

# Health Technology Assessment: A Practical Tool for Advancing Equity in Universal Health Coverage

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## Abstract

**Background:** Health technology assessment (HTA) plays a crucial role in enhancing equity within universal health coverage (UHC) by making sure that health technologies are accessible, effective, and affordable for all groups, including those historically underserved. HTA informs policy-making concerning the adoption and prioritization of health technologies to fulfill the needs of the populace, particularly those afflicted with rare ailments and those residing in low- and middle-income nations. Through assessing both the clinical and cost-effectiveness of health technologies, HTA identifies the most appropriate options for the needs of the community, thereby facilitating a fairer allocation of resources. Furthermore, HTA ensures the development and evaluation of health technologies are conducted impartially, incorporating the viewpoints and necessities of at-risk groups such as women, children, and the elderly. HTA is instrumental in mitigating healthcare disparities by pinpointing and tackling the elements that hinder equal access to health technologies. For instance, it evaluates the availability and accessibility of health technologies across various regions and demographic groups, identifies obstacles to access, and formulates recommendations to overcome these challenges. HTA is vital in advancing equity in UHC, ensuring that health technologies meet the accessibility, effectiveness, and affordability needs of all, particularly marginalized groups. By addressing healthcare disparities and considering the perspectives of vulnerable populations, HTA promotes transparency and accountability in decision-making and suggests ways to rectify inequities in access to health technologies.

**Keywords:** Health Technology Assessment; Equity; Universal Health Coverage; Health Policy

## 1. Background

Health technology assessment (HTA) is a multidisciplinary process that evaluates the medical, social, economic, and ethical implications of using health technologies such as drugs, medical devices, and procedures. Its aim is to provide evidence-based information to support decision-making on the introduction, use, and withdrawal of health technologies. HTA is pertinent to equity and universal health coverage (UHC) in several ways (1).

Firstly, it can help ensure equitable access to health technologies for all populations, including those who may be excluded or marginalized by the health system. By identifying the most effective and cost-effective health technologies, HTA facilitates fair resource allocation.

Moreover, HTA supports the goal of UHC by identifying health technologies that effectively improve health outcomes while minimizing costs (2). Prioritizing the use of

these technologies enables health systems to offer a basic package of affordable and accessible health services to everyone, regardless of income or social status.

The scope of HTA is broad, covering a range of issues related to health technologies, including safety, effectiveness, cost-effectiveness, and social and ethical implications. It assesses the clinical effectiveness of health technologies, their benefits and harms, and the quality and quantity of evidence supporting their use. HTA also evaluates the economic impact of health technologies, including their cost-effectiveness and their effect on health system budgets (3).

Ultimately, HTA plays a crucial role in informing decisions related to the introduction, use, and withdrawal of health technologies and can support the goal of UHC by promoting equity in access to health services. By as-



sessing the effectiveness, safety, and cost-effectiveness of health technologies, HTA helps ensure that health systems provide access to the most effective and efficient health technologies to all populations, regardless of income or social status (4).

## 2. Main Text

### 2.1. Equity in HTA

The importance of equity in HTA cannot be overstated. Equity refers to the fair and just distribution of health resources, including health technologies, among all populations, regardless of their social status or economic background (5). Equity in HTA means ensuring that all populations have equal opportunities to access and benefit from health technologies. There are several ways in which equity can be assessed in HTA.

Firstly, HTA can identify health technologies that are most needed by marginalized and underserved populations. This involves assessing the burden of disease and health needs of different populations and prioritizing health technologies that are most effective in addressing these needs (6). Secondly, HTA can assess the impact of health technologies on different populations, including their potential to exacerbate existing health disparities.

Moreover, HTA can analyze the distribution of health technologies among different populations by examining their availability and accessibility in various regions and communities. Identifying any barriers to access is crucial in this assessment. Additionally, HTA can evaluate the affordability of health technologies, including their cost and the availability of health insurance coverage.

Health technology assessment plays a vital role in ensuring equitable access to health technologies for all populations. It helps to identify the most effective and cost-effective health technologies, thus ensuring fair resource allocation. Furthermore, HTA informs policy decisions related to the introduction, use, and withdrawal of health technologies by providing evidence-based information on their effectiveness, safety, and cost-effectiveness. This helps policymakers make decisions that promote equitable access to health technologies for all populations (7).

In conclusion, equity is a crucial consideration in HTA. Assessing equity in HTA involves identifying health technologies that are most needed by marginalized and underserved populations, analyzing the distribution of health technologies among different populations, and promoting policies that ensure equitable access to health technologies for all (8).

## 3. Universal Health Coverage

Universal health coverage (UHC) refers to a health system that provides access to quality health services to all people without financial hardship. UHC aims to ensure that everyone can obtain the health services they need

without suffering financial hardship or being denied access due to their economic or social status (9). UHC is closely related to equity and HTA. Equity in health means that everyone has an equal opportunity to access and benefit from health services, regardless of their social or economic status. HTA plays a crucial role in ensuring equitable access to health technologies by providing evidence-based information on the safety, effectiveness, and cost-effectiveness of health technologies.

HTA can support the goal of UHC by identifying and prioritizing the most effective and cost-effective health technologies. It can help to ensure that the limited resources available for health care are allocated in a way that maximizes health outcomes for the population. By prioritizing the use of effective and cost-effective health technologies, HTA can help to ensure that health systems provide access to a basic package of health services that is affordable and accessible to all, regardless of income or social status (10). Furthermore, HTA can help to ensure that health services are of high quality and meet the needs of the population (11).

By assessing the safety and effectiveness of health technologies, HTA can help identify areas where the quality of care can be improved and support the development of evidence-based clinical guidelines and standards of care (12). Universal health coverage aims to ensure that all people have access to quality health services without financial hardship, and HTA plays a crucial role in supporting this goal by identifying and prioritizing the most effective and cost-effective health technologies (12). By promoting equity in access to health technologies and ensuring the quality of health services, HTA can help to ensure that UHC is achieved and that health systems provide high-quality care to all (11).

## 4. Challenges and Opportunities of HTA

While HTA can play a crucial role in advancing equity in UHC, there are several challenges and opportunities to consider when using HTA to achieve this goal (13). These include data availability, stakeholder engagement, and decision-making processes.

### 4.1. Data Availability

HTA requires high-quality data to support evidence-based decision-making. However, in many low- and middle-income countries, data on health technologies and their impact on different populations may be limited or of poor quality. This can pose a significant challenge in conducting HTA and may limit the ability to identify and prioritize health technologies that promote equity in UHC (14).

### 4.2. Stakeholder Engagement

Engaging stakeholders in HTA is crucial to ensure that the perspectives and needs of different populations are

taken into account. However, this can be challenging, especially in low- and middle-income countries, due to factors such as limited resources, lack of capacity, and competing priorities (15).

#### 4.3. Decision-Making Processes

The decision-making processes involved in HTA can also pose challenges to promoting equity in UHC. Decisions about the introduction, use, and withdrawal of health technologies can be influenced by political considerations, financial constraints, and competing priorities. Ensuring that these decisions are evidence-based and prioritize equity can be challenging, particularly in resource-constrained settings (16).

#### 4.4. Limited Resources and Expertise

Conducting HTA requires a significant investment of resources and expertise, including trained personnel, data infrastructure, and analytical tools. Many countries, especially those with limited resources, may lack the capacity to conduct HTA effectively (17).

#### 4.5. Political and Economic Pressures

HTA can be influenced by political and economic pressures, which may prioritize short-term cost savings over long-term health benefits. This can lead to decisions that do not align with the best interests of patients or the broader healthcare system (18).

#### 4.6. Ethical Considerations

HTA involves making decisions about which health technologies should be made available to patients, raising important ethical implications. For instance, decisions about covering expensive treatments that may only benefit a small group of patients can raise questions about distributive justice and fairness (19).

#### 4.7. Variability in HTA Approaches

There is variability in how HTA is conducted across different countries and regions, making it challenging to compare results and make decisions based on HTA findings. This can also create challenges for manufacturers who need to understand the HTA requirements and processes for different markets (20).

#### 4.8. Time and Resource Constraints

Conducting HTA can be a time-consuming and resource-intensive process, especially when assessing multiple technologies. This can pose challenges for decision-makers who must balance the need for rigorous analysis with the need to make timely decisions (21).

#### 4.9. Incorporating Patient Perspectives

While HTA traditionally focuses on clinical and eco-

nomics factors, there's a growing recognition of the importance of including patient perspectives in the assessment process. However, challenges exist in identifying and measuring patient-relevant outcomes, as well as ensuring their representation in decision-making (22).

#### 4.10. International Collaboration and Coordination

Many health technologies are developed and marketed globally, necessitating international collaboration and coordination in the HTA process. This can be challenging due to the variability in HTA approaches and the different regulatory environments across countries (21).

#### 4.11. Keeping Up with Advances in Technology

With technology constantly evolving, there's a need to continuously update and refine the HTA process to ensure its relevance and effectiveness. This requires ongoing investment in research and development, as well as collaboration between industry, policymakers, and HTA agencies (23).

Despite these challenges, there are several successful examples of HTA programs that have promoted equity in UHC. For instance, the HTA Network for the Americas (RedETSA) has successfully promoted equity in health technology access in Latin America. Another example is the National Institute for Health and Care Excellence (NICE) in the United Kingdom (24), which has effectively promoted equity in the use of health technologies by employing a transparent and evidence-based assessment process.

Using HTA to advance equity in UHC presents both challenges and opportunities, including data availability, stakeholder engagement, and decision-making processes. Successful examples of HTA programs that have promoted equity in health technology access can serve as models for other countries and regions aiming to advance equity in UHC. For example, the Health Intervention and Technology Assessment Program (HITAP) in Thailand has successfully promoted equity in the use of health technologies by employing a transparent and participatory assessment process, resulting in equitable access to essential health services and technologies for all (25).

Another example is the South African Health Products Regulatory Authority (SAHPRA), which has successfully promoted equity in the regulation of health technologies. SAHPRA employs a rigorous and evidence-based process to evaluate the safety, quality, and efficacy of health technologies, taking into account the needs and perspectives of different populations. SAHPRA's regulatory decisions have contributed to equitable access to quality health products and services in South Africa, particularly for marginalized and underserved communities. While using HTA to advance equity in UHC presents several challenges, there are successful examples of HTA

programs that have promoted equity in health technology access and regulation (14). These programs have utilized transparent and evidence-based processes, engaged stakeholders, and considered the perspectives and needs of different populations. These successful examples can serve as models for other countries and regions seeking to advance equity in UHC through HTA.

## 5. Policy Implications

The utilization of HTA to advance equity in UHC carries significant policy implications, particularly in resource-constrained settings. HTA can inform policy decisions related to resource allocation, reimbursement, and coverage, ensuring that resources are utilized efficiently and effectively and that all populations have access to essential health technologies.

## 6. Resource Allocation

HTA can assist policymakers in identifying and prioritizing health technologies that are most effective and cost-effective, thereby ensuring that resources are directed towards technologies that provide the most benefit. Additionally, HTA can help policymakers identify inefficiencies and waste in the health system, enabling them to redirect resources to areas where they are most needed (23).

## 7. Reimbursement

HTA can inform reimbursement decisions by payers, including governments and insurers, by providing evidence-based information on the effectiveness, safety, and cost-effectiveness of health technologies. This can help ensure that patients have access to the most effective and cost-effective health technologies, regardless of their ability to pay (20).

## 8. Coverage Decisions

HTA can inform coverage decisions, ensuring that essential health technologies are covered by public and private insurance schemes. HTA can also inform decisions related to the design of insurance schemes, ensuring that they are equitable and provide coverage to all populations, including marginalized and underserved communities (12).

Governments, payers, and other stakeholders play a crucial role in promoting equitable access to health technologies through HTA. Governments can support the development of HTA capacity, ensure that HTA is integrated into policy decision-making processes, and provide funding to support the implementation of HTA recommendations. Payers can use HTA to inform reimbursement and coverage decisions and promote the use of evidence-based medicine. Other stakeholders, including patients, healthcare providers, and industry, can participate in HTA processes, ensuring that the perspectives and needs

of different populations are taken into account (6). The use of HTA to advance equity in UHC has significant policy implications, particularly in resource-constrained settings. HTA can inform policy decisions related to resource allocation, reimbursement, and coverage decisions, ensuring that all populations have access to essential health technologies. Governments, payers, and other stakeholders play a crucial role in promoting equitable access to health technologies through HTA, and their participation is essential to the success of HTA programs (2).

## 9. Conclusions

The role of HTA in advancing equity in UHC cannot be overstated. By assessing the effectiveness, safety, and cost-effectiveness of health technologies, HTA can help ensure that all populations, particularly marginalized and underserved communities, have equitable access to the most effective and affordable health technologies. However, using HTA to advance equity in UHC requires addressing numerous challenges, including data availability, stakeholder engagement, and decision-making processes. Despite these challenges, there are emerging opportunities to use innovative data sources and engage stakeholders more effectively in the HTA process. By investing in building the necessary infrastructure and capacity to conduct HTA effectively, governments, payers, and other stakeholders can ensure that the HTA process is transparent and participatory, ultimately promoting equitable access to health technologies. Health technology assessment has an important role to play in promoting equity in UHC. By prioritizing health technologies based on their potential impact on health outcomes and equity rather than simply on their cost-effectiveness, we can create a more equitable and sustainable healthcare system that meets the needs of all people.

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