fall on an implementation spectrum ranging from policy intention to full, systematic implementation. Based on the scored statements, EIPS institutionalisation can be categorised as Foundational, Breakthrough, Consolidating, or Mature. An example of application of iProSE is presented capturing India's progress in moving from Breakthrough in 2016 to Consolidating in 2022.

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Accompanying how-to guide available at https://www.cgdev.org/sites/default/files/iProSE-how-to-guide.pdf

Accompanying data collection tool available at https://www.cgdev.org/sites/default/files/2022-12/iDSI-iProSE-tool.zip

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Abbreviations

CGD	Center for Global Development
EIPS	evidence-informed priority-setting
GBT	WHO Global Benchmarking Tool
HBP	Health Benefit Package
HFPM	WHO Health Financing Progress Matrix
HTA	health technology assessment
HTAIn	Health Technology Assessment in India
iProSE	iDSI Progression Scale for institutionalising Evidence-Informed Priority-Setting in healthcare
LMIC	low- and middle-income country
UHC	Universal Health Coverage
WHO	World Health Organization

1. Introduction

Rigorous, explicit, evidence-informed priority-setting (EIPS) in healthcare has long been recognised as an essential instrument for achieving health system objectives in general and Universal Health Coverage (UHC) in particular [1, 2]. Growing pressures on healthcare budgets and the public's rising expectations were already inescapable realities in all health systems; these have only been exacerbated by a fiscal crisis owing to the COVID-19 pandemic, an energy crisis, and the military conflict in Ukraine. This situation makes priority-setting even more important in current times [3]. Many countries, particularly low- and middle-income countries (LMICs), are facing a daunting prospect of slowing economic growth and mounting debt repayments, with government health spending expected to plateau or decrease in many countries [4]. The plateauing levels of development assistance for health further limit the available fiscal space of many LMICs for maintaining hard-earned gains towards UHC.

EIPS processes, of which health technology assessment (HTA) is a prominent approach (Box 1), can help countries improve value for money in attaining stated health system objectives and develop legitimacy in front of health system stakeholders for difficult resource allocation choices. Practical tools have recently been developed to allow measuring of the value of priority-setting [5], and accumulating empirical evidence indicates that EIPS processes can make a difference. In Thailand, HTAs conducted between 2008 and 2020 produced an estimated net monetary benefit eight times higher than HTA-related expenditure and halved the cost of purchasing a quality-adjusted life year from US$4,189 ("no HTA" scenario) to US$2,094 [6].

BOX 1. What is HTA?

HTA (health technology assessment) is a multidisciplinary process that uses explicit methods to determine the value of a health technology at different points in its life cycle. The purpose is to inform decision-making to promote an efficient, equitable, and high-quality health system [7]. In this context, "health technology" refers to an intervention developed to prevent, diagnose, or treat medical conditions; promote health; provide rehabilitation; or organize healthcare delivery [8]. Health technologies include medicines, vaccines, medical procedures, diagnostic tests, medical devices different from diagnostic tests, public health programmes.

Of 127 countries responding to the World Health Organization (WHO) Global Survey on HTA and Health Benefit Packages (HBPs) 2020/2021, 82 percent reported having a formal, systematic process of gathering evidence to inform policy decisions, but only 53 percent of the respondents said that there was a legislative requirement to consider the results of a decision-making process in coverage and HBP decisions, and 33 percent said the results of the decision-making process are considered binding by law [9]. In many countries, policy makers continue to hesitate using evidence to inform decisions. The reasons for such hesitation are well-documented, relating to

misconceptions about HTA (e.g., "putting a price on life"); feasibility issues (e.g., insufficient data or human resources); and values, attitudes, and politics [10].

EIPS can take many forms and always involves many decision makers. It is therefore best considered broadly as a function, that is, as the effectiveness of health system governance structures to use evidence for setting priorities. The overall performance of this function needs assessment in order to enable policy makers to track progress and plan improvements.

The Center for Global Development (CGD) has embarked on developing a **self-assessment scale** that maps the extent to which countries have robust processes in place for using evidence to inform priority-setting in the health sector. The **principal aim** of such a scale is to enable countries and associated development partners to understand and measure their progress on institutionalising EIPS, and thus strategically plan for its improvement.

This paper introduces iProSE, iDSI Progression Scale for institutionalising EIPS in healthcare. After an initial conceptual overview (section 2), it presents the elements of the scale (section 3) and an initial application for India (section 4) before final remarks (section 5).

2. Measuring the institutionalisation of Evidence-Informed Priority-Setting

This section first outlines key concepts for EIPS institutionalisation, then summarises previous attempts at measuring it, and concludes with implications for developing iProSE.

2.1. Key concepts

"**Priority-setting**" is understood here as the process of allocating finite health resources against many competing demands or commitments [11, 1]. Ideally, priority-setting should seek to achieve health system objectives such as UHC—maximising health, reducing inequities in health, and increasing financial protection against the costs of ill health [12]. It is an inherently political process where multiple values and goals collide, with the resulting priorities often a compromise among stakeholders [13]. Priority-setting happens in all health systems, all the time, because demands exceed available resources. In many places, however, this process is implicit; that is, the considerations, criteria, decision rules, and decision process are not specified. **Evidence-informed priority-setting** occurs when "the decision makers and the process are made explicit and transparent, and priority setting is done in a deliberative manner involving relevant stakeholders, in consideration of best available evidence about clinical and cost-effectiveness and social values" [14].

Multiple types of **evidence**, with corresponding sources, can be considered in priority-setting, such as epidemiological (e.g., disease prevalence), service delivery (e.g., vaccination coverage), health financing (e.g., catastrophic payments), and health technology–related (e.g., costs, effectiveness,

cost-effectiveness). The type of evidence that is relevant depends on the specific nature of the priority-setting question being asked.

As for **institutionalisation**, it is useful to set out by defining **institutions**. In a broad sense, they are the formal and informal rules that organise social, political, and economic relations [15]. Institutions have been defined as "a relatively enduring collection of rules and organized practices that are embedded in structures of resources that are relatively invariant in the face of turnover of individuals and relatively resilient to idiosyncratic preferences and expectations of individuals and changing external circumstances" [16]. **Organisations** represent material expressions of institutions circumscribed by "groups of individuals bound by a common purpose" [15]. Both institutions and organisations can be formal or informal. Institutions and organisations shape one another in a given setting.

In the context of priority-setting in health, an early (2001) definition of "**institutionalisation**" as applied to HTA refers to it as "promoting structures and processes suitable to produce technology assessments that will be powerful in guiding policy and clinical practice towards the best possible health and cost outcomes" [17]. More recently (2021), the WHO has proposed that institutionalising HTA entails five steps: establishing of a mandate; reviewing or establishing of the legal framework; establishing of institutional and governance arrangements; processes and evidence required for assessment and appraisal; and monitoring and evaluation [18].

From these definitions, we retain for our purposes, first, that progress in institutionalising EIPS can be assessed by examining norms and routines—that is, what happens systematically and most of the time, not (just) what is supposed to happen or what happens sporadically. Second, progress is expected to be rather slow (and empirical evidence confirms it), therefore it is essential to capture such progress with sufficiently sensitive measures so that measurements can inform potential course corrections. Finally, institutionalisation must, in part, be assessed by examining impact—in the case of EIPS, impact on actual resource allocation decisions; examining resources and processes alone is insufficient.

2.2. Measuring EIPS institutionalisation in healthcare: What we know

Attempts at measuring progress towards the institutionalisation of EIPS are not new. Some of these focus on HTA as a particular type of EIPS process, while others have a broader scope. They vary in terms of their approaches to collecting data (from literature reviews to mixed methods approaches) and to synthesising data, using either numerical scores or qualitative labels (Appendix 1). Approaches for measuring other institutional aspects of health systems are equally diverse (Box 2).

BOX 2. Examples of global approaches to measuring policy developments in healthcare

The World Health Organization (WHO) Global Benchmarking Tool (GBT) for evaluation of national regulatory systems of medical products evaluates regulatory systems, which play a key role in assuring the quality, safety, and efficacy of medical products [19]. The GBT's approach has external assessors scoring a comprehensive list of indicators on a **4-point scale** (**Not Implemented**, **Ongoing Implementation**, **Partially Implemented**, or **Implemented**) based on information in official documents. Three types of official documents are considered: legal provisions; regulations; and evidence of implementation, for example, records of medical products authorized. The aggregated scores inform the categorisation of national regulatory systems in maturity levels on a scale of 1 (existence of some elements of regulatory system) to 4 (operation at advanced level of performance and continuous improvement). The GBT's application is supported by detailed manuals and by a software platform for data collection and analysis.

The WHO Health Financing Progress Matrix (HFPM) [20] produces a standardized qualitative assessment of a "country's health financing institutions, processes, policies and their implementation, benchmarked against good practice in the context of universal health coverage."[a] It assesses strengths and weaknesses in a country's health financing system, based on a set of evidence-based benchmarks that are framed as 19 desirable attributes as captured by 33 questions. The attributes synthesize an extensive review of conceptual and empirical health financing knowledge that indicates what matters for making progress to Universal Health Coverage. Each of the 33 questions is scored on a **4-level scale** (**Emerging**, **Progressing**, **Established,** and **Advanced**) by comparing available qualitative and quantitative evidence with level descriptions for each question. It is recommended that the HFPM be implemented by an experienced investigator in close collaboration with a country's ministry of health and WHO technical experts; the baseline assessment is expected to take 1–2 months. A detailed guide and a data collection template are available. Note that the HFPM contains a question on benefit decisions, and we describe in section 3.4 ("Scoring") of this paper how iProSE is aligned and complementary to this question.

The Joint Learning Network's *Measuring Health System Efficiency in Low- and Middle-Income Countries: A Resource Guide* proposes a "benchmarking plus" approach to be used by practitioners and policy makers for the routine assessment of health system performance from an efficiency perspective, precisely for identifying inefficiencies specific to a particular problem and the way to manage them [21]. It couples benchmarking (i.e., cross-country comparisons) with examining of several indicators along the process of how inputs are transformed into outcomes and with gathering of additional contextual knowledge in order to identify the appropriate policy action. The guide provides a list of indicators most often used for tracking health system performance and gives guidance on how they can be used to measure efficiency.

Although none of the instruments described briefly in this box aims to measure institutionalisation per se, they (particularly GBT and HFPM) attempt to capture explicitly institutional arrangements within their topic areas. For example, in question 1.3 of the HFPM—"Is health financing information systemically used to monitor, evaluate and improve policy development and implementation?"—the highest level of progress (Advanced) is described as "A well-designed monitoring and evaluation system for health financing exists, and high-quality data are systematically available and used to inform oversight of health financing, and report to the public on progress."[b] From this perspective, the approaches taken by these instruments are useful to consider for the purpose of developing a scale for EIPS institutionalisation.

a. Matthew Jowett, Joseph Kutzin, Soonman Kwon, Justine Hsu, Julia Sallaku, Juan G. Solano. Assessing Country Health Financing Systems: The Health Financing Progress Matrix. Health Financing Guidance No. 8 (Geneva: World Health Organization, 2020), 1.

b. World Health Organization, The Health Financing Progress Matrix: Country Assessment Guide. Health Financing Guidance No. 9 (Geneva: World Health Organization, 2020), 78.

The available instruments are useful in that they already rely on extensive literature reviews of the components and drivers of EIPS institutionalisation, and therefore there is little need to duplicate the effort of identifying what matters. Having reviewed previous work and compared it with our aims and principles (for more details, see section 3 later in this paper), we identified three ways in which iProSE could improve existing instruments of institutionalisation measurement:

- Focus on policy impact at least as much as on capacity for evidence generation. This approach entails being intentional and specific about the tangible implications that considering evidence may have for allocating public budgets for health.
- Broaden and be specific about the scope of health technologies and interventions considered, as some types of health technologies affect country health budgets in different ways. WHO Global Health Expenditure Database data for 2019 suggest, for example, that preventive care, which includes public health interventions, takes up a much higher share of the health budget in low-income countries, while medical goods and inpatient curative care take up a much higher share in upper-middle-income countries.
- Capture the nature and quality of evidence that informs decision-making. Specifically, one can argue that incorporation of economic evidence is essential because it allows decision-makers to consider trade-offs and opportunity costs when facing alternative courses of action.

3. The self-assessment scale

This section outlines the principles (section 3.1), aims (section 3.2), design (section 3.3), and scoring (section 3.4) of the proposed self-assessment scale.

3.1. Principles

Five principles have guided the development of iProSE in terms of approach and design.

Principle 1. Open access and independent use

The self-assessment scale has been designed with independent use in mind. The self-assessment scale aims to be a global public good whose application and use will not necessarily be contingent on the participation of its developers. The "self-assessment" nature of the scale reflects, on the one hand, the intention to enable its primary users and owners of the EIPS institutionalisation process—governments—to use the scale freely, and, on the other hand, the wish to allow evidence-informed policy practitioners to use, reflect on, adapt, and provide feedback on the self-assessment scale in order to improve it iteratively.

A how-to guide and a related data collection tool accompany this paper. They operationalise the self-assessment scale for practical applications and are freely available.

Principle 2. Country and cross-country relevance

The scale aims to support countries to consider their progress over time, but also to enable cross-country comparison. The scale's content therefore attempts to **capture aspects of EIPS institutionalisation common and relevant to most countries, particularly LMICs**. For countries, making comparisons with peers opens opportunities for learning of lessons and policy transfer. For development partners, making comparisons across countries opens conversations about how to offer appropriate, context-sensitive assistance at the right time.

Principle 3. Objectivity

The self-assessment scale is document- and milestone-based. It focuses deliberately, however non-exclusively (see below), on official documents as the basis for making assessments. This approach is not new in measuring EIPS institutionalisation [22]. It also specifies concrete steps along the institutionalisation journey, from policy intent to implementation (or policy action).

Such an approach has been taken for three reasons. First, to enable standardized comparisons across countries (see Principle 2 earlier in this report). Second, to allow a clear and actionable characterisation of a country's progress on the EIPS institutionalisation journey. Third, to capture the nature of systematic decision processes. Robust decision-making may happen in the absence

of documented processes; however, given the frequency of decisions and the large volume and high complexity of evidence required to inform most healthcare priority-setting questions, it would be difficult to argue that undocumented processes are compatible with systematic, institutionalised evidence-informed decision-making.

Principle 4. Explicit links to resource allocation

The self-assessment scale aims to make explicit which resource allocation decisions EIPS is likely to make a tangible contribution to. This is because the entire premise of EIPS is that it is institutionalised in the health system and routinely improves resource allocation decisions to allow governments to attain policy objectives with the limited resources they have. Is this the case? To this end, the scale focuses on two specific resource allocation questions: Does EIPS inform "what to cover?," that is, which health technologies to reimburse from public funds? And does EIPS inform "at what prices to procure health technologies?"

Principle 5. Pragmatism

Applying the self-assessment scale should not require a substantial monitoring and evaluation budget. At its simplest, the scale can be applied using its supporting documents (see Principle 3 earlier in this report) as part of a desk-based exercise informed by one or more experts with both deep knowledge of the policy and regulatory landscape and access to government documents. These experts would, however, need to have time to identify the relevant documents and interpret their content relative to the scale's scoring grid.

iProSE is designed to be applied by a country assessment team comprising experts with knowledge, professional experience, and legitimacy for conducting such an exercise. The importance of a robust team cannot be understated given that judgement calls are inevitable as part of conducting the assessment, from scoping to scoring. The how-to guide and the accompanying spreadsheet tool are meant to support the application.

3.2. Aims of the scale

The scale aims to

- support countries, and LMICs in particular, in understanding where they are on the EIPS journey and how they can best continue their progress;
- allow fair, objective comparisons of countries' EIPS institutionalisation progress with a view to facilitating policy learning;
- provide technical assistance providers with a tool to track a country's progress in implementing EIPS and, thus, inform its planned support; and
- inform development partners to strategically target support to countries to develop EIPS processes.

The scale is primarily intended to be completed prospectively, at regular intervals following a baseline exercise. While institutionalisation progress often extends over several years, iProSE's scope is deliberately broad so that it captures gradual developments in terms of health technologies and interventions covered, type of economic evidence used, and policy implementation stage. We anticipate that completing the scale every two years can balance practicality and relevance. The scale can also be completed retrospectively to capture progress from a specific moment in the past up to the present (see section 4 of this paper for an example).

The scale attempts to capture the extent to which decisions with substantial influence over the health budget—that is, **"What health technologies to cover?"** and **"At what prices to procure health technologies?"—**are systematically informed by evidence. The scale can be applied at the national or sub-national level, for example, in countries with a federal government or where healthcare resource allocation is a devolved function.

3.3. Design

The self-assessment scale comprises eight aspirational statements over two domains:

1. Two statements about how evidence is used to **inform spending decisions;** and
2. Six statements about **enabling factors** for the production and use of evidence.

Briefly, each of the two statements on spending decisions are scored for each type of health technology/intervention on the basis of two factors: what type of health economic evidence is used, and the extent to which evidence informs spending decisions. Each statement on enabling factors is scored on the basis of the extent of their implementation across the healthcare system (not by health technology/intervention). More details follow.

Statements on the use of evidence to inform spending decisions

The scale first attempts to capture the extent to which decisions with substantial influence over the health budget—that is, **"What health technologies to cover from public funds?"** and **"At what prices to procure health technologies from public funds?"**—are systematically informed by evidence.

The starting point for the selection of these two statements on spending decisions was the literature on potential functions, uses, or roles of EIPS. Table 1 gives an overview of such functions, most of which refer to the functions (or uses, or roles) of HTA. CGD senior experts selected the two statements, one on coverage decisions and the other on procurement and pricing, on the basis of their direct relevance to public spending on health. This choice is aligned with the findings of a recent scoping review of HTA uses in LMICs [23]. Quality of care and determining of fees, co-pays, or results-based financing design are acknowledged as important areas, but with less immediate relevance for how most LMICs can use evidence to inform decisions; they can be included in further developments of iProSE.

TABLE 1. Overview of functions for evidence-informed priority-setting processes

Source	Potential Functions of Evidence-Informed Priority Setting
Chi and Jeffery (2019) [11]	EIPS can inform resource allocation decisions such as creating/revising a benefit package, creating/revising an essential medicines list, making decisions on drug procurement, allocating resources to specific interventions in disease programs, and making decisions about how to spend capital budgets.
O'Brien et al. (2019) [24]	Three types of uses for HTA: • Priority-setting: e.g., early research and development for product development; resource allocation decisions across programs, delivery platforms, and technologies; identifying of best buy interventions in Essential Medicines Lists, benefit packages, and public health; designing of investment cases for the Global Fund to Fight AIDS, Tuberculosis and Malaria and the Global Financing Facility; providing of managed space for stakeholder engagement, and fostering of legitimacy • Purchasing of commodities: procuring vaccines, drugs, and devices, including price negotiations and special access schemes; determining fees and co-pays; and delisting/disinvesting from wasteful interventions and practices • Quality of care: quality management through guidelines, treatment and referral pathways, and quality standards; pay-for-performance (results-based financing) using quality indicators; clinical audit and (self-)regulation of providers; and education and training of health workforce
Bertram et al. (2021) [18]	Decisions on reimbursement, pricing policies (which influence procurement), and clinical guidelines
WHO Health Technology Assessment/Health Benefit Package Survey 2020 [25]	The survey instrument asks countries whether they use HTA for the following: clinical practice guidelines; planning and budgeting; pricing (negotiations) of medical technologies; indicators of quality of care; determination of objectives of P4P schemes; design of HBPs; public procurement of medicines; and protocols for public health programmes.

Notes: AIDS = acquired immunodeficiency syndrome; EIPS = evidence-informed priority-setting; HBP = health benefit package; HTA = health technology assessment; P4P = Pay for Performance.

In the context of the self-assessment scale, "health technology" refers to six major categories: medicines, vaccines, medical procedures, diagnostic tests, medical devices different from diagnostic tests, public health programmes. Systems (e.g., health information) and policies (e.g., pay for performance) could technically also fall under "priority-setting," but have been left outside the scale's scope in this iteration given the aim to make the scale widely relevant (Principle 2) and pragmatic (Principle 5).

These two statements about spending decisions are specific to each type of health technology. This acknowledges that in most countries, EIPS processes are not uniformly developed across types of health technologies. For example, a functional priority-setting process for pharmaceuticals may be in place that does not cover vaccines and medical devices. Moreover, decisions on procurement prices do not apply to medical procedures and public health interventions.

Statements on enabling factors

The "enabling factors" refer to elements that are needed to promote and set up the use of evidence to support policy decisions. They have been described extensively in the literature from various perspectives, mostly in relation to HTA (Table 2). We selected six from the literature as the most critical factors: capacity for producing evidence; capacity for using evidence; systematic interactions between producers and users of evidence; political commitment for the production and use of evidence; "soft infrastructure" to support the production and use of evidence, such as healthcare cost databases or cost-effectiveness thresholds; and inclusive stakeholder participation in the decision-making process.

TABLE 2. Overview of enabling factors for developing EIPS processes and systems

Source	Enabling Factors for Evidence-Informed Priority-Setting
Rajan et al. (2011) [26]	For low- and middle-income countries (in decreasing order of importance as ranked by): • Availability of human resources to develop HTA • Availability of financial resources to perform/run HTA • Existing good practices and examples from other countries • Understanding of the local needs and setting of priorities • Existing international networking, support, and collaboration • Availability of capacity building and training programs for HTA and evidence-based medicine
Oortwijn et al. (2013) [22]	Presence of fulfilment of elements needed to establish a (formal) HTA programme if no agency or group is in place: • Interest in HTA expressed by government/policy makers which can be retrieved in official documents • Commitment towards HTA from government/policy makers as it is expressed in official documents • Public money (funding) allocated to HTA as expressed in official documents • Willingness to commit public money (funding) to HTA as expressed in official documents • Support for HTA from several stakeholders, including the medical profession, as expressed in publicly available documents • Organisational structure and institutional set-up in place; the achievement of legal support (i.e., policy statement or a specific law providing for the institution of a new body or giving HTA functions to an existing organisation) is important in formalising HTA activities • International network strategy available • Availability of human resource development: capability to carry out HTA, ability to review international literature, HTA training opportunities

Source	Enabling Factors for Evidence-Informed Priority-Setting
Castro Jaramillo et al. (2016) [27]	Drivers for the development and use of HTA: • Availability and quality of data • Cultural aspects • Financial support • Globalisation • Health system context • Implementation strategy • Local capacity • Policy/political support • Stakeholder pressure • Usefulness perception

Notes: EIPS = evidence-informed priority-setting; HTA = health technology assessment.

3.4. Scoring

Each statement is assessed and scored against an implementation spectrum ranging from "no documentary evidence about the statement" (minimum score) to "documentary evidence indicates that the statement is fully implemented" (maximum score) (Table 3). The scores are aggregated at the level of each domain and then into a single score reflecting the overall extent of EIPS implementation.

TABLE 3. Conceptual design of the self-assessment scale

Domains	Statements	Implementation Spectrum					
		None	Policy	Legislative	Operational	Implemented Partially	Implemented Fully
Decisions	Two statements	Statement scores					
Enabling factors	Six statements						

For each statement, the position on the implementation spectrum and the corresponding score are assessed on the basis of information available in official documents. The typology of documentary evidence draws on the WHO Global Benchmarking Tool, which distinguishes between legislative and operational documents as sources of evidence for making country assessments. The scale considers four types of documents:

- **Policy documents** receive the lowest scores (e.g., the country has an HTA strategy). These are important to acknowledge because they signal political intent in the direction of institutionalising EIPS, but they are usually non-binding.
- **Legislative documents** receive somewhat higher scores than policy documents (e.g., laws, decrees). These reflect a higher level of commitment to EIPS than policy statements, however they do not guarantee implementation.

- **Operational documents** receive even higher scores (e.g., standard operating procedures, manuals, norms). These documents are internal to relevant institutions (e.g., ministry of health), which operationalise policies and legislation on EIPS into actionable steps.
- **Implementation documents**, which attest to decisions being implemented or to EIPS enabling factors being enacted, receive the highest scores. A distinction is made between **partial implementation** (e.g., pilots, the process is applied in some instances, but not in others without any apparent explanation) and **full implementation**, where the process is applied predictably in (nearly) all instances. What these documents are exactly is specific to each statement; indicatively, they can include expenditure statements, procurement orders, budget breakdowns, minutes of meetings, and peer-reviewed publications. These details are elaborated upon in the how-to guide.

The statements also refer specifically to the use of evidence**. By "evidence," we focus intentionally on health economic evidence.** Evidence on the clinical effectiveness and safety of health technologies is commonly considered in all contexts, and therefore, for the purpose of an assessment scale, it has little discriminatory power; moreover, it is not, by itself, sufficient for robust priority-setting, as it does not enable consideration of trade-offs and opportunity costs [28]. Instead, iProSE focuses on comparative health economic evidence and broader system-level aspects, which are recognised as essential components of priority-setting processes and for which there is much more variability across countries.

Three tiers of health economic evidence on health technologies are considered:

1. Costs and health-related outcomes of health technologies
2. Comparative economic evaluation evidence on health technologies
3. Comparative economic evaluation evidence *plus* evidence on at least one broader, system-level aspect pertaining to the ethical, organisational, legal, or socio-economic implications of implementing the health technology. For example, reimbursing a novel health intervention implemented by a community-based multi-disciplinary team of health professionals may require defining the concept of "multi-disciplinary" team in the relevant legislation and adjusting the organogram, workflows, and budget structure of existing community care providers to accommodate the changes. Such aspects and their related implications (financial, bureaucratic, political) need also be considered in the decision process.

The score of each statement reflects the extent of implementation and, for the two decision statements, the type of health economic evidence considered (Table 4):

- 0 means there is **no documented indication** that decisions (are supposed to) incorporate health economic evidence considerations or that EIPS enabling factors are (supposed to be) present.
- The maximum score (5 for enabling factors, 15 for decisions) means there is **concrete, documented indication** that decisions are **made and implemented** using extensive health economic evidence or that EIPS enabling factors are **present**.

- Scores between 0 and the maximum score mean either that there is **some documented indication** for decisions or enabling factors, but without concrete indication of systematic implementation ("things look good on paper"), or that a less-than-complete spectrum of health economic evidence items informs decisions.

TABLE 4. iProSE scoring grid

Type of Health Economic Evidence on Health Technologies	Implementation Stage					
	None	Policy	Legislative	Operational	Implemented Partially	Implemented Fully
Decision statements						
Costs and outcomes, not as an economic evaluation	0	1	2	3	5	12
Economic evaluation	0	3	4	5	7	14
Economic evaluation + at least one broader aspect	0	4	5	6	8	15
All six statements on enabling factors	0	1	2	3	4	5

Statements for decisions weigh more than statements for enabling factors, which is reflected in their respective score ranges. This weighting recognizes the focus of iProSE on whether health economic evidence directly influences resource allocation.

In case of contention or ambiguity, we recommend using conservative scoring and being transparent about potential tensions/interpretations. We acknowledge that scoring statements, even based on official documents, may not always be straightforward. For example, a policy document may not specify all types of health technologies it applies to; two pieces of legislation can be contradictory; or evidence of implementation may be rather anecdotal. In such cases, judgement calls from the country assessment team are inevitable. We recommend awarding the lowest score that can be unequivocally substantiated and documenting the nature of the tension. The spreadsheet-based tool accompanying the scale allows for making notes for each statement about such potential complexities.

The overall scores by statement and type of health technology are aggregated into a country-level score which can go up to 180, representing full implementation of EIPS across all types of health technologies and fully materialised enabling factors. The components of the total score are as follows (Table 5):

- "What to cover?": six types of health technologies × statement score [0–15] = maximum score 90
- "At what prices to procure?": four types of health technologies × statement score [0–15] = maximum score 60
- Enabling factors: six factors × statement score [0–5] = maximum score 30

TABLE 5. Operational framework of iProSE

Statement	Implementation Stage					
	None	Policy	Legislative	Operational	Implemented Partially	Implemented Fully
Decisions						
When deciding which health technologies to reimburse using public funds, health economic evidence on the respective health technologies/interventions is considered in the decision.	Statement is scored against implementation stage (from 0–none to 15–implemented fully) based on information in official documents for each of 6 types of health technologies: medicines, vaccines, medical procedures, diagnostic tests, medical devices different from diagnostic tests, public health programmes. Total possible score when assessing all six types of health technologies/interventions: 90.					
When negotiating prices as part of a public procurement procedure for health technologies, health economic evidence on the respective health technologies is considered in price negotiations.	Statement is scored against implementation stage (from 0–none to 15–implemented fully) on the basis of information in official documents for each of four types of health technologies: medicines, vaccines, diagnostic tests, and medical devices different from diagnostic tests. Total possible score when assessing all four types of health technologies/interventions: 60.					
Enabling factors						
Organizational structures are in place with the mandate to generate health economic evidence on health technologies.	Each statement is scored against implementation stage (from 0–none to 5–implemented fully) based on information in official documents. Total possible score across six enabling factors: 30.					
Organizational structures are in place with the mandate to interpret health economic evidence on health technologies and make recommendations or resource allocation decisions.						
Formal linkages are in place to bring together producers and users of health economic evidence on health technologies.						
The government funds organizational structures to produce and/or use health economic evidence on health technologies to inform resource allocation decisions.						
Soft infrastructure is in place (e.g., cost databases, methods guide, rules-based thresholds) to support producers/users of health economic evidence for resource allocation decisions.						
When deciding which health technologies to reimburse using public funds, relevant health system stakeholders have their perspectives heard.						

When the self-assessment is done only for selected health technologies, the maximum score for the two decision statements is reduced accordingly; that is, health technologies not assessed are scored 0. For example, an assessment looking only at pharmaceuticals and medical devices will have a maximum score of 30 (2 health technologies × 15 points) for both "What to cover?" and "At what prices to procure?" This reduces international comparability, and so we encourage the full scoring across all types of health technologies wherever possible.

Categorising country progress

Categorising country progress can be useful to improve communication with stakeholders, policy makers, and funders. Based on the iProSE scale scores resulting from conducting the assessment, a country's EIPS development can be characterized as Foundational, Breakthrough, Consolidating, or Mature (Table 6).

- "Foundational" reflects a stage where only enabling factors may be present, but policy decisions are not yet informed by evidence, not even in an ad hoc way.
- "Breakthrough" represents a stage where the majority of enabling factors are in place, and one area, commonly pharmaceuticals but not necessarily, is making ad hoc decisions on improved resource allocation based on EIPS. This is a common situation across countries.
- "Consolidating" represents the broadening of the EIPS remit to multiple technologies and decision areas to enable a true consideration of system efficiency.
- At the end of the spectrum, a "Mature" stage is one where most enabling factors are materialised and resource allocation decisions for multiple types of health technologies are systematically informed by evidence.

TABLE 6. Categorisations of EIPS progress based on the iProSE scale

Stage	Number of Statements at "Partial" or "Full" Implementation		
	Enabling Factors (of 6 Statements)	AND	Resource Allocation Decisions (of 10 Statements)
Foundational	≤3 statements		0 statements
Breakthrough	>3 statements		1 statement
Consolidating	>3 statements		3 statements (covering two distinct types of health technologies)
Mature	>5 statements		5 statements (covering three distinct types of health technologies and both decision areas)

The four-stage categorisation does not depend directly on the number of points. As such, it is theoretically possible for a country to be classified as "Mature" when examining only resource allocation decisions for three types of health technologies if the two decision statements are at least "implemented partially" for all three. However, the more health technologies that are included in the assessment, the higher the likelihood that a higher stage of EIPS institutionalisation can be reached.

The first decision statement ("What to cover?") in iProSE is aligned with and complementary to section 5 ("Benefits and Conditions of Access") in the WHO Health Financing Progress Matrix, specifically question 5.2: "Are decisions on those services to be publicly funded made transparently using explicit processes and criteria?" The four levels of progress for this question in the HFPM (Box 3) depend on transparent, explicit processes which use cost-effectiveness evidence, with the highest level of progress "Advanced" (corresponding broadly to "Mature" in iProSE) relying on the presence of the appropriate regulatory environment, stakeholder involvement, and systematic use of assessments to determine changes to the benefit policy. As such, without being duplicative, conducting the EIPS assessment using iProSE entails gathering and interpreting the information required to answer this question in the HFPM.

BOX 3. Levels of progress for decisions on changes to publicly funded health benefits (question 5.2) in the WHO Health Financing Progress Matrix

LEVEL 1: EMERGING. Decisions on publicly funded benefits are not made transparently, with no criteria or process defined as the basis for decisions, and no inclusion of stakeholder perspectives.

LEVEL 2: PROGRESSING. Some decisions on publicly funded benefits are assessed against selected criteria and plans to establish a formal process are being considered, but decision-making is largely opaque (not transparent).

LEVEL 3: ESTABLISHED. Larger number of assessments are conducted to inform benefit decisions, and a decision is taken to institutionalize an explicit process that includes criteria such as cost–effectiveness and budgetary impact.

LEVEL 4: ADVANCED. Laws or regulations in place requiring proposed changes to publicly funded benefits are to be subjected to systematic assessment and deliberation; expert and non-expert stakeholders are incorporated.

4. Application: India's journey of institutionalising HTA (2016–2022)

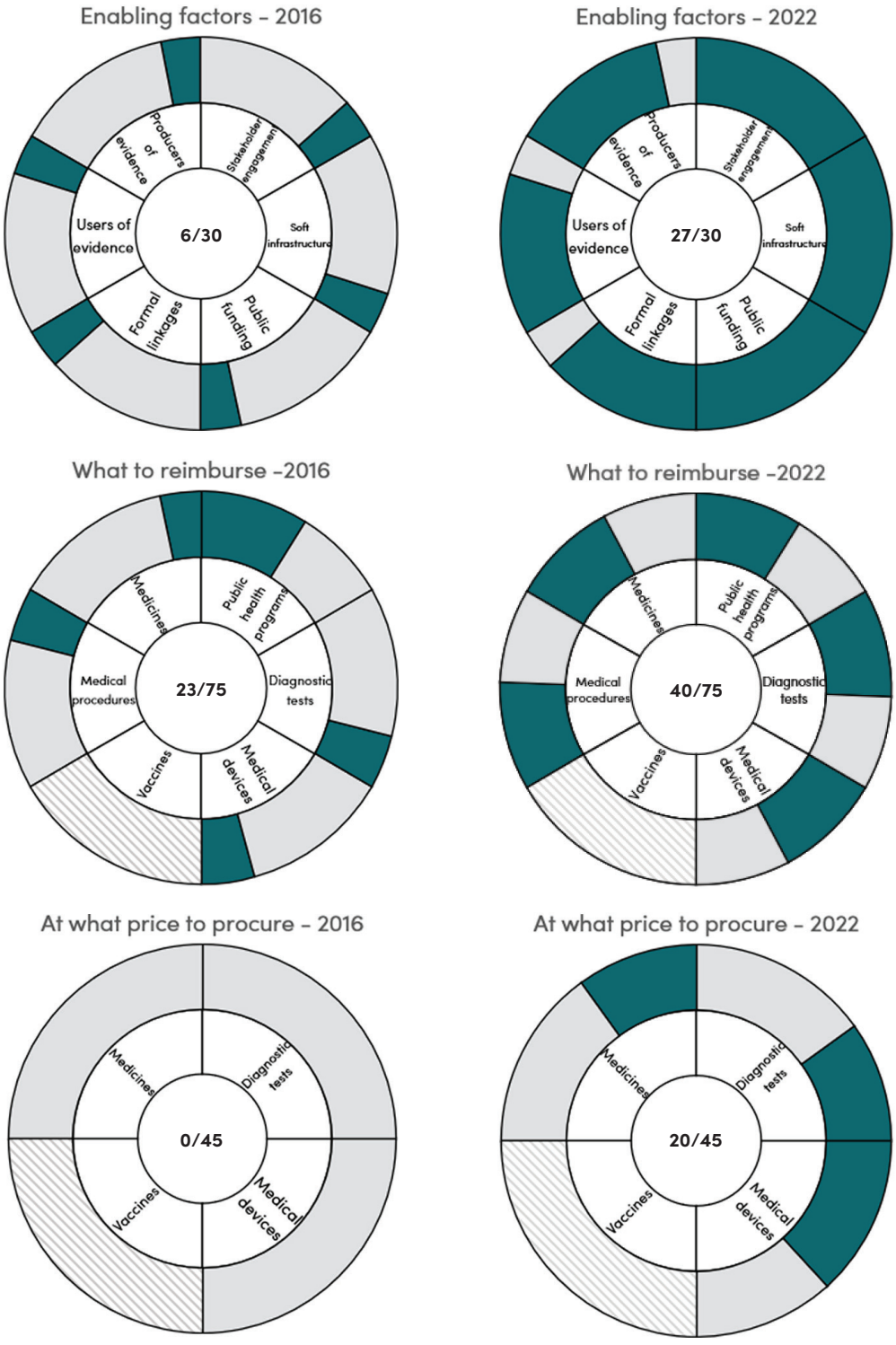
iProSE was applied retrospectively in India to characterise its progress on HTA institutionalisation since 2016, a year before HTAIn (the HTA Unit of Government of India) was established at the Department of Health Research (Appendix 2). The purpose of the application was to test the scale's sensitivity in a known context. Vaccines were the only type of health technology not assessed as part of this exercise. CGD consultants in India participated in preliminary discussions on the design of the scale; identified relevant official documents from the Indian context; and consulted with Indian experts where clarifications were necessary, particularly in relation to the 2016 status.

Before 2017, HTA-related activities in India were conducted on an ad hoc basis, and enabling factors were in early stages of development (Figure 1). While there are instances of evidence generation supporting policy decisions (e.g., a cost-effectiveness analysis of HIV preventive interventions in India [29] informed the mid-term review of the National AIDS Control Program phase-3 and the decision to continue funding targeted interventions for female sex workers), there was no formal, systematic process to speak of. Nevertheless, the government of India was starting to show strong commitment towards developing HTA as a viable strategy for pursuing UHC and the Sustainable Development Goals [30].

The situation in 2022 is markedly different (Figure 1). In April 2017, the government of India established the Health Technology Assessment in India (HTAIn, formerly Medical Technology Assessment Board) under the Department of Health Research, Ministry of Health and Family Welfare. HTAIn is responsible for commissioning and conducting HTA studies in the country [31, 32]. Some coverage decisions are informed by complex economic evidence, and all enabling factors have now materialised fully. Procurement, in contrast, is showing progress, but there is room for more development.

The application of the iProSE scale over these two time points in India (pre-2017 and 2022) suggests that India has made considerable progress in all areas of the scale, progressing one stage from 'Breakthrough' to 'Consolidating'. The major area for future progress is transitioning from partial to full implementation of EIPS processes and tightening the link with the prices that commodities are procured. Encouragingly, an HTA Bill is expected to be passed by Parliament which will support systematising HTA, and the National Health Authority is establishing a committee which will increase the linkage among HTAs, health benefit package updates, and pricing.

FIGURE 1. iProSE results from India, 2016 and 2022



Applying iProSE in the Indian context has provided important lessons. First, the documentary evidence required to inform the statements was more easily available than expected, partly owing to the involvement of an experienced and well-connected expert, and partly as most of it was already in the public domain. Second, establishing the scope of the assessment at the outset is essential. In India's case, one of the fundamental choices arose between examining priority-setting for only the largest public health insurance scheme—Pradhan Mantri Jan Arogya Yojana (PMJAY)—and going beyond it to examine other health programmes and services from the Ministry of Health and State Health Departments. The country assessment team opted for the latter. Another scope-related aspect pertained to the choice between federal-level priority-setting and state-level priority-setting, also acknowledging that some Indian states are making faster progress towards the institutionalisation of EIPS than others; the assessment team opted for the former. India has a pluralistic health system with nearly 70% of healthcare provisioning being done through the private sector. However, we did not assess the use of HTA to inform private sector decisions. Last but not the least, applying the scale using the provided tools (how-to guide and spreadsheet) took about two days' work for someone familiarised with the health system and HTA developments.

5. Conclusion

We have designed the iProSE self-assessment scale as a tool for conducting and documenting a detailed mapping of country progress in institutionalising the use of evidence to inform public spending for health. This paper outlines the motivation and conceptual development. It is accompanied by a spreadsheet-based application tool and by a detailed user guide to be used by country assessment teams when applying the tool. We have applied iProSE retrospectively in the Indian context of institutionalising HTA as a learning and feasibility exercise. We have found that it successfully captures relevant policy developments and is not difficult to implement.

5.1. Strengths of the iProSE scale

iProSE has been designed with objectivity, pragmatism, independent use, and relevance for spending decisions in mind. It can be completed relatively quickly, with minimum resource requirements as it is not dependent on consensus building. It requires inputs from professionals with strong knowledge of the country's health system, particularly at the regulatory and policy decision levels, and access to official documents.

iProSE is primarily intended to be completed every 1–2 years at the level of the health system for all health technologies, enabling countries and their partners to identify stronger and weaker areas of the EIPS system and therefore plan improvements. It is also intended to categorise countries in one of four EIPS progress levels to aid communication to high-level stakeholders and partners. iProSE builds on and expands the scope of existing instruments of EIPS institutionalisation measurement, while maintaining alignment with related assessments such as the HFPM. Operationally, iProSE

can be deployed at the same time or in parallel with other health system assessments as it draws on comparable professional expertise without necessarily requiring consensus.

At the same time, iProSE is modular and lends itself to a wide range of use cases, some of which can be much more specific than a system-level assessment. For example, the insights it generates could be used to inform the development of a national pharmaceutical strategy, the criteria for public procurement of medical equipment, the monitoring of HBP implementation, or institutional capacity-building plans. When completed retrospectively, as we did for India in section 4, it can provide opportunities for showcasing policy commitment, strengthening motivation, and identifying blind spots. When completed prospectively, at regular intervals, it can inform institutional development plans, support monitoring and evaluation plans, and inform accountability mechanisms.

5.2. Limitations of iProSE

There are also limitations. First, the discriminatory powers of the statement scoring system (including the weights) and of the four progress categories have not been tested extensively. The India case study is reassuring, as it detected meaningful policy change whilst showing room for future improvement, but as additional assessments are carried out, the scoring system may need to be further calibrated. Second, the scores and weights have not yet been externally validated. A future research stream could look at which factors are most associated with empirical improvements in the value for money of the health sector, and the scores could be adjusted accordingly. Third, within the six types of health technologies, important heterogeneity may exist that the scale does not capture. For example, procurement decisions may be informed by complex economic evidence for HIV medicines, but not for other types of medicines, which can make it difficult to produce a representative and accurate overall procurement score for "pharmaceuticals." Finally, reliance on official documents supports objectivity in assessing institutionalisation, but it is not without challenges: it may lead to suboptimal characterisations of the situation in countries at early stages of EIPS institutionalisation; in some cases, reality may evolve faster than documents can be updated; and obtaining access to and interpreting official documents may be easier in some contexts than in others. Therefore, balancing iProSE's reliance on documents with expert opinion may require refinement. The country assessment team implementing iProSE will have an important role in clarifying the scope, making determinations, and documenting choices made when completing the scale. Further country applications can provide guidance on improving such aspects.

5.3. Recommendations

We believe iProSE and its accompanying tools (spreadsheet and how-to guide) can be useful in accelerating the development of EIPS processes and systems in LMICs. We will seek to refine it further on the basis of ongoing and future applications. By way of next steps, we structure our main messages as recommendations for countries, development partners, and the wider priority-setting community.

For countries:

- Use iProSE and accompanying tools for conducting baseline assessment of EIPS institutionalisation as a starting point for policy diagnosis, learning, planning, and action.
- Document lessons learned from applying iProSE in their own settings, if possible, in alignment with other institutional development tools.

For funders and international agencies with a global health remit:

- Support further piloting of iProSE and documenting of lessons learned, particularly across countries.
- Consider incorporating iProSE in their own monitoring and evaluation frameworks relating to institutional development.

For the healthcare priority-setting community:

- Consider adopting iProSE as part of the priority-setting conceptual apparatus.
- Support further piloting of iProSE and documenting of lessons learned, particularly across countries.
- Investigate validation of iProSE scores and weights to improve calibration of the scale.

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Appendices

Appendix 1. Summary of tools for measuring EIPS institutionalisation in healthcare

Study	Stated Purpose	Data Collection	Country Application	Approach to Measuring Institutionalisation
Oortwijn et al. 2013 [22]	Develop and apply an instrument to map the level of HTA at country level in selected countries.	Document review Web survey of key informants	10 countries from across the world	**Indicators** for the level of institutionalisation [**score range 0–28**]: At least one national or regional agency/organisation that is a member of INAHTA (since …) and (1) reports to a minister of health/human resources or other authorities such as social security institutions; (2) produces and/or endorses HTA reports; and (3) informs decisions about introduction, reimbursement, and disinvestment from health technologies [Yes = 25; No = 0] At least one government-advising group outside INAHTA and (1) reports to a minister of health/human resources or other authorities such as social security institutions; (2) produces and/or endorses HTA reports; and (3) informs decisions about introduction, reimbursement, and disinvestment from health technologies [Yes = 20; No = 0] Presence/fulfilment of elements needed to establish a (formal) HTA programme if the above are not in place [Per element—Completely present = 3; Partially present = 2; Present to some extent = 1; Not present = 0]: • Interest in HTA expressed by government/policy makers which can be retrieved in official documents • Commitment towards HTA from government/policy makers as it is expressed in official documents • Public money (funding) allocated to HTA as expressed in official documents • Willingness to commit public money (funding) to HTA as expressed in official documents • Support for HTA from several stakeholders, including the medical profession, as expressed in publicly available documents

Study	Stated Purpose	Data Collection	Country Application	Approach to Measuring Institutionalisation
				• Organisational structure and institutional setup in place; importance of the achievement of legal support (i.e., policy statement or a specific law providing for the institution of a new body or giving HTA functions to an existing organisation) in formalising HTA activities • International network strategy available • Availability of human resource development: capability to carry out HTA; ability to review international literature, including expertise in searching the internet; availability of HTA training opportunities. Number of memberships of HTAiN [More than 10 members = 3; 5–10 members = 2; 1–5 members = 1; 0 members = 0]
Kaló et al. 2016 [33][1]	Summarize the major types of HTA implementation practices and propose an HTA implementation scorecard that can support the formulation of HTA roadmaps in CEE countries.	Literature review Authors' internal consultation	Discussion informed by the experience of CEE countries, but no application of the scorecard	**Four levels** of HTA implementation: limited priority of HTA implementation; HTA implementation focused on capacity building (three progress levels); HTA implementation focused on policy decisions (three progress levels); and full HTA implementation. Balanced scorecard on HTA implementation with **17 single/multiple choice questions** spread across **eight domains**: (1) capacity building; (2) funding; (3) legislation; (4) scope of implementation; (4) decision criteria; (6) quality and transparency of implementation; (7) use of local data; and (8) international collaboration. No scores are assigned, only "current status" and "preferred status in 10 years" for each question.

1 A similar version of this implementation roadmap has also been applied in the Latin American context, reported in Diego Rosselli et al., "HTA Implementation in Latin American Countries: Comparison of Current and Preferred Status," *Value Health Reg Issues* 14 (2014): 20–7.

Study	Stated Purpose	Data Collection	Country Application	Approach to Measuring Institutionalisation
Li et al. 2016 [14]	Prioritize a shortlist of candidate partner countries for iDSI to provide practical strengthening for rational priority-setting capacity, where there would be the greatest likelihood of success within the two-year time frame of the iDSI grant.	Literature and data review Key informant interviews	17 countries in Asia (7), Latin America (5), and sub-Saharan Africa (5)	Data were collected for 17 countries across **5 qualitative indicators** (political commitment to rational priority-setting; current position along the UHC journey; institutional and technical capacity for rational priority-setting; health system financing characteristics; and potential economies of scale in rational priority-setting) and **28 quantitative indicators** referring to political will, capacity to benefit given the position on the UHC journey, institutions, and health system financing. Then the following exclusion criteria agreed upon among iDSI delivery partners were used to shortlist countries: – Country has clearly established and centralised rational priority-setting institutions, at any level of maturity. – Country has not articulated political commitment to priority-setting for UHC. – There is no existing NICE/HITAP engagement with policy makers at the highest level, or practical support likely unfeasible for other reasons.
Hollingworth et al. 2021 [34]	Better understand how priority-setting decisions for spending in healthcare are made in sub-Saharan Africa (SSA), with specific reference to the use of HTA.	Systematic literature review	Sub-Saharan Africa	Data extracted from the included articles were analysed using a parallel-results convergent synthesis design, which involves a process where the synthesis of both quantitative and qualitative elements in the review process is concurrently conducted. The narrative synthesis identified five main themes: (1) use of HTA; (2) decision-making in HTA; (3) values and criteria for priority areas in HTA; (4) involvement of stakeholders in HTA; and (5) progress in HTA in SSA. No scores or categories/labels were assigned. The authors concluded that "[t]here has been growing interest in HTA in SSA countries … . However, HTA awareness remains low, and HTA-related activities are uncoordinated and often disconnected from policy."

Study	Stated Purpose	Data Collection	Country Application	Approach to Measuring Institutionalisation
Bertram et al. 2021 [18]	Describe how the increasing strength of the health system and the fiscal space available for health may change the mandate of the HTA mechanism and the complexity of the methods used.	Conceptual contribution	Global, generic	**Four levels** of mandate for the HTA mechanism as the health system becomes stronger: – Fragile states: defining of essential services; emergency kits; disaster planning; continuity of chronic care – Low-income countries with low coverage: limited mandate; less-data-intensive methodologies; defining of PHC packages; allocation of resources – Middle-income countries with low coverage: defining of essential services; strengthening of resource allocation decisions; complexification of methodology as data collection improves – High-income countries: marginal analyses for additions to packages; expanding of mandates; sharing of knowledge and resources
Kumar et al. 2022 [35]	Provide information about the progress of HTA in Asia via a Balanced Scorecard in order to cross-compare HTA institutionalization and share lessons learned with other LMICs to support their interests of advancing the use of HTA in their own settings.	Literature review Key informant interviews	10 countries in Asia	Balanced scorecard comprising 18 milestones (indicators), each rated on a scale of 1–5: – 1—No progress on milestone, milestone not initiated, or limited information – 2—Milestone at early stages or ad hoc use of HTA – 3—Progress in achieving milestone for ongoing use of HTA but variable/ unclear impact on decision-making – 4—Significant progress on milestone and high-quality ongoing use of HTA but limited remit in terms of type of decisions informed by HTA – 5—Significant progress on milestone and high-quality ongoing use of HTA that has a close connection to decision-making and broad remit Scores are aggregated for a maximum score of 90 (18 milestones × maximum score of 5).

Notes: CEE = Central and Eastern European; HITAP = Health Intervention and Technology Assessment Program; HTA = health technology assessment; HTAIn = Health Technology Assessment in India; iDSI = International Decision Support Initiative; INAHTA = International Network of Agencies for Health Technology Assessment; NICE = National Institute for Health and Care Excellence; PHC = UHC = Universal Health Care.

Appendix 2. India results, 2016 and 2022

1	prefilled; DO NOT CHANGE					
2	automated; DO NOT CHANGE			Reset scale scores		
3	type in/select					
4		Reference year				
5		2016				
6						
7		**Level of implementation**	**Health economic evidence used**		Score	Documentary evidence (link or title)
8	**Health technology/intervention**	**1. What to reimburse?**				
9	Medicines	Documentary evidence confirms that operational procedures are in place so that	evidence on both costs and outcomes, but not presented as an economic evaluation	informs decisions on which medicines to reimburse using public funds.	3	
10	Medical procedures	Documentary evidence confirms policy intention that	economic evaluation and at least one other aspect (societal, legal, ethical, organizational)	informs decisions on which medical procedures to reimburse using public funds.	4	
11	Vaccines	Not assessed	Not assessed	informs decisions on which vaccines to reimburse using public funds.	#N/A	
12	Medical devices	Documentary evidence confirms policy intention that	economic evaluation and at least one other aspect (societal, legal, ethical, organizational)	informs decisions on which medical devices to reimburse using public funds.	4	
13	Diagnostic tests	Documentary evidence confirms policy intention that	economic evaluation and at least one other aspect (societal, legal, ethical, organizational)	informs decisions on which diagnostic tests to reimburse using public funds.	4	
14	Public health interventions	Documentary evidence confirms that in some cases (e.g., ad hoc, pilot)	economic evaluation and at least one other aspect (societal, legal, ethical, organizational)	informs decisions on which public health interventions to reimburse using public funds.	8	Cost effectiveness of targeted HIV prevention interventions for female sex workers in India
15						
16	**Health technology/intervention**					
17	Medicines	There is no documentary evidence to suggest that	evidence on both costs and outcomes, but not presented as an economic evaluation	informs price negotiations in the public procurement of medicines.	0	
18	Vaccines	Not assessed	evidence on both costs and outcomes, but not presented as an economic evaluation	informs price negotiations in the public procurement of vaccines.	#N/A	
19	Medical devices	There is no documentary evidence to suggest that	evidence on both costs and outcomes, but not presented as an economic evaluation	informs price negotiations in the public procurement of medical devices.	0	
20	Diagnostic tests	There is no documentary evidence to suggest that	evidence on both costs and outcomes, but not presented as an economic evaluation	informs price negotiations in the public procurement of diagnostic tests.	0	
21						
21						
22	**Enabling factors**					
23	Producers of evidence	Documentary evidence confirms policy intention that		organizational structures mandated by the government are expected to produce any type of evidence on health technologies.	1	
24	Users of evidence	Documentary evidence confirms policy intention that		organizational structures mandated by the government are expected to use any type of evidence on health technologies for making (recommendations on) resource allocation decisions.	1	
25	Formal linkages	Documentary evidence confirms policy intention that		formal linkages should be in place to bring together producers and users of evidence on health technologies.	1	
26	Public funding	Documentary evidence confirms policy intention that		public sources should provide majority funding to producers and users of evidence on health technologies that informs resource allocation decisions.	1	
27	Soft infrastructure	Documentary evidence confirms policy intention that		elements of soft infrastructure should be in place to support producers and/or users of evidence on health technologies.	1	
28	Stakeholder engagement	Documentary evidence confirms policy intention that		when deciding which health technologies to reimburse using public funds, relevant health system stakeholders should have their perspectives heard.	1	

1	prefilled; DO NOT CHANGE					
2	automated; DO NOT CHANGE			Reset scale scores		
3	type in/select					
4		Reference year				
5		2022				
6						
7		**Level of implementation**	**Health economic evidence used**		Score	Documentary evidence (link or title)
8	**Health technology/intervention**	**1. What to reimburse?**				
9	Medicines	Documentary evidence confirms that in some cases (e.g., ad hoc, pilot)	economic evaluation and at least one other aspect (societal, legal, ethical, organizational)	informs decisions on which medicines to reimburse using public funds.	8	Trastuzumab
10	Medical procedures	Documentary evidence confirms that in some cases (e.g., ad hoc, pilot)	economic evaluation and at least one other aspect (societal, legal, ethical, organizational)	informs decisions on which medical procedures to reimburse using public funds.	8	IOL
11	Vaccines	Not assessed	Not assessed	informs decisions on which vaccines to reimburse using public funds.	#N/A	
12	Medical devices	Documentary evidence confirms that in some cases (e.g., ad hoc, pilot)	economic evaluation and at least one other aspect (societal, legal, ethical, organizational)	informs decisions on which medical devices to reimburse using public funds.	8	Stents (PMJAY)
13	Diagnostic tests	Documentary evidence confirms that in some cases (e.g., ad hoc, pilot)	economic evaluation and at least one other aspect (societal, legal, ethical, organizational)	informs decisions on which diagnostic tests to reimburse using public funds.	8	Trunat
14	Public health interventions	Documentary evidence confirms that in some cases (e.g., ad hoc, pilot)	economic evaluation and at least one other aspect (societal, legal, ethical, organizational)	informs decisions on which public health interventions to reimburse using public funds.	8	Hepatitis screening
15						
16	**Health technology/intervention**	**2. At what price(s) to procure?**				
17	Medicines	Documentary evidence confirms that operational procedures are in place so that	economic evaluation and at least one other aspect (societal, legal, ethical, organizational)	informs price negotiations in the public procurement of medicines.	6	PM-JAY Pricing Policy document
18	Vaccines	Not assessed	Not assessed	informs price negotiations in the public procurement of vaccines.	#N/A	
19	Medical devices	Documentary evidence confirms that in some cases (e.g., ad hoc, pilot)	economic evaluation and at least one other aspect (societal, legal, ethical, organizational)	informs price negotiations in the public procurement of medical devices.	8	Safety Engineer Syringes
20	Diagnostic tests	Documentary evidence confirms that operational procedures are in place so that	economic evaluation and at least one other aspect (societal, legal, ethical, organizational)	informs price negotiations in the public procurement of diagnostic tests.	6	PM-JAY Pricing Policy document
22	**Enabling factors**					
23	Producers of evidence	Documentary evidence confirms that in some cases (e.g., ad hoc, pilot)		organizational structures mandated by the government produce any type of evidence on health technologies.	4	HTAIn website link
24	Users of evidence	Documentary evidence confirms that in some cases (e.g., ad hoc, pilot)		organizational structures mandated by the government use any type of evidence on health technologies for making (recommendations on) resource allocation decisions.	4	HEFTA Unit at NHA
25	Formal linkages	Documentary evidence confirms that in some cases (e.g., ad hoc, pilot)		formal linkages are in place to bring together producers and users of evidence on health technologies.	4	HTAIn website link, PMJAY Pricing pc document
26	Public funding	Documentary evidence confirms that in most cases and systematically		public sources provide majority funding to producers and users of evidence on health technologies that informs resource allocation decisions.	5	HTAIn budget reports
27	Soft infrastructure	Documentary evidence confirms that in most cases and systematically		elements of soft infrastructure are in place to support producers and/or users of evidence on health technologies.	5	Organizational stucture
28	Stakeholder engagement	Documentary evidence confirms that in most cases and systematically		when deciding which health technologies to reimburse using public funds, relevant health system stakeholders have their perspectives heard.	5	HTAIn website - Process Manual

			Assessment 2022			Assessment 2016			
Decisions	Maximum theoretical score		**What to reimburse?**	**At what prices to procure?**	**Total score**	**What to reimburse?**	**At what prices to procure?**	**Total score**	
Medicines		30	8	6	**14**	3	0	**3**	
Medical procedures		15	8	Not applicable	**8**	4	Not applicable	**4**	
Vaccines		30	Not assessed	Not assessed	**0**	Not assessed	Not assessed	**0**	
Medical devices		30	8	8	**16**	4	0	**4**	
Diagnostic tests		30	8	6	**14**	4	0	**4**	
Public health interventions		15	8	Not applicable	**8**	8	Not applicable	**8**	
		150	**40**	**20**	**60**	**23**	**0**	**23**	

Enabling factors	Maximum theoretical score		**Assessment 2022**	**Assessment 2016**
Producers of evidence		5	4	1
Users of evidence		5	4	1
Formal linkages		5	4	1
Public funding		5	5	1
Stakeholder engagement		5	5	1
TOTAL		**30**	**27**	**6**