INCORPORATING EQUITY IN HEALTH TECHNOLOGY ASSESEMENT IN LATIN AMERICA: CHALLENGES AND OPPORTUNITIES

General Presentation – 2025 Health Technology Assessment Policy Forum

This document focuses on the integration of **equity into Health Technology Assessment (HTA)** — a perspective that cuts across the overall evaluation process and aims to guide health decisions toward fairer and responsive to inequalities systems. According to this perspective, equity should be considered **transversally throughout the entire life cycle** of a health technology, with the goal of identifying differential impacts, reducing unjust gaps, and promoting more equitable access to the benefits of innovation.

Incorporating equity into HTA involves **systematically identifying avoidable health inequalities**, analyzing their **structural determinants**, and evaluating how technological decisions may contribute to either widening or narrowing these gaps. This requires integrating **new dimensions of analysis** into assessments — such as distributional impact, and geographical, gender, socioeconomic, or ethnic equity — as well as adapting existing methodologies to capture these effects.

To explore the feasibility of these practices and support their adoption in Latin America, it is necessary to **review international experiences**, examine available **conceptual and methodological frameworks**, and identify emerging **local practices** that have explicitly incorporated an equity lens.

Still, differences in how equity is defined, measured, and applied may require further **deliberation during planning and implementation**. These discussions involve normative values, institutional capacity, and the political will to prioritize populations in vulnerable situations — especially in low- and middle-income countries (LMICs) and across the Latin American region.

GLOSARY

Equity in health

The absence of unfair, avoidable, or remediable differences in health between population groups defined socially, economically, demographically, or geographically. In the context of HTA, it involves considering how decisions may differentially affect various groups and contribute to reducing or perpetuating inequalities.

Health technologies assessment (HTA)
A systematic process that analyzes the properties, effects, and/or impacts of health technologies to inform health policy decisions. It includes clinical, economic, social, ethical, and organizational assessments.

Social determinants of health

Social, economic, and environmental factors that influence the health status of individuals and populations, such as education, income, housing conditions, access to services, structural discrimination, and gender.

Distributional impact
An analysis of how a policy, intervention, or technology unequally affects different population groups. Considering this in HTA helps identify regressive or progressive effects on equity.

Populations in vulnerable situations
Individuals or groups facing greater barriers to accessing quality health services or living in healthy conditions due to structural inequalities. This may include rural populations, persons with disabilities, Indigenous communities, women, migrants, among others.

Gender

The social construction of roles, relationships, and expectations attributed to individuals based on their sex or gender identity (in countries where gender identity is recognized). Its incorporation in HTA allows for the analysis of inequalities in access to, use of, and outcomes from health technologies.

Intersectional approach

An analytical framework that acknowledges how multiple dimensions of inequality (such as gender, ethnicity, class, and disability) intersect and produce combined effects on health and access to technologies.

Distributive justice

An ethical principle that guides the equitable allocation of resources and benefits among all members of society. In HTA, it provides normative criteria for integrating equity considerations.

Equity measurement

A set of methods and tools used to assess health inequalities and their determinants. It includes disaggregated analyses, inequality indices, concentration curves, and distributional impact studies.

Explicit prioritization

A transparent and reasoned process for defining the criteria and technologies to be assessed or funded, taking into account dimensions such as disease burden, effectiveness, cost-effectiveness, and equity.

HTAi forums: Vision and Objectives

Since 2003, the Policy Forums organized by **Health Technology Assessment international (HTAi)** have brought together global experts to foster dialogue between public and private sector stakeholders and to advance both scientific and policy agendas in the field of **Health Technology Assessment (HTA)**. These Forums provide neutral spaces for strategic discussions that explore the development and current state of HTA and its implications for health systems, industry, end users, and other key actors.

HTAi Forums bring together representatives from three main sectors:

- **Decision-makers** responsible for coverage, reimbursement, and pricing of medicines and medical devices within health systems;
- **Organizations that support such decisions** through HTA;
- **Biomedical companies** that develop health technologies.

The **Global HTA Policy Forum**, the most prominent, focuses on Europe and the United States and has been active for over 21 years. The **Asia Policy Forum** has been held for 11 years. In **2016**, the initiative was extended to **Latin America**, marking the beginning of the **Latin American HTA Policy Forum**.

The Forum is organized with the support of a **Steering Committee**, composed of the Forum Chair and a balanced group of representatives from participating institutions — three from the public or nonprofit sector and three from the industry sector. The **Institute for Clinical Effectiveness and Health Policy (IECS – www.iecs.org.ar)**, based in Argentina, serves as the **Scientific Secretariat**.

The first Latin American HTA Policy Forum was held in **Costa Rica in 2016**, focusing on **principles and best practices for using HTA in decision-making across the region** (1). Key topics included the importance of transparency, stakeholder engagement, clear priority-setting criteria, appeal mechanisms, and stronger links between HTA and policymaking:

- **2017 – Lima**: Stakeholder involvement in HTA processes (2).
- **2018 – Montevideo**: Value frameworks in HTA (3).
- **2019 – Buenos Aires**: Strengthening the connection between HTA and decision-making (4).
- **2020 (virtual)**: Topic prioritization mechanisms used by HTA agencies((4,5).
- **2021 (virtual)**: The role of deliberative processes in HTA (6)
- **2022 – Brasília**: Use of real-world evidence in HTA (6,7).
- **2023 – Santiago de Chile**: Risk-sharing agreements (7)
- **2024 – Cartagena, Colombia**: Horizon scanning and early dialogue.(7,8)

The **2025 Latin American HTA Policy Forum** will take place in **Mexico City, Mexico**. As in previous years, the selection of the Forum's topic began during the closing session of the previous edition. **Based on suggestions from Forum members, a shortlist was developed and voted on,** with the **final decision** made through a **consultative process** involving the **Steering Committee.**

The selected theme for the **10th Latin American HTA Policy Forum (2025)** is: ***"Incorporating Equity into HTA: Criteria, Methodologies, and Experiences for Fairer Decision-Making."***

Aligned with this theme, the **Forum's goals and discussion areas** are:

- **To analyze how equity can be explicitly and systematically integrated** into HTA processes;
- **To explore ethical, technical, and political criteria** for embedding equity within institutional HTA frameworks;
- **To identify national and international experiences** that have incorporated equity in priority setting, evaluation, or decision-making;
- **To facilitate knowledge exchange among key stakeholders** to identify opportunities, barriers, and concrete steps for advancing this approach across the region.

2025 Background Document

For each edition of the **Latin American HTA Policy Forum organized by HTAi**, the **purpose** of the **background document** is to **summarize key information** that serves as a foundation for the discussions and exchanges that will take place during the meeting. This material is designed to enhance dissemination and facilitate its use across different formats, encouraging understanding and engagement from stakeholders and participants, while providing a comprehensive perspective on the theme selected for this year.

To ensure accessibility and familiarity with the background and context related to the **integration of equity into HTA processes**, a variety of formats are provided to promote participant engagement prior to the event:

- **Written document**: Compiles key concepts on health equity, reviews relevant definitions in the field of HTA, and analyzes international experiences of incorporating equity criteria into evaluation and decision-making processes.

- **Video**: Features presentations by leading experts who have promoted the integration of equity within HTA agencies, sharing lessons learned, challenges, and recommendations for implementation in diverse contexts.

- **Podcast**: Includes interviews with thought leaders in equity and HTA, discussing methodological approaches, ethical dilemmas, and prioritization strategies related to equity in health technology assessment.

INTRODUCTION

Before considering how equity can be **incorporated or strengthened in the field of health technology assessment (HTA)**, it is necessary to **provide a definition** so that it can be understood and applied.

Equity is **the absence of unfair, avoidable,** or **correctable** differences in the **health status of different social, economic, geographic, or demographic groups** (9). The scope of equity is not limited to **health status as the sole outcome of interest**, but also **access** to health services, and the **financing and effective use** of the health system. **Improving access** to technology without also addressing the quality of care or the conditions surrounding the person accessing care, **may not lead to a more equitable system**. (10)

There is growing recognition that equity as a **guiding principle** for health policy decision making aligns with, and is reinforced by, evidence that societies that succeed in **reducing gaps between social groups** tend to have **higher levels of wellbeing** (11,12). However, **evaluating the equity effects of interventions** in the health system **is not an easy task**. In contrast to other dimensions typically considered in decision making, such as safety or clinical effectiveness, there is scant existing literature on how to assess equity impacts. In addition to the limited availability and quality of information, it is difficult to extrapolate equity analysis from other countries. In short, **the methods and consensus in this area are in their infancy**.

Despite the difficulties, there is broad agreement that including equity considerations health policy decision making helps health systems to become more fair, **where resources are distributed with consideration to existing inequalities and to maximize population wellbeing under principles of distributive justice** (13). Latin America is a region characterized by profound and persistent structural and historic inequalities, and here the challenge of incorporating equity in HTA is of particular relevance. (14)

This situation is accelerating **efforts** to develop a **strategy** for **informing judgments about equity** and to advance agreement on what improvements in this area are needed, for instance in terms of domains (access, service use, health) and distributional considerations (socioeconomic status, geographic residence, etc.). A continuing challenge is how to estimate equity effects of interventions given the data available.

The interest to move towards assessments that take greater account of inequities is not new. There is a longstanding debate regarding the **relation between efficiency and equity** in HTA processes. In some frameworks they are oppositional, for example, where prioritizing vulnerable populations imply lower aggregate health gains, while in **others it is proposed that both goals can be achieved through well-designed strategies** (15). At the 2018 HTAi Latin America HTA Policy Forum, representatives from 12 countries agreed that equity impacts should be a priority consideration in regional value frameworks (14).

This aim of **this paper** is to contribute to the comprehensive incorporation of an equity perspective into all stages of healthcare assessment and decision-making by providing an

analysis of **existing challenges** and **opportunities** to incorporating an equity perspective into HTA processes in Latin America. It provides a review of possible **advantages** of this approach in healthcare decision-making and describes **available equity methodologies** for HTA processes. It then lays out potential **barriers and facilitators** and describes **international experiences** in this area.

POTENTIAL BENEFITS OF INCLUDING EQUITY IN HEALTHCARE DECISION MAKING

2.a. Different models of access to health services and their equity impacts

The first step in advancing towards the systematic analysis of health equity is to **define the object of analysis**. The definition commonly focuses on the **distribution of health outcomes** among distinct population groups, although it can also refer to **healthcare services access**, which requires consideration of service **availability**, **effective use**, or the **coverage offered** , (16,17) From the health system perspective, the **distribution of financing** is also important, in particular, the household burden of **out-of-pocket** spending or the **risk of impoverishment** due to catastrophic events. While this exceeds the typical focus of HTA, it becomes important when **social value** is considered in evidence-based decision making.(16,17)

A second key component relates to the **determinants of inequity**. Health inequities originate in the **social determinants of health (SDOH),** which refers to the conditions under which people are born, grow, live, work and age that are determined by the distribution of money, power, and resources at global, national, and local levels (18). Factors such as **socioeconomic status**, **gender**, **location of residence**, **ethnic or racial affiliation**, or historically marginalized groups **constitute distinct aspects of equity** that are to be measured in specific ways. This presents **methodological challenges** for assessment since **socioeconomic equity** effects may not be mirrored in terms of **geographic** or **gender equity**, and it may create tension between factors. For example, an intervention to reduce socioeconomic disparities could amplify regional inequities.

In this regard, a useful conceptual tool to analyze **where inequities arise** in the patient journey is called the **"inequality impact staircase".** In this approach, the patient journey is disaggregated into stages, such as **prevalence**, **diagnosis**, **treatment initiation**, **adherence**, and **effectiveness**, which allows for the identification of where inequalities are concentrated. This approach can inform the development of **targeted interventions** that optimize their distributive impacts. (19)

Measuring equity requires bringing to light structural inequalities and producing evidence that informs health policy design. To do this, indicators such as **life expectancy**, **infant mortality**, or **effective coverage** are stratified by variables such as **level of education**, **income**, **location of residence**, **ethnic group** or **gender**. (20)

A priority objective at the global level is **universal health coverage** to provide people with timely, appropriate access to the quality healthcare services that they need without facing economic hardship (21). This is based on three key dimensions: **population reach** (or coverage), **cost-effective resource use**, and **financial protection** from catastrophic expenses.

Inadequate access to healthcare services can result in many forns of **inequity** appearing in different stages of care pathways. The framework developed by **Tanahashi**(22) identifies five key dimensions where **structural and social barriers** can have diverse effects on different population groups:

- **Availability coverage:** refers to the presence of services of sufficient quantity and quality. **Structural inequities**, such as limited healthcare provision in rural or marginalized areas, and the lack of adequate infrastructure violates the right to health, particularly for populations that have been historically excluded, and women.

- **Accessibility coverage**: includes **physical** barriers (distance, transportation), **financial** barriers (out-of-pocket costs, lack of protection) and **organizational/informational** barriers (inflexible hours, complex procedures, low literacy, or restrictive social norms).

- **Acceptability coverage**: addresses situations of **discrimination**, **stigmatization**, or the absence of a **gender-informed perspective** that complicates interactions with the health system,

- **Contact coverage:** Even where healthcare services are available and accesible, this may not be enough to **engage people** with the system. This may be due to **mistrust**, past negative experiences, or otherwise **low willingness to seek care**.

- **Effective coverage:** implies that the care received is adequate, continuous, and of high quality. However, where there is poor diagnostic or therapeutic quality, a lack of coordination between services or adherence barriers, these impact upon people with chronic conditions, women, and vulnerable groups especially hard.

Health inequalities, i.e., **the observable differences among population subgroups**, can be measured and monitored, and this is an indirect way of assessing health inequity. The acronym "**PROGRESS-Plus**" is commonly used to describe the dimensions of inequality that can be used as **disaggregation criteria for monitoring inequalities in health** (see Table 1).(22) These dimensions are also useful for assessing barriers.

PROGRESS-Plus refers to **P**: place of residence (rural, suburban, or urban), **R**: race or ethnicity, **O**: occupation, **G**: gender and sex, **R**: religion, **E**: educational level, **S**: socioeconomic status, **S**: social capital or resources. **Plus** refers to personal characteristics that can provoke discrimination or that require accommodation for physical differences (e.g., age or disability); relationship characteristics (e.g., parents who smoke, lack of registration required for service access, migrant status in areas without inclusion measures); and, time-dependent relationships (e.g., hospital discharge, respite care, or other situations where people can encounter

temporary disadvantages). By monitoring health inequalities and the assessment of barriers, a deeper understanding can be achieved of which subpopulations are being left behind.

2.b. Measuring health equity

In the previous section are described the possible "dimensions" where inequities in access to healthcare can appear. **There are multiple types of measures,** and each captures specific aspects of inequalities, with different applications, limitations, and levels of complexity.

Simple measures, such as absolute differences or proportions, are easy to understand and calculate, making them **useful for communicating results to non-technical audiences.** (23) However, these measures do not consider the size nor distribution of effects among population subgroups, which limits the potential for more detailed interpretation and analysis. **Complex measures,** on the other hand, such as **the relative inequality index or the quintile index**, take into account the entire distribution among subgroups, allowing for weighting according to the size of each group. This permits a more complex and precise analysis, but which is more difficult to calculate and interpret. The inequalities can be measured in **absolute** terms, for example, the difference in coverage between disparate groups, or in **relative** terms, such as the ratio of coverage between the same groups.

Furthermore, there are **composite indices** that allow for a more precise assessment of equity across the entire social distribution:

- **Concentration index** (CI), measures the distribution of an indicator in relation to **socioeconomic status**. A value of 0 means perfect equality; while negative values indicate a concentration in poorer groups, and positive values in the richest groups.

- **Gini index**: assesses the general inequality in **resource distribution** (such as income or coverage). The scale starts at 0 (perfect equality), and 1 being maximum inequality, although a limitation is that it does not indicate the direction that inequality occurs.

- **Slope index of Inequality (SII)**: calculates the **absolute difference** in a health indicator **between the most and least advantaged groups,** which is expressed in percentage points.

- **Relative Index of Inequality (RII)**: shows the **ratio between the extremes on a social gradient**. Where a value of 1 indicates equality, a value greater than 1 favouring the wealthiest sectors, and a value below 1 favouring the less fortunate.

The **choice of measure** depends on the **context** of analysis, the **available data**, and the **objective** of study. Some measures are used to identify the total magnitude of inequalities, while others help to understand the specific patterns of inequalities between certain groups.(23)

This section looked at the dimensions of healthcare access that can be affected by inequalities, and how to measure them. While measures can focus on different dimensions and use different approaches, they all reflect the impact of inequity. For example, a lack of access can be evidenced both in the proportion of people who do not access the system as well as an increase in avoidable deaths. Each dimension can be assessed through different outcomes, but all express a form of health inequity. Examples of interventions that have been shown to have a positive impact on the distribution of health equities are presented in **Annex 1**.

2.c. Relevance and benefits of including equity in HTA in Latin America

In Latin America, advancing towards assessments that consider **structural inequalities** are desirable not only from an ethical perspective, but it is becoming increasingly important for strengthening health decision-making. While this approach is **still in its infancy**, there are valuable precedents, from agencies offering space to academics and networks such as the **HTAi's Latin American HTA Policy Forum**, that show a growing interest in **including equity** in the health technology assessment process. (14)

Some countries, such as **Colombia, Argentina, and Brazil**, have started to explore methodological tools such as **subgroup analysis** and its inclusion in **deliberative** processes or **multi-criteria decision-making** techniques, although they are being applied heterogeneously and with varying levels of institutionalization.

Incorporating equity into HTA can bring substantial benefits, particularly in contexts where there is high degree of fragmentation and scarcity. From a technical perspective, it can allow for the identification of populations that could experience **differential impacts** compared to the average, for example, groups that receive significantly greater benefits and those who do not, and this can allow for resources to be focused where they are most needed. In political terms, it can **enhance the legitimacy** of decisions by making underlying values and criteria visible. At the institutional level, contributing to **more transparent and participative processes that are responsive** to social demands.

This does not mean replacing existing criteria, but rather **complimenting** them with tools that allow for inequalities to be **assessed**, **anticipated**, and **mitigated**. However, the systematic integration in HTA in the region requires overcoming important technical, institutional, and political challenges. Recognizing both **current progress** and **limitations** is key to laying out a roadmap for health technology assessments to support decisions to be not only effective and sustainable, but also **fairer and more equitable**.

3. EQUITY IN HEALTH TECHNOLOGY ASSESSMENT

3.a. Conceptual basis for incorporating equity in HTA

Bringing **equity** into **HTA** requires decision making about not only **how much health is gained**, but which populations receive the benefit. While some perspectives prioritize the **maximization**

of total population health (like the **utilitarian view**), others focus on **reducing inequalities** and **improving the situation of those in worse condition**. For example, the philosopher **John Rawls** argued that a just society must ensure **basic freedoms for all** and to prioritize the **improvement of conditions for the most disadvantaged** (24). Another argument from **Amartya Sen** proposes that what is important is to **increase real opportunities** for people to live **lives they value** (25). These ideas have influenced **evaluation frameworks** that seek not only **efficiency**, but also **greater social justice** (13,19,26). These ideas have started to influence **value frameworks** of some **assessment agencies** that recognize equity as a relevant criterion that is beyond standard efficiency. (9,19)

Most conventional HTA tools have been developed under a population-average logic, which tends to **ignore differences among social groups** (27). This bias can perpetuate inequities if the technologies assessed disproportionately benefit populations with better capacity to access healthcare, or who have better initial health status. Equity, in this approach, should not be seen as an accessory, but rather as a transversal principle that guides assessment from the selection of technologies through to the formulation of recommendations. (14)

3.b. Methodological tools for including equity in HTA

Various tools have been developed to capture **the distributive impact of health technologies** for explicitly **determining the social value of reducing inequalities**. These methods vary in their degree of institutionalization, technical complexity, and applicability, especially in low-income contexts as found in Latin America.

Deliberation in HTA allows for the **social and ethical dimensions based in patient experiences** to be considered, such as community values, principles of distributive justice or the lived experiences of historically excluded groups. This is often the first approach taken to considering **equity**. Even in absence of quantitative evidence, decision makers can be expected to reflect on **potential equity impacts** for each technology. This process could include different stakeholders (citizens, professionals, communities, decision makers) that can be organized through **public hearings, citizen panels, participatory workshops**, or **open consultations**. These types of activities have started to occur in Latin America, as shown by **CONETEC in Argentina**, although their structure and impact on decision-making vary.

There are several tools designed to guide deliberative processes in equity-focused health technology assessment. The GRADE methodology, for example, includes specific guidance for incorporating equity in decision making. It proposes a series of questions for reflecting on possible impacts of a technology on different aspects of equity.(28) Another example is the Equi-Neu tool, developed by the Ministry of Health of Neuquén Province. It is a provisional screening form used to facilitate an equity perspective in HTA.(29) The objective is to anticipate and analyze the potential impact of a technology on different structural dimensions of equity, covering both general and specific issues related to the right to health, impacts on vulnerable population groups, and the costs resulting from inequality.(30)

The framework *Manual for Patient Participation in Decision Making on Health Coverage* (*Manual para la Participación de Pacientes en Toma de Decisiones sobre Cobertura en Salud)*

(31) proposes a foundation for **inclusive** deliberative processes where patient participation is **representative**, **informed**, **and deliberative**. In addition to strengthening **institutional legitimacy** and **transparency**, this participation contributes to creating more **fair and responsive health systems**. While the manual notes limitations such as the lack of systematization, lack of clear criteria for representation and of sufficient conditions for effective participation, it lays out **an ethical pathway necessary** for encouraging deeper consideration of equity in decision making.

Subgroup analysis allows for the exploration of differences in the **effectiveness**, **safety**, or the **cost-effectiveness** of a technology among different population groups. This technique is used to describe the distribution of benefits or risks related to **gender**, **socioeconomic status**, **health coverage**, or **place of residence**. IT can be applied in primary studies, administrative databases, or economic models, provided that disaggregated data are available and of sufficient analytical power.(13)

To be emphasized is the importance of promoting **subgroup analysis relevant to equity** in primary studies (RCTs and observational data). Although these studies are often underpowered, techniques such as **meta-analysis** can contribute to generating useful evidence for equity-oriented assessments. (19)

Distributive cost-effectiveness analysis (DCEA) augments standard economic evaluation by considering not only **how much health is gained**, but also **how the benefits and opportunity costs are distributed** among different social groups. Unlike standard analysis, DCEA allows for an estimate of **who gains and who is likely to lose health** as a result of an intervention, based on criteria such as income, gender, region, or ethnic group. For this, data of technology effectiveness can be combined with anticipated healthcare access by the group, and the initial health status of the population, thereby identifying whether a technology reduces gaps or whether it deepens existing inequalities.

The results can be reported through **equity curves**, **concentration indices**, or other aggregated metrics, and these can be integrated into the analysis of efficiency to support decisions to consider **distributive justice**. In contexts where equity is an explicit priority, **social welfare functions** can be applied that introduce parameters of **inequity avoidance**, weighting the distribution of benefits above the population average. It is recommended to explicitly include the **distribution of opportunity costs among subgroups**, in other words, to estimate which groups are subject to prejudice in the reallocation of a new technology, which allows for a more complete analysis of distributive impact.(19)

While the implementation of DCEA is in its infancy, it has been included in **official methodological guidelines in India** as a key tool for orientating decisions about universal health coverage (13,27). In parallel, different authors highlight that the robust application of these tools requires use of **representative and disaggregated data** about inequalities in health, differential subgroup effects, and spending patterns. The lack of this data is one of the main barriers to the routine application of distributive analysis, and for this reason **sensitivity analysis** is recommended in situations where such data is not available. (19)

Extended **cost-effectiveness analysis (ECEA)** can also expand the focus of the standard economic approach by considering **not only the health benefits but also the effects in terms of financial protection and economic equity.** This methodology permits an estimation of how many cases of catastrophic household spending are avoided through application of an intervention, or how many people are protected against falling into poverty due to its implementation. By linking **health impact** with **indicators of economic justice**, ECEA offers a more comprehensive view of the social value of technologies. It has been applied primarily in policies of universal coverage in Asia and Africa, where it enables comparison of alternatives from the perspective of health efficiency, but also from the capacity to reduce economic inequalities.(20,27)

Equity weighting in QALYs assigns greater value to the quality-adjusted **life years** gained by **the most vulnerable populations**, such as those of lower socioeconomic status, worse initial health status, or lower life expectancy. This approach seeks to reflect an ethical concern for distributive justice. Although practical implementation of the approach presents **methodological and ethical challenges**, some countries have started using it indirectly. In the United Kingdom, NICE (National Institute for Health and Care Excellence) applies cost-effectiveness thresholds more flexible for rare diseases or severe conditions, and in Norway the benefits for groups with worse initial health status are explicitly valued.(27)

Multi-criteria decision analysis (MCDA) is a tool that is not specifically designed for assessing equity, but rather it focuses on supporting decisions that **consider multiple relevant dimensions simultaneously**, including equity. In the process of including and covering health technologies, this dimension coexists with other attributes such as clinical effectiveness, economic impact, safety, acceptability and social needs. These different aspects often interact with each other, for example, certain safety issues may be tolerated if an intervention provides significant clinical benefit for patients with a severe condition, as is the case with some cancer treatments. In a similar vein, health system decision makers may prefer interventions with less promised benefit if they reduce inequalities, or accept one that widens gaps if it produces a substantial positive impact at the population level. MCDA makes it possible to make these trade-offs explicit by **assigning a relative weight to each criterion and scoring technologies based on their performance in each dimension**. This can facilitate decisions to be more transparent and aligned with social values. This has been explored by agencies like IETS (Institute of Health Technology Assessment) in Colombia and in other middle-income countries. (27,32)

There exist other **approaches** that use a **global health analysis** that are not widely integrated into HTA, but could be.

Equity-focused health impact assessment (HIA) is a structured process to analyze and anticipate the **inequality effects of a policy or intervention** on **different social groups**. Through analysis of the social determinants of health and key stakeholder participation, HIA **identifies the different benefits and risks**, for example, based on gender, income, or territory, and proposes recommendations to mitigate negative impacts and reduce inequalities. While this is used primarily in sectors like the environment or urban planning, its inclusion in HTA could reinforce the early identification of distributive effects.(20)

Intersectional analysis brings a perspective that recognizes that health inequalities are not unidimensional, but rather that they encompass **multiple simultaneous factors** (gender, ethnicity, disability, age). Although its application in practice is limited due to a **lack of adequate data**, it presents a relevant line of inquiry for more inclusive assessments in the future.(13)

Geospatial mapping of inequities has been used to **identify disparities in the territorial distribution** of services and population coverage, allowing for a clear view of some of the barriers to access. In Argentina, for example, it has been used to characterize the accessibility of primary care and to inform health planning (33). Nevertheless, the formal integration of geospatial mapping in HTA has been limited.

Each of these approaches **present advantages and limitations** that should be considered prior to adoption. **Deliberative processes** expand the democratic legitimacy that brings social values into decisions, however their influence on decision making may be limited if not formally structured. **Subgroup analysis** is technically accessible and can be incorporated into existing assessments but it requires reliable, disaggregated data that is of sufficient statistical power to detect relevant differences (13). **DCEA** and **ECEA** offer quantitative approaches of equity, but their technical complexity and data requirements render them difficult to institutionalize (27). MCDA brings greater transparency and structure to criteria weighting but consensus is needed on the hierarchy of value, which is not always available. Approaches such as **QALY** weighting or **intersectional analysis** are conceptually strong, but face ethical, methodological, and operational resistance to large scale implementation. Finally, tools like **geospacial mapping** can be useful to orient decisions in specific contexts, although they currently lack formalization.(20)

TABLE 1. Tools for including equity in HTA processes

Tools	Disaggregated Data	Degree of incorporation	Advantages	Limitations	References

Deliberative processes	No	○○◐○○	Promotes participation and incorporation of an ethics perspective; values social perceptions and representations	Limited if there is no legitimacy or genuine participation among stakeholders	(14) (31)
Subgroup analysis	Yes	○○○○○	Allows for differences in technology effectiveness, safety, or cost-effectiveness among different population groups to be observed.	Requires reliable data and analytic capacity.	(13)
Distributive cost-effectiveness analysis	Yes	○○○○○	Allows for analysis of the distribution of health benefits among different population groups; useful for highlighting gaps and inequities.	High technical complexity and need for disaggregated data.	(13); (27)
Extended cost-effectiveness analysis	Yes	○○○○○	Analysis includes structural inequalities, allowing measurement of the social value of a technology.	Limited application outside universal health coverage policies.	(20); (27)
QALY equity weightings	Yes	○○○○○	Strengthens equity in assessment; prioritizes health indicators relevant to vulnerable populations.	Ethical and methodological limitations in implementation.	(27)
Multi-criteria decision analysis	Yes	○○○○○	Technology is scored across multiple dimensions to facilitate and guide decision making.	Criteria weighting requires consensus.	(32); (27)

○○○○○ = Very low - ○○○○○ = Low- ○○◐○○ = Medium Low - ○○○○○ = Medium

Impact tools from global health not yet used in HTA

Tool	Requires specific data?	Main advantage	Main limitation	References
Health impact assessment with equity focus	No	Anticipates negative impact and unequal effects of an initiative based on social determinants of health.	Rarely used in health; requires broad participation	(20)
Intersectional analysis	Sí	Makes intersections of vulnerability observable (accumulation of factors like gender, equity ethnicity, disability, age, etc.)	Lack of data.	(13)

Geospacial mapping of inequities	Sí	Facilitates detection of geographic hotspots where inequalities are most pronounced.	Limited formalization in HTA guides.	(33)

3.c. Stages of the HTA process where equity could be included

Equity can, and should, be considered through all stages of HTA. Several international guidelines, like **Checklist** developed by the Centre for Global Development (13), support this approach. Described below are the main stages where equity could be included in HTA:

1. Scoping stage
The HTA process begins with the problem definition, **topic selection** and assessment questions that could include an equity focus. This would involve prioritizing technologies relevant to vulnerable populations or those with unmet needs, and to **identify which specific subgroups could be most impacted by the intervention**. Some countries already include equity criteria in their prioritization frameworks to identify which technologies are assessed first. (32)

2. Assessment stage (or evidence review and analysis)
During this stage of HTA, specific methodologies can be used such as subgroup analysis, distribution of effects, and analysis of the distribution of cost-effectiveness through DCEA. By including **disaggregated data organized by socioeconomic status**, **gender**, **ethnicity**, or **geographic region**, this can allow for existing inequalities to be identified and to protect the **potential impact of the technology on the distribution of health**. In addition, assessing accessibility and acceptability of the technology to particular groups can be key to anticipating implementation barriers. (9)

3. Recommendation formulation stage
HTA recommendations can explicitly include equity criteria to justify, for example, **more flexible cost-effectiveness thresholds** for disadvantaged groups or to value interventions that reduce gaps in health outcomes. It is also possible to include clauses that recommend strategies for equitable implementation. (27)

4. Stage of knowledge transfer and implementation
The translation of the recommendations into effective policies requires the consideration of the real capacity of the health system to implement the technology equitably. This includes **identification of populations with lower potential access to care**, to adapt **financing mechanisms** or to define **different implementation strategies** (e.g., territorial distribution or campaigns targeted to specific communities).

5. Reassessment stage
Equity impacts should be part of technology monitoring. This would involve monitoring technology use in practice, identifying emerging disparities in access or outcomes, and

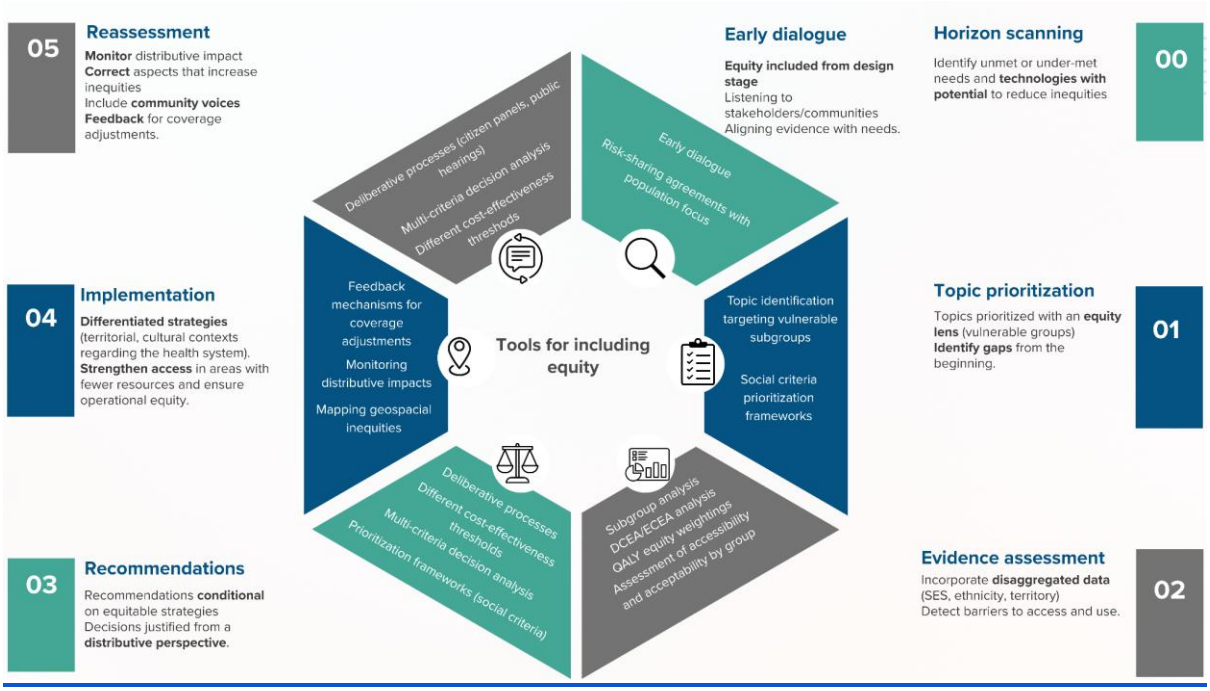
reviewing the recommendations to determine if the intervention has increased the gaps instead of reducing them. The institutionalization of reassessment with an equity lens is limited, but it represents a key tool to ensure health system sustainability and fairness.

6. Other emerging opportunities

In addition to the standard stages of HTA, some emerging approaches highlight the usefulness of including equity in situations such as **early dialogue** with technology developers, where the needs of specific subgroups can be anticipated, and in **risk sharing agreements** that could be designed to maximize benefits to vulnerable populations. Although these opportunities have not been broadly formalized, they have been identified as areas with high potential for promoting fairer decisions.(13,34)

The above stages offer multiple entry points to ensure that **equity is not an accessory but a central component of HTA processes**. Early and sustained incorporation of equity can allow for the anticipation of unintended effects, the promotion of transparency in decision making and for directing resources to interventions that promote a more equitable distribution of health benefits.

Figure. Integration of equity in the stages of health technology assessment



3.d. Challenges and limitations in using an equity approach in HTA

There are multiple obstacles that continue to limit the effective and systematic integration of equity in HTA. These challenges are encountered both in the available tools and in the institutional, political, and structural conditions of the health system, which are particularly relevant for Latin America.

One of the main obstacles is the **lack agreement on the methodological frameworks** that would guide how equity is to be included in a structured way in the different stages of HTA.

There are conceptual approaches and tools emerging, like DCEA or the weighting of benefits towards vulnerable groups, however they are in their infancy with little standardization across countries and assessment agencies. (13,27)

This challenge is exacerbated by the **scarcity of disaggregated data** for key variables such as level of education, income, region, ethnic group, or gender. The lack of reliable and comparable data limits analysis of the differential effects, impeding the assessment of if a technology contributes to or reduces existing inequalities (9). In many cases, the available administrative records or clinical studies do not include these variables, which restricts analytical possibilities.

Added to this is the **difficulty of operationalizing the concept of equity in assessment processes**. Although widely invoked in guiding principles and discourses, equity rarely has a specific and operationalizable definition to be translated into technical criteria, concrete indicators, or differentiated thresholds. This ambiguity leaves room for variable interpretations and, in practice, often leads to this approach being omitted from final decisions (14). Furthermore, **health inequities are the manifestation of social and structural conditions**, like poverty, insufficient education, unemployment, inadequate housing, or unfavourable social environments, that **cannot be corrected by health system interventions alone**(26). The structural dimension often makes the direct application of the concept of equity impossible and limits the action of both decision makers and patients in the health system. (13,27)

The inclusion of equity in HTA **is further limited by institutional and governance factors**. Distributive considerations can be excluded from analysis or assessed only superficially due to the lack of specific technical capacities in assessment teams and the absence of clear incentives or regulatory frameworks requiring their inclusion. In some HTA agencies, procedures focus almost exclusively on efficiency, with no structured way to consider other social values.

There can be political **factors that hinder the advancement of a more robust approach to equity**. Government priorities may be oriented towards short-term outcomes or influenced by pressure from stakeholders with strong bargaining power, for instance the pharmaceutical and medical device industries. In such scenarios, arguments based on economic efficiency tend to predominate, and diminish redistributive or ethical criteria.

Barriers arising as a result of fragmented health systems, such as can be found in Latin America, must also be considered. The coexistence of multiple subsystems with different coverage, financing, and access schemes can create situations where an equity-informed HTA recommendation may not translate into equitable access in practice. This mismatch between assessment and implementation is a significant structural limitation. (14)

A final point is that **social participation and the involvement of key stakeholder in HTA continues to be limited**. In the majority of assessment processes, traditionally marginalized groups, such as indigenous peoples, people with disabilities, rural communities, or patients with lower health literacy, are not significantly represented. This lack of participation reduces the

legitimacy of the recommendations and constrains the possibility of including valuable perspectives on the real barriers to health technology access and use.

Taken together, these challenges reflect the need for a deeper shift in the practices, structures, and normative frameworks that govern the HTA process. Overcoming these requires not only adjusting the technical tools but also expanding the notion of value and fairness in healthcare decision making.

3.e. Opportunities to strengthen equity considerations in HTA

Despite the numerous challenges facing efforts to include equity considerations in HTA, there are several favourable conditions that could facilitate its advancement and strengthening. These opportunities arise from recent methodological developments, institutional and political transformations, and the accumulation of regional experience, and growing support from international organizations.

One of the most promising aspects is the drive to develop **conceptual frameworks and standardized tools** to guide the systematic inclusion of equity in all stages of the assessment process. The availability of technical guides, new methodologies, such as distributive cost-effectiveness analysis or the use of multi-criteria approaches, and their progressive adaptation in diverse contexts, can facilitate advancement towards better coherence and comparability across countries and agencies.

At the same time, strengthening health information **systems and capacity for collecting disaggregated data** organized by socioeconomic status, ethnicity, region, or other key dimensions, would enable a more detailed, context-sensitive analysis aimed at identifying specific gaps. Some countries in the LATAM region have started to improve their administrative records and to use metrics of equity that can be incorporated into HTA analysis.

At the institutional level, **there is growing commitment by assessment agencies, ministries of health and health planning organizations** that is opening the door to creating more enabling environments for including equity considerations. This process can be strengthened when it is linked with broader health reform processes, orientated to reinforcing primary care, reducing subsystem fragmentation and the development of more progressive and equitable financing schemes.

The **development of specialized human resources** through training programs in equity-sensitive methodologies, disaggregated data interpretation, and stakeholder engagement are other key factors for strengthening this approach. The formation of technical, networked communities for sharing best practices and collaboration on joint projects can have a multiplier effect in the Latin American region.

Furthermore, it is fundamental to develop **regulating and normative frameworks that explicitly establish equity as a guiding principle for assessment**. The inclusion of the equity dimension

in laws, regulations, and ministerial resolutions or technical guides can provide the institutional support to ensure its continuity beyond shifting political circumstances.

Regarding social participation, concrete opportunities have been identified to **strengthen the involvement of patients, as well as affected communities and social organizations** in the different stages of assessment. By increasing health literacy, designing culturally relevant consultation mechanisms and strengthening trust in institutions can contribute to making social participation more representative and binding.

Finally, **intersectoral collaboration and international support** structures are fundamental. Recommendations and frameworks issued by organizations such as the Pan American Health Organization (PAHO), the World Health Organization (WHO), and the International Network of Agencies for Health Technology Assessment (INAHTA) along with access to external funding, technical support and global research networks, have been factors in many countries to promote the inclusion of equity in their assessment agendas.

The opportunities described in this section together help to create a more favourable environment for equity to move from being a stated value to a cross-cutting and operational focus of HTA processes. To seize these opportunities will depend on the sustained commitment of the stakeholders involved and the ability to translate the principles into real and sustainable practices.

4. International Experiences

4.1 Canadá

Canada's Drug Agency (CDA), which is formerly known as Canadian Agency for Drugs and Technologies in Health (CADTH) has produced a **manual for "Equity-Focused Health Technology Assessment at CADTH"**(35), which describes **how criteria of equity, inclusion, diversity, and accessibility are applied across assessments.** The manual frames health inequity in relation to variables such as **age, sex, ethnicity, place of residence, socioeconomic status (SES), and disease-related factors**, highlighting how these dimensions intersect and contribute to differences in health outcomes.

CDA (formerly CADTH) incorporates equity as a transversal axis in all stages of the assessment process, from technology selection to economic analysis and patient participation. Using tools such as ECHTA and PROGRESS-Plus, they adapt evidence searches to include relevant cultural knowledge, and they prioritize interventions for historically excluded populations.

In this approach, equity is a focus at stage of the process, being present from the early stages, such as topic identification, where knowing the end user and the needs of the health system

are prioritized. **Assessments use methodologies where equity strategies are systematized**, like the Checklist and criteria for ECHTA (13). This facilitates consideration of contextual aspects a well as participation of key stakeholders. CADTH also adopts proposals from the Campbell and Cochrane Equity Methods Group, and the PROGRESS-Plus methodology that allows consideration of the potential for a technology to mitigate or exacerbate inequities, and to identify more equitable indications. Using these instruments, CADTH 2024 technology prioritization list addressed the most disadvantaged groups of children and adolescents with medical complications.

The approach to conducting literature searches follows the same principles, where priority is placed on sources that do not exclude certain communities and those that avoid bias, which can contribute to a more appropriate search terminology. One example of this i the work on Indigenous Knowledge, which was conducted after it was realized that the published literature was insufficient to capture the oral traditions of indigenous communities. **In this way, CADTH prioritizes the inclusion of indigenous knowledge in a culturally safe and respectful way.**

CADTH provides reports to other clients other than the Provincial governments that include a section exploring the equity implications of complex pharmaceutical products, such as CAR-T cell therapies for hematologic cancers or innovative medicines for rare diseases. They identify how inequities in access to treatment, care, and outcomes may arise, among other issues, and how potential biases in the evidence underlying a therapy, the risk of ignoring or overlooking the interests of groups requiring equity consideration, and inequities in the use of the therapy under review can affect patients, caregivers, and providers.

For economic evaluations, the agency maintains a modeling history with diverse sources, including information on groups that experience less privileged access to treatment, lower adherence, loss of productive capacity, etc.

CADTH also **promotes patient group participation,** with representatives engaged in approximately 60 reimbursement assessments each year. The agency recognizes that there remains much work to do (e.g., including people of colour, those living in poverty, those from rural or isolated areas, members of the LGBTQ+ community, etc.) it uses 17 different approaches aimed at finding collaborators and allies involved in each area. They aim to capture first-hand experiences and to select a representative range of people from different regions across Canada with diverse backgrounds and experiences, and to prioritize those who identify as part of a group deserving of equity consideration. This has allowed for a better understanding of how healthcare is experienced in different communities.

4.2 United Kingdom

In the United Kingdom, the **NICE** takes an approach to equity in HTA that is based on its legal obligations as a UK public body. However, NICE goes beyond legal compliance alone and the agency actively **incorporates equity considerations throughout the guidance development and HTA process** by extending analysis to socially excluded groups such as the homeless and children in state care.

NICE incorporates equity in the entire assessment process through specific analysis, diverse participation and use of new methodologies like DCEA, that allow for a measurement of the distributive impact of technologies and to support more fair decision-making.

NICE uses a systematic process of *Equality and Health Inequalities Impact Assessment* (EHIA) as an integral part of the development of each guidance or recommendation delivered. Each assessment treated as an individual policy, and its potential impact on vulnerable populations is analyzed from the start of the process. This assessment draws upon both qualitative and quantitative evidence from patients, civil society organizations, professionals, and scientific sources that are published alongside the final guidance. NICE also promotes the participation of people with diverse backgrounds in their advisory committees, and the agency measures the impact of its internal policies and recruitment on organizational equity.

In its recent **strategy** (2020-2024), **NICE defines two major objectives: to improve the approach to considering equity in the development of its guidance, and to strengthen the diversity and inclusion within its own workforce**. It comprises activities like the review of the equity analysis processes, holding 'listening' events with members of ethnic minorities to understand barriers, and developing an action plan to increase representation and participation. It also aims to improve data quality on protected characteristics, to reduce non-declarations in internal records, and to enable equal access to leadership opportunities.(36)

In the near future, NICE is moving towards incorporating quantitative methodologies that would allow for a more accurate measurement of the equity impacts of technologies. One key development is the implementation of Distributional Cost-Effectiveness Analysis (DCEA), which is a technique that introduces distributive dimensions into economic evaluation. This allows for assessment of not only the efficiency of a technology, but also for whom it is efficient, and what impact it has on reducing or widening health inequalities. From 2022, NICE began accepting submissions using these methods, and in 2024, the agency developed a formal position paper on its use. For 2025, an update of the methodological manual is planned, to include specific guidelines on when to apply DCEA, which tools can be used for it, and how to interpret results to guide fairer decision-making.

In parallel, NICE is developing complementary tools like the *Health Inequalities Briefings* (HI Briefings) that are to inform EHIA analysis with estimations of the impact on health inequalities. These have been piloted for producing guidance on the management of type 2 diabetes. These initiatives, along with an explicit strategy to reduce inequalities that were revealed or exacerbated by the pandemic, demonstrate an evolution in NICE's approach from one where equity is addressed primarily through normative and procedural strategies, to one where equity is operationalized with quantifiable evidence and with clear intention that the agency's recommendations are both effective and socially just.

Nevertheless, **NICE recognizes that the agency's capacity to reduce inequalities in health is limited relative to the structural determinants that drive them.** As stated in its 2025 methodological update, a single NICE recommendation is not expected to have a substantial

impact on population health inequalities, as these are largely a factor of elements outside of the health sector. **NICE's decisions should therefore be interpreted cumulatively and within the context of broader health system and cross-sectoral policy efforts.** In certain cases, a technology may have significant distributional impact that warrant further assessment by the agency's committees. (37)

In summary, NICE's approach combines a strong legal framework with technical and organizational tools to incorporate equity in HTA. The agency is currently transitioning to a more robust model for measuring and assessing distributive impact, which is an important step towards achieving a more equitable health system wherein evidence-based decisions consider who benefits, and who might be left behind.

4.3 Asia

A study by Patikom et al. in April 2025 examined **how equity is included in HTA processes in 13 health systems in Asia.(38)** The study involved a systematic review, complimented by in-depth interviews with key informants in each country, allowing for triangulation and contextualization of the collected information. **The analysis looked at five stages of the HTA process:** topic identification, prioritization, assessment, appraisal, and decision-making. In those countries with a formal HTA process, diverse forms and degrees of integration of equity were identified.

China has a national HTA agency that addresses equity at several points in the HTA process. Technologies targeting pediatric or rare diseases are prioritized, and higher cost-effectiveness thresholds are accepted in situations of unmet medical need. Quantitative assessment of the distributive impacts on population subgroups are also encouraged.

In **South Korea,** HIRA and NECA are agencies that include equity in their work from topic identification, where they prioritize health conditions that are of low commercial interest such as rare diseases. Assessments include subgroup impact analysis, and decision-making considers differential cost-effectiveness thresholds for serious conditions.

The HITAP (Health Intervention and Technology Assessment Program) program in **Thailand** is one of the most advanced approaches in the region. Here, equity is considered in all phases of the process, with the exception of the formal appraisal step. Social stakeholders are permitted to identify topics in an open process, and interventions for low-income population groups are prioritized. There are specific precedents where technologies that are not cost-effective are included in the health system for equity reasons, such as for renal replacement therapy using peritoneal dialysis.

In the **Philippines**, the HTA process is participatory and equity is formally recognized as a standard criterion in all stages. Current regulations require equity to be considered in prioritization, assessment, and decision making, particularly for interventions for vulnerable populations (e.g., based on socioeconomic status, gender, age, geographic location, or disability).

Malaysia takes an approach based in multi-criteria decision making (MCDA), where equity is one of the main elements of prioritization, especially in relation to rare diseases. Equity is also considered in decision-making processes to promote the inclusion of patient voices.

The Agency for Care Effectiveness (ACE) in **Singapore** considers equity contingently, for instance, in situations where there are indications of inequality. While the consideration of equity is not standardized, it can be included through sensitivity analysis in assessment, or as a criterion in decision making, especially for interventions targeting unmet medical needs.

In **Taiwan**, equity is mainly addressed in the assessment phase, through descriptions of the impact a technology can have on different subgroups. It can also be considered in decision-making, in particular with health needs that are not currently covered.

In **Japan**, equity is not an explicit part of the initial HTA processes; however, it is considered in the decision-making stage through the potential for flexible cost-effectiveness thresholds based on specific characteristics of the beneficiaries.

Indonesia adopts a qualitative approach, wherein equity criteria are considered in the prioritization and assessment, appraisal, and decision-making stages. Even without a structured scoring system, priority is given to interventions that promote more equitable access to care, in particular for rural or low-income population groups, which is critical given the country's geographic complexity.

Some countries in Asia are in the early stages of HTA development. In **Brunei**, for example, there is no formal assessment agency or process; however, it has been documented that equity criteria are considered in decision-making where potential inequalities are identified.

In **Vietnam**, equity is considered during the Covid-19 pandemic as an exceptional criterion for the prioritization of topics related to public health emergencies. However, this practice has not yet been formalized into a systematic process.

Cambodia and Myanmar do not have an institutionalized HTA process, which is the reason why there are no instances of equity being incorporated into this type of analysis.

This study shows that consideration of equity in HTA processes is gaining ground in Asia, although implementation varies significantly across countries. In some contexts, like the Philippines and Thailand, equity is transversally integrated and supported by standards. In other countries, the inclusion of equity is nascent or otherwise limited. Tools like multi-criteria decision analysis and equity-informative economic evaluations are beginning to be explored, although their application in practice remains limited. This heterogeneity indicates the need to ensure that HTA processes can contribute effectively to the reduction of inequalities in health in the region.

In the following paragraphs the case of the Philippines is described in depth, as it represents one of the most advanced and formalized examples of the transversal integration of equity in HTA in the region.

The HTA process guide of the Health Technology Assessment Council (HTAC) of the Philippines lays out a transversal approach for including equity in all stages in the assessment of health technologies, in concordance with the Universal Health Coverage Law (UHC Act).(39) This law establishes that decisions about which interventions should be paid for by the State must be based on a fair and transparent assessment process, in which the equitable distribution of the health benefits among all sections of the population, especially the most vulnerable, are explicitly considered. In the guide, equity is presented as one of the general principles that govern the entire process. Under the principle of inclusion and preferential attention to those with unmet or underserved, HTA must ensure the participation of vulnerable communities and take into account the impact that a technology may have in reducing health inequalities. This perspective is present in the process from topic identification to the final recommendation to the Department of Health (DOH) and the public insurer, PhilHealth.

In the Philippines, equity informs the entire HTA process, from technology prioritization – using a scoring system for the value of benefits for vulnerable groups – to the final recommendation, where redistributive impact is explicitly considered. The approach combines qualitative and quantitative analysis to ensure public decisions are not only efficient, but also socially just.

During the technology prioritization stage, equity is included as one of the main criteria for assessment, for both new and existing technologies. In this context, the ethical, social, and equity implications are assessed. The assessment is conducted following a scoring system designed to reflect the degree to which a technology could benefit vulnerable populations. One point is given for each vulnerable group receiving a direct benefit from a particular technology, to a maximum of six points. The particular groups considered in the HTA are: people experiencing poverty or economic exclusion, SOGIE (people identified by their sexual orientation or gender expression or identity), children and seniors, people living in geographically isolated or disadvantaged areas, people with disabilities, and indigenous people or marginalized ethnic groups. Information about these groups can come from scientific literature, administrative registries, consultation with experts, and data from non-governmental organizations or public agencies. This score is later included in a prioritization matrix along with other criteria such as number of users, disease severity, household financial burden, and the needs of the national health system. While the guide does not establish a fixed weighting for each criterion, equity can represent about 20% of the total score that determines if a technology advances to the assessment stage.

In the technical assessment stage, equity is applied through ELSIE analysis, which comprises ethical, legal, social, and equity implications. This forms an obligatory part of the technical report prepared by assessment teams. The analysis is to determine whether the technology improves access to care for marginalized groups, or if it can potentially reduce the structural disparities impacting health, and if it can be implemented in an inclusive manner at different levels of the health system. This is achieved through qualitative analysis, but it must be supported by concrete evidence, and it directly influences the subsequent assessment by the HTA Council.

In the recommendation stage, HTAC considers a set of criteria that explicitly includes equity under the rubric of "responsiveness to disease magnitude, severity, and equity". The Council must deliberate on if the technology has a positive impact on underserved populations, whether it generates a favourable redistributive impact, and if it can be applied in the real-world context of the Philippine health system without creating exclusions. While this approach does not use a mathematical formula with fixed weights, the HTAC must justify and transparently document how each criterion, including equity, influenced the final decision, whether it was to approve, approve with conditions, or to reject. Furthermore, the process involves mechanisms for public comment and appeal, where any stakeholder can present additional evidence, including equity-related arguments.

4.4 Australia

Australia's Medical Services Advisory Committee (MSAC) explicitly incorporates equity in their decision-making process, although it is not a technically assessed quantitative domain like clinical efficacy or cost-effectiveness. Equity is considered as an additional element, along with other factors such as the value of knowing; and organizational, ethical, and social aspects; and availability of effective alternatives. **Assessment reports are expected to present reflections on the impacts of the technology on the equitable distribution of health resources among different groups, such as defined by age, socioeconomic status, or geographic location.** MSAC is also required to identify whether the proposed technology would improve healthcare access for underserved populations or if it contributes to reducing structural inequalities.

In Australia, the MSAC assigns value to technologies according to if they improve or reduce inequalities, especially for historically excluded populations, although this is not a formal metric in their assessment model.

The impacts on equity are assessed qualitatively, without the use of weighting formulas; rather, it depends upon the deliberative judgment of the Committee. In particular, it considers equity to be relevant when a technology enables health service access to groups previously excluded for economic or geographic reasons, such as indigenous people or pediatric patients. In this approach, equity is not weighted numerically in the assessment process, but it is recognized as an important part of the contextual analysis that guides Committee decisions.

5. Latin American Regional Experiences

A **survey** conducted by the **RedETSA (Red de Evaluación de Tecnologías en Salud de las Américas)** Equity Group gathered responses from 39 institutions in 14 countries in the region, and it showed that **56% thought that the potential equity impacts of new health technologies should always be assessed in HTA reports**, and **41% thought it should be assessed most of the time**. However, equity is not frequently addressed nor in a systematic way: with **11% reporting using standardized tools for analysis**, and **77% indicated that their institutional staff have little or no training in applying equity in HTA.** These results show that there is an important gap between the recognition of equity as relevant aspect for HTA and its effective inclusion in the process. A new survey currently being conducted by the HTAi Public Health interest group to assess the use of conceptual frameworks such as PROGRESS-Plus in

assessments and to explore how different institutions are integrating equity considerations into their practices.

5.1 Brazil

In Brazil, **CONITEC (Comissão Nacional de Incorporação de Tecnologias no Sistema Único de Saúde)** follows a guidance document, "Diretrizes Metodológicas: Avaliação de Desempenho de Tecnologias em Saúde (AdTS)" that **considers equity as one of the relevant aspects of decision making.** It does this through a qualitative and transversal approach and not as an independent technical domain with specific assessment methods. (40)

Equity is mentioned in the context of disinvestment and reinvestment decisions, where changes in funding are looked at to determine whether they maintain or affects equity in care, for example, in access to a technology by particular patient subgroups. Furthermore, **decision makers must ensure that minorities are not excluded from access to essential technologies** even if the number of beneficiaries is small.

In Brazil, CONITEC includes equity as an ethical and social consideration in decisions about disinvestment and reinvestment, with caution about the impacts on care access of vulnerable populations. This approach is transversal and qualitative, although it does not rely on a specific methodology nor any quantitative weighting criteria.

Certain technologies can still be beneficial for some subgroups and so decisions about restricting access must be well justified to help prevent any negative effects on the distributive justice of the health system.

In short, equity is considered as a part of an ethical and social dimension that should be safeguarded in decisions about the continuation or retirement of technologies, particularly in relation to access to care for vulnerable groups. However, there is no methodological framework for this type of assessment nor structured format for quantitative weighting.

5.6 Argentina

In Argentina, **CONETEC** (Comisión Nacional de Evaluación de Tecnologías Sanitarias y Excelencia Clínica), has developed a **standardized and procedural framework** to assess health technologies that **includes equity as one of the main pillars of assessment**.(41) One of the main challenges recognized is how the health system ensures equitable access to diagnostics, treatments, and other health interventions, especially in a fragmented and segmented system like in Argentina, where there are profound differences across sectors and regions.

Argentina, through CONETEC, includes equity as a principle in as their standardized approach and tools such as the value framework. While there are instances of formal participation and distributive analysis, limitations to effective implementation are still encountered in terms of their operationalizability and real weight in decision-making.

CONETEC seeks to understand how decisions about the incorporation, disinvestment, use, coverage and financing of health technologies are made based on scientific evidence, while at the same time considering the ethical, social, and economic dimensions, including equity. In this sense, Argentina has integrated the concept of equity in the throughout the HTA process, from topic prioritization to the formulation of recommendations.

One of the key instruments to achieve this is the value framework, a tool that orients coverage decisions to explicitly include equity impact analysis. In each assessment, a technology **is analyzed to determine if it reduces health inequalities** or, on the other hand, if it widens them. In addition, representatives of the Ministry of Health hold veto power in this domain, which enables them to protect public interest if they consider that a technology could harm equitable access to healthcare.

Argentina also promotes the participation of multiple health system stakeholders, including patients, citizens, scientific societies, funders, and technology producers. Civil society organizations, in particular, have a formal seat at the table in working groups, to ensure that the perspectives of those who experience inequalities firsthand are included in the assessment.

Public consultations are also used at different stages of the process, where any interested person or organization can share their views on access to the technologies being assessed, as well as their use and impact. These consultations are open, free of charge, and published on the institutional website.

CONETEC ensures that all procedures are transparent, participatory, and traceable, thereby reinforcing an equity approach not only in the content of decisions, but also in the way decisions are made. Argentina has institutionalized an equity approach within the HTA system, combining technical analysis with social justice to shape policies that promote more fair and universal access to healthcare.

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Annex 1. Examples of interventions sensitive to health equity

There is empirical evidence that shows that, in addition to conceptual frameworks and methodologies, using an equity-sensitive approach to the design of interventions can generate positive impacts both in terms of **health outcomes** and the **reduction of inequalities**. Below are summarized relevant **studies of these effects** in different contexts.

In **India**, a randomized clinical trial evaluated the impact of **community-initiated kangaroo mother care** to promote effective coverage for the survival of low birthweight newborns (42). The study included 8,402 infants who were randomly assigned to receive the intervention, or standard care. This strategy, based on prolonged skin-to-skin contact and breastfeeding exclusively, showed a **25% reduction in neonatal mortality** among those born weighing between 1,500 and 2,250 grams. Stratified analysis revealed that the benefits were most notable in infants from the poorest quintiles, children of illiterate mothers, and non-Hindus. The difference between the concentration index was 0.05 (CI95%L -0.07 to 0.17). Given that a value of 0 indicates perfect equality, and the confidence interval includes this value, the result suggest that the benefits were equally distributed across socioeconomic levels, with no evidence of significant concentration in the most advantaged or disadvantaged groups.

In **Bangladesh**, a cluster randomized controlled trial compared two strategies for the prevention of **type 2 diabetes in rural areas**: one was a community-based participatory and learning intervention, and the other a mobile-based digital intervention (43). Diabetes prevalence and incidence were assessed using oral glucose tolerance tests stratified by age, gender, and socioeconomic status. **The community-based strategy promoted acceptable and effective**

access to care by engaging populations in participatory processes, achieving a 51% reduction in diabetes prevalence (RR 0.49; CI95%: 0.28-0.85), with effects observed in all groups except in the wealthiest, and older adults. **The digital intervention showed smaller benefits**, limited to young adults. The study demonstrates that face-to-face and community-based strategies can have a greater reach and impact on the most vulnerable groups.

In **Nigeria**, a cluster-randomized stepped-wedge clinical trial assessed a universal **home visit program for pregnant women and their partners in Bauchi**.(44) The study included 15,912 women and it documented significant improvements in various indicators of material health, including **increased knowledge of warning signs, reduction in strenuous physical labor during pregnancy**, and reduction in complications and postnatal sepsis. The effects were more pronounced for women living in rural areas, in poorer households, or with no formal education. Although part of this result may be explained by the higher baseline risk in these groups, which can generate a greater absolute impact of the intervention, the program design explicitly considered universal inclusion criteria and implementation sensitive to community contexts. Therefore, **the study results suggest that a universal outreach strategy designed with geographic and social sensitivity**, can produce positive distributional effects and contribute to reducing health inequalities along with positive impacts on **coverage and acceptability**.

A study based on mathematical modelling assessed the equity of resource allocation during the **Ebola outbreak in West Africa**,(45) Using a multi-stage stochastic programming model, the authors simulated different scenarios for the distribution of limited resources that considered not only healthcare efficiency, but also equity metrics such as installed capacity and regional epidemiological risk, thereby taking into account **coverage availability** and **geographic equity**. The results showed that **strategies that prioritised regions with lower capacity for response reduced both the number of infections and total deaths, in comparison with those that distributed resources proportionally to the population**.

A final example is in Argentina (46), where the Application of Information and Communication Technologies (ATICA method) aims to assess the impact of an mHealth intervention on Pap smear adherence in women who tested positive for Human Papilloma Virus (HPV). Follow-up was conducted with women living in vulnerable regions of the Jujuy province, who had self-collected HPV samples. In addition to home visits by health workers, telephone follow-up was also conducted. At 120 days after the positive result, 70.5% of the women in the treatment group completed triage compared with 55.1% in the control group. At 60 days, text messages further improved the response. The intervention also reduced the time to triage, with 50% coverage achieved around day 50 in the intervention group compared with day 100 in the control group.