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HTA Implementation in Latin American Countries: Comparison of Current and Preferred Status

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ABSTRACT

Objectives: To provide an overview about the current status of health technology assessment (HTA) implementation in Latin American countries and to identify long-term objectives considering regional commonalities. **Methods:** We conducted a survey among participants of the 5th Latin American Future Trends Conference in October 2015. Thirty-seven respondents from eight Latin American countries provided insights about the current and preferred future status of HTA implementation related to human capacity building, HTA financing, process and organizational structure for HTA, scope of mandatory HTA, decision criteria, standardization of HTA methodology, mandating the use of local data, and international collaboration in HTA. **Results:** Survey respondents reported insufficient human resources and public investment for HTA implementation. Organizational structure and legislation framework of HTA differ considerably across countries. According to survey respondents, in the future policymakers should rely more on the assessment of therapeutic value,

cost-effectiveness, and budget impact criteria by applying explicit thresholds, potentially in a multicriteria decision analysis framework. HTA should not be restricted to policy decisions of new technologies but it should also be used for the revision of previous decisions. In addition, the quality and transparency of HTA have to be strengthened. **Conclusions:** HTA plays an increasingly important role in Latin American countries. Each country needs to record its current implementation status and identify components for improvement. Duplication of efforts can be reduced if international collaboration is integrated into national HTA implementation.

Keywords: evidence-based decision making, health technology assessment, HTA components, HTA implementation, Latin America, policy survey.

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Introduction

Efficient allocation of scarce public resources should be a fundamental objective of policymaking at both national and global levels. Accordingly, reliable scientific evidence and transparent decision making are needed to face challenges in public policy. Expenditure on medicines represents a major problem for third-party payers and policymakers in most countries because they have to provide equitable patient access to high-cost treatments and maintain the financial sustainability of health systems [1].

Health technology assessment (HTA) is a multidisciplinary field that aims to systematically evaluate the effects of a technology on health, on the availability and distribution of resources, and on other aspects of health system performance such as

equity and responsiveness [2]. HTA implementation requires a careful designing process. The health system of any country reflects its history, culture, and many other values or preferences, and the same applies to HTA. Consequently, any global conclusions concerning HTA can only be partial and tentative in the implementation process [3]. There is no single way to implement HTA because local restrictions on available human and financial resources and lack of political commitment might make general principles difficult to achieve [4].

In the 1990s, reforming the health sector became an important movement in Latin America, and the Pan American Health Organization (PAHO) became more active in promoting HTA [5]. Moreover, in many countries the process of developing and implementing HTA received an increased importance to improve priority setting in recent years [6,7].

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Our policy research provides an overview about the current and preferred status of HTA implementation in Latin American countries. In addition, we aim to identify long-term objectives by considering existing initiatives and regional commonalities.

Methods

We conducted a policy survey among participants of the 5th Latin American Future Trends Conference in October 2015. We applied an HTA implementation scorecard that was designed to support the formulation of HTA road maps in lower income countries [8]. Opinions of respondents about the current and preferred future status of HTA implementation in their own countries were collected and aggregated in eight areas: capacity building, HTA financing, process and organizational structure, scope of HTA, decision criteria, standardization of methodology, use of local data, and international collaboration.

The surveys were distributed among conference participants before the event. Participation in the survey was voluntary and we explicitly explained to participants how we would process their response. The survey informed participants in a written form that individual survey results are kept strictly confidential. Results were aggregated and preliminary findings with main conclusions were discussed and validated during the conference in a roundtable discussion with all conference participants contributing. Finally, our plan to prepare a scientific article about the results was discussed with and agreed on by the participants.

Surveys were considered valid if all questions were accurately answered or not more than three answers were missing or invalid (e.g., providing multiple answers for a single-choice question). Results of invalid surveys were excluded from the data set. During the data processing of valid surveys, the invalid answers were removed, and therefore those have no influence on aggregated results.

Results

The survey was conducted among the 53 conference participants. We received 45 surveys (85% response rate). Out of these 45 surveys, 8 were considered invalid, and therefore we excluded them. The 37 respondents with valid surveys represented eight countries (Argentina, Brazil, Chile, Colombia, Ecuador, Mexico, Peru, and Venezuela), including 15 public sector and 2 private sector decision makers (e.g., payers, HTA agencies, or health care institutes), 4 health care providers, 4 academics, 3 consultants, 8 representatives of pharmaceutical manufacturers, and 1 patient representative. Detailed results are presented in Table 1. Survey results are presented in the eight main categories of the HTA scorecard [8].

Capacity Building

According to the respondents' opinion, Latin American countries have limitation in HTA capacity building. Forty-one percent respondents were not aware of organized permanent HTA education in their countries. Project-based training programs (e.g., short courses) that may be adequate for educating senior decision makers were reported by some participants (38%). Nevertheless, ensuring sufficient human resources in the long-term requires investment in graduate and postgraduate programs at academic centers and universities. Most participants (95%) would prefer such education in the future.

Funding HTA

HTA implementation requires financial resources on both the research part and the critical appraisal of evidence submitted by manufacturers or other HTA doers. On the basis of our survey results, several Latin American countries do not have sufficient funding for these activities. The absence of reasonable funding for HTA research and for critical appraisal was reported in 41% and 46% of survey respondents, respectively. Most respondents prefer a significant increase in the public budget for both HTA research and critical appraisal in the future. Moreover, for critical appraisal procedures, the dominance of public funding was the preferred option by most participants (89%).

Legislation on HTA

Most respondents (94%) preferred formalizing the role of HTA and relying more on local evidence or even mandating the use of local data in the HTA process. More than half of the participants (53%), however, reported that currently HTA has no formal role in the decision-making process. Forty-three percent of respondents were not aware of institutionalization of HTA in their own countries, but most preferred a clearly defined organizational structure. Fifty-four percent preferred a central public HTA institute with the support of academic networks. Thirty-five percent, however, preferred a system with several HTA bodies that may better serve countries with fragmented health financing, although most of these respondents still believed that central coordination among these HTA agencies is needed.

Scope of HTA

Almost half the participants (46%) stated that HTA is not applied in a systematic way for any health technologies in their countries. Nevertheless, respondents would extend the scope of HTA to several health technologies, including pharmaceuticals (88%), medical devices (85%), prevention programs (94%), or even surgical interventions (76%). Although currently HTA is either not used or it is applied only for a selected group of technologies especially with a high budget impact, in the future 89% of participants would prefer to use HTA not only for all new technologies but also for a revision process of previous decisions.

Decision Criteria

Our survey indicates that currently the most common decision criterion in Latin American countries is cost-effectiveness (53%). In the future, most participants (97%) would increase the role of this criterion, and in addition they would include more decision criteria in HTA decision making, such as unmet medical need (63%), relevance to national health care priorities (80%), added therapeutic value (86%), and budget impact (91%). Forty-two percent of the survey respondents were not aware of thresholds for HTA decision criteria. All our survey respondents suggested to determine explicit thresholds in the future. Forty-two percent of respondents would, however, implement thresholds in a soft way, which would provide a clear guidance for policymakers but would also leave the possibility for exceptional cases. Nevertheless, 58% would still prefer hard mandatory thresholds, which may leave less room for corruption. According to our survey results, currently multicriteria decision analysis (MCDA) framework is applied only in a few cases; participants would, however, increase its use, because 62% would prefer implementing such framework.

Quality and Transparency

There can be several tools and methods that could improve the quality of HTA implementation. Nevertheless, one-third of the

Table 1 – Results from HTA implementation survey.

Category	Current status (%)	Preferred status in 10 y (%)
<i>1. HTA capacity building</i>		
Education (single choice)		
No training	41	0
Project-based training and short courses	38	5
Permanent graduate programs with short courses	11	19
Permanent graduate and postgraduate programs with short courses	11	76
<i>2. HTA funding</i>		
Financing critical appraisal of technology assessment (single choice)		
No funding for critical appraisal of technology assessment reports or submissions	46	0
Dominantly private funding (e.g., submission fees) by manufacturers for the critical appraisal of technology assessment reports or submissions	31	11
Dominantly public funding for the critical appraisal of technology assessment reports or submissions	23	89
Financing health technology assessment (i.e., HTA research) (single choice)		
No public funding for technology assessment; private funding is not needed or expected	41	0
No marginal public funding for research in HTA; private funding is expected	43	0
Sufficient public funding for research in HTA; private funding is also expected	11	68
HTA research is dominantly funded from public resources	5	32
<i>3. Legislation on HTA</i>		
Legislation on the role of HTA process and recommendations in decision-making process (single choice)		
No formal role of HTA in decision making	53	0
Dominantly international HTA evidence is taken into account in decision making	14	6
International and local HTA evidence is taken into account in decision making	22	39
Local HTA evidence is mandatory in decision making	11	56
Legislation on organizational structure for HTA appraisal (single choice)		
There is no public committee or institute for the appraisal process	43	3
Committee is appointed for the appraisal process	19	0
Committee is appointed for the appraisal process with support of academic centers and independent expert groups	19	5
A public HTA institute or agency is established to conduct formal appraisal of HTA reports or submissions	3	3
A public HTA institute or agency is established to conduct formal appraisal of HTA reports or submissions with support of academic centers and independent expert groups	16	54
Several public HTA bodies are established without central coordination of their activities	0	8
Several public HTA bodies are established with central coordination of their activities	0	27
<i>4. Scope of HTA implementation</i>		
Scope of technologies (multiple choice)		
HTA is not applied to any health technologies	46	0
Pharmaceutical products	51	88
Medical devices	34	85
Prevention programs and technologies	17	94
Surgical interventions	17	76
Other	0	33
Depth of HTA use in pricing and/or reimbursement decision of health technologies (single choice)		
HTA is not applied to any health technologies	40	3
Only new technologies with significant budget impact	23	3
Only new technologies	17	6
New technologies plus revision of previous pricing and reimbursement decisions	20	89
<i>5. Decision criteria</i>		
Decision categories (multiple choice)		
None of the following categories are applied	31	0
Unmet medical need	28	63
Health care priority	42	80
Assessment of therapeutic value	31	86
Cost-effectiveness	53	97
Budget impact	39	91
Other	11	20
Decision thresholds (single choice)		
Thresholds are not applied	42	0
Implicit thresholds are preferred	42	0
Explicit soft thresholds are applied in decisions	14	42

continued on next page

Table 1 – continued

Category	Current status (%)	Preferred status in 10 y (%)
Explicit hard thresholds are applied in decisions	3	58
MCDA (single choice)		
Explicit MCDA framework is applied	19	62
<i>6. Quality and transparency of HTA implementation</i>		
Quality elements of HTA implementation (multiple choice)		
None of the following quality elements are applied	31	0
Published methodological guidelines for HTA/economic evaluation	67	84
Regular follow-up research on HTA recommendations	8	41
Checklist to conduct formal appraisal of HTA reports or submissions exists but <i>not available</i> for public	8	16
Published checklist is applied to conduct formal appraisal of HTA reports or submissions	19	73
Transparency of HTA in policy decisions (single choice)		
Technology assessment reports, critical appraisal, and HTA recommendations are <i>not published</i>	59	0
HTA recommendations are published without details of technology assessment reports and critical appraisal	27	8
Transparent technology assessment reports, critical appraisals, and HTA recommendations	14	92
Timeliness (single choice)		
HTA submission and issuing recommendation have no transparent timelines	40	0
HTA submissions are accepted/conducted following a transparent calendar, but issuing recommendation has no transparent timelines	46	9
HTA submissions are accepted continuously and issuing recommendation has transparent timelines	14	91
<i>7. Use of local data</i>		
Requirement of using local data in technology assessment (single choice)		
No mandate to use local data	47	0
Mandate of using local data in certain categories <i>without</i> need for assessing the transferability of international evidence	47	14
Mandate of using local data in certain categories <i>with</i> need for assessing the transferability of international evidence	6	86
Access and availability of local data (single choice)		
Limited availability or accessibility to local real-world data	68	0
Up-to-date patient registries are available in certain disease areas, but payers' databases are not accessible for HTA doers	24	3
Payers' databases are accessible for HTA doers; patient registries are not available or accessible in most of the disease areas	8	9
Up-to-date patient registries are available in certain disease areas and payers' databases are accessible for HTA doers	0	89
<i>8. International collaboration</i>		
International collaboration, joint work on HTA (joint assessment reports), and national/regional adaptation (reuse) (multiple choice)		
No involvement in joint work, and no reuse of joint work or national/regional HTA documents from other countries	71	3
Active involvement in joint work (e.g., EUnetHTA rapid REA, full Core HTA)	23	50
National/regional adaptation (reuse) of joint HTA documents	3	47
National/regional adaptation (reuse) of national/regional work performed by other HTA bodies in other countries	6	81
International HTA courses for continuous education on HTA (single choice)		
Limited interest in 1) developing/implementing and 2) participating at international HTA courses	65	0
Interest only in regular participation at international HTA courses	32	8
High interest in 1) developing/implementing and 2) participating at international HTA courses	3	92

EUnetHTA, European network for Health Technology Assessment; HTA, health technology assessment; MCDA, multicriteria decision analysis; REA, relative effectiveness assessment.

survey respondents were not aware of such tools or methods in their countries. Published methodological guidelines for economic evaluations were reported by 67% of the participants. In addition to the increased use of methodological guidelines (84%), survey respondents would like to implement more quality elements in HTA procedures in the future such as monitoring the impact of previous decisions (41%) or critical appraisal checklists

for standardizing the evaluation process of HTA submissions (89%). Fifty-nine percent of the respondents indicated that HTA reports and recommendations are currently not accessible for the public. All participants felt that this practice needs to be changed, and 92% believed that technology assessment reports, critical appraisals, and HTA recommendations should be in the public domain.

Local Data

Half of the survey respondents reported that currently the use of local data is not necessarily part of the HTA process in their countries. In the future, however, 86% of respondents would mandate the use of local data or—when the collection of local data is not feasible or not efficient—would require transferability assessment. Our survey results also highlight the limited availability of local data for conducting HTA and the restricted access to patient registries and payers' databases. Most respondents (89%) would invest in such databases because local data play a crucial part in HTA implementation.

International Collaboration

Our survey results show that there is a need for improving international collaboration activities on joint HTA work and capacity building. Almost two-third of respondents felt that Latin American countries are not participating actively in joint HTA work. Nevertheless, 81% would facilitate initiatives focusing on the adaptation of HTA-related work performed by other HTA bodies. International collaboration may also contribute to the process of capacity building, because 92% of survey respondents would prefer to develop and participate at international HTA courses.

Discussion

Results from the survey on the current HTA implementation are mostly in line with the published literature in Latin America.

Initial steps of building HTA capacities have started early in some cases, especially in large Latin American countries. For instance, in Mexico the first step toward strengthening health policy research dates back to the late 1970s [9]. The first formal event related to HTA in Brazil was held in 1983 when policy issues and different aspects of HTA were discussed [10]. In Argentina, series of meetings were held at the end of the 1990s promoted by the World Bank and other international bodies such as PAHO to sensitize and foster decision makers toward HTA [11]. Nevertheless, it is also recognizable that many Latin American countries do not have sufficient HTA capacity because of the absence of national structure and strategy to educate and retain professionals [12].

Survey respondents indicated limited access to academic capacity building in some countries, such as Ecuador, Peru, and Venezuela, where only special project-based training programs are available. In Chile, the Pharmacoeconomics and Health Technology Assessment Diploma program was developed and in Colombia independent HTA courses are available at different universities. In these countries the local International Society for Pharmacoeconomics and Outcomes Research (ISPOR) chapters collaborate with academic partners and HTA agencies to facilitate capacity building. Nevertheless, until full graduate and postgraduate courses have limited availability in the region, HTA candidates in Latin America may decide to study in academic centers of more developed countries (e.g., in Western Europe or North America). In most cases, this can be very costly and inefficient, and trained experts often prefer staying in more affluent countries with better or safer living conditions.

Our policy survey indicated limited financial resources for HTA processes in Latin America; some positive examples, however, still can provide reference cases for funding HTA. In Brazil and Argentina, national initiatives were set to finance HTA activities. The National Agenda of Priorities in Health Research was launched in 2004 in Brazil to reduce the gap between scientific knowledge and health-related decisions. Significant budget was allocated by the Ministry of Health (MoH) and its

partners to support selected projects. HTA was included in this initiative, and the Department of Science, Technology, and Strategic Inputs was named as the coordinator of the working group on HTA [13]. Although this department was not named as an agency for HTA, it had the right to allocate funds for original HTA research or systematic reviews and for the establishment of technology assessment standards [10]. Consequently, most assessments conducted in Brazil to date have been commissioned and funded by the government and have been carried out by researchers affiliated to local universities [14]. In 2003, the Argentine MoH and the Federal Health Council invested public funds in developing regulations on health technologies and creating clinical practice guidelines through a national agency of HTA [11].

Apart from national initiatives, international funds may also facilitate HTA implementation for countries with currently limited financial resources on HTA procedures. For instance, the Inter-American Development Bank financially supported the establishment of an independent HTA agency in Colombia.

Although HTA is increasingly used for priority setting and for supporting health policymaking decisions in several Latin American countries [6], half of our survey respondents still felt that HTA has a limited formal role in the current legislative framework in their countries. Latin American countries still share the common challenge of providing equitable access and achieving universal coverage when faced with rising health care costs [15]. This may explain why most of the participants suggested that in 10 years HTA should have a more explicit and formal role in the decision-making process.

Legislation on the institutional framework of HTA may depend on the fragmentation of health care financing. In single-payer systems it is an obvious step to establish a central HTA agency that can coordinate national HTA activities and may even contribute to international collaboration. Several Latin American countries have, however, fragmented health care financing systems with multiple public and private third-party payers. The main question is whether these payers can or are willing to share and coordinate HTA activities through a central HTA agency.

Centralized HTA agencies or committees exist in countries with more experience in HTA, and decentralized structures exist only in a few countries. In Colombia, a technical committee in the MoH was appointed to act as an advisory body of the National Council on Social Security until 2013, when an independent HTA agency was created [16]. The *Instituto para Evaluación de Tecnologías en Salud* receives public funds in Colombia, and in collaboration with university centers it focuses on informing the MoH about clinical practice guidelines, systematic reviews, economic evaluations, and budget impact analyses [6,17]. Chile developed a unit for HTA in its MoH among the first in 1997 [5]. It aimed to develop evaluations and evidence-based reports on health technologies, reflecting on MoH priorities [18]. Then, in 2013, the HTA National Commission established a set of recommendations for the implementation and institutionalization of HTA [19]. Nevertheless, until now, Chile has not been able to institutionalize HTA. In Brazil, the Department of Science and Technology coordinated HTA activities until 2011 when the institutional framework for HTA was created by law [20]. The National Committee for Incorporation of Technologies was established under the auspices of the Brazilian MoH [12]. In Mexico the National Center for Technological Excellence in Health was created as a specialized agency under the MoH in 2004 with the aim to collect, verify, and update evidence on health technologies to prioritize needs and allocate resources [9]. The independent, not-for-profit Institute of Clinical Effectiveness and Health Policy serves as the main agency of HTA in Argentina since the early 2000s [11]. In Argentina, another institutional structure was created in 2009.

The Technology Assessment Coordination Unit [21] consists of a network of 14 institutions dedicated to HTA with the primary role of coordinating national HTA efforts and producing high-quality information for decision making [22].

In general, HTA should be applied regardless of the type of technology to improve the benefit package for health insurance decisions or to support the pricing procedure of publicly reimbursed health technologies [6,23]. This was highlighted in our survey results as well because most survey respondents would apply HTA for a broad scope of technologies. Nevertheless, currently only a few examples and initiatives can be found in which the scope of HTA goes beyond pharmaceutical products in a systematic way. For instance, according to a draft legislation in Chile, HTA should be applicable for diagnostics and other high-cost technologies in addition to pharmaceuticals [24].

Special applications of HTA were reported from two countries. In Brazil, the Institute of Biomedical Engineering was working on the development of HTA methodologies to evaluate special medical devices so as to support health care management decisions [25]. In Argentina, a special hospital-based HTA program was created in 2001 at a national pediatric facility with a self-managed budget. In the program, HTA reports for technology procurement, clinical practice guidelines, capacity building in research and management, and technical support for health services research were delivered. The system was evaluated, and it generated proof of concept for the feasibility and usefulness of HTA at the hospital level in developing countries [26].

According to the survey respondents, the role of cost-effectiveness in HTA still needs to be strengthened in Latin American countries, and understanding of the concept of economic evaluations and the interpretation of study results should also be improved. A previous study in Argentina showed that decision makers were mostly unaware of economic evaluations. Evidence on effectiveness, population demand, and resource availability was mentioned as the most important criterion [27]. The same conclusion was reported from Brazil, where the improvement in health economic evaluation methods at Brazilian universities and research institutes has not yet reached the governmental bodies, and therefore the biggest challenge is the knowledge transfer of research findings to the policy level [23]. For instance, in Brazil the lack of the definition of a cost-effectiveness threshold is one of the most controversial issues in applying economic evaluations for health policy decisions [23]. In Mexico, the threshold for cost-effectiveness analyses is explicitly linked to the gross domestic product per capita [22,28]. In Colombia, the MoH and the HTA agency have suggested the lower and upper thresholds to be 1 and 3 times the gross domestic product per capita, respectively. Also, in Colombia a technology prioritization system with MCDA methodology was constructed on the basis of 15 criteria in 2013 [6]. They applied the Evidence and Value: Impact on DEcisionMaking framework [29], with 13 criteria of the framework and two locally generated criteria. According to our survey results, these examples and initiatives should be followed by other Latin American countries as well.

Although lack of HTA quality elements was reported in our survey, according to the ISPOR, four Latin American countries (Brazil, Colombia, Cuba, and Mexico) published methodological guidelines for pharmacoeconomic evaluations [30]. Methodological guidelines for the economic evaluation of health technologies are also available in Chile [31]. The development and implementation of such tools are proceeding in different ways in different countries, which may be the consequence of fragmentation of health care systems in the region [32]. Nonetheless, more countries should follow the example of these countries and develop their own tools to improve HTA implementation in the local context.

The need for improving transparency was also reported in our survey. In a few countries there are initiatives for such purposes. The "Brazilian Health Technology Assessment Bulletin" was developed to increase the adaptation of scientific evidence among those involved in health care decision making. It was introduced as a joint effort by public institutions [33]. The number of published HTA documents has been increasing significantly in Latin America since 2000. Although this improves the transparency, most published studies were only short documents, and therefore they rarely addressed all HTA components such as ethical, social, and/or legal issues [34].

HTA transferability experiences were already reported in Latin American and Caribbean countries [35,36]. According to various decision makers and researchers, these countries heavily rely on evidence from other countries as an input to conduct local reports. Moreover, information from outside the region is considered useful, applicable, and adaptable. In addition, authors reported that evidence from neighbor countries has a great potential for transferability and applicability; nevertheless, certain barriers need to be addressed such as limited transparency, methodological quality, and production of publicly available reports [35,36].

Some literature references describe good examples for the collection of local data. In Uruguay, a project was initiated in 2010 to monitor the outcomes and impact of the established treatments with real-world registries at the level of individual patients [6]. The National Committee for Incorporation of Technologies in Brazil prioritized to improve quantitative methods applied in HTA. There were, however, no utility data for most of the important diseases, and therefore research initiatives were financed from public resources to define utility values for the Brazilian population [23]. Such research initiatives may contribute to the adoption of quality-of-life aspects in the process of decision making by regulatory bodies or health policymakers and may set examples for other countries to follow.

Initial steps toward international collaboration related to HTA implementation were introduced in Latin America a long time ago. PAHO began to promote HTA as early as 1983. Since 2000, PAHO became more active in producing publications on HTA and fostering collaboration among academic centers [5]. PAHO launched the Regional Network of HTA for the Americas, which focuses on regional exchanges of information to support decision making on regulation, use and replacement of technologies, improvements in the quality of care, and rational use of technologies [37]. According to the survey results, these initiatives need to be more visible for HTA stakeholders. In terms of capacity building, the European example of international HTA training provided by ISPOR [38] may be relevant for this region as well.

Conclusions

Although HTA implementation is most advanced in more affluent Western Europe or North America, middle-income countries increasingly apply HTA to support health policy decisions [39]. Latin American countries are improving their HTA systems on the basis of their own needs. HTA processes are increasingly adopted to prioritize the use of health resources; nevertheless, those may vary in terms of underlying mechanisms and methodologies [22].

Latin American countries are moving toward the institutionalization of HTA and increasing its role in the decision-making process [6]. Nevertheless, low-quality data, financial constraints, and limited human capacity represent the most important challenges of HTA implementation [7]. Key HTA principles seem to be relevant to most HTA doers and users in Latin America [4]. Their application, however, was reported to be uniformly poor,

and significant absences were observed regarding the links between HTA and decision making [40]. Moreover, institutionalizing HTA research and finding its place in the complex governance of health care are also challenges [12]. Health care systems are still in the transitional phase in some countries, although in others the complex political and administrative structure makes it difficult to ensure optimal implementation of HTA.

On the basis of our survey, general trends could be identified to develop HTA road maps in Latin American countries. More graduate and postgraduate trainings have to be developed on the basis of country-specific needs, and increased public budget is needed for HTA research and the critical appraisal of HTA submissions. In policy decisions, the role of local evidence and data has to be strengthened, which translates to the extended use of local patient registries and payers' databases. There are two main options for the institutionalization of HTA: a central HTA agency with the support of academic networks or the establishment of multiple HTA bodies within a country preferably with central coordination. The scope of HTA has to be extended to non-pharmaceutical technologies and should include the revision of previous policy decisions. Although cost-effectiveness with explicit threshold remains the most preferred HTA criterion, several other criteria have to be considered, maybe even by applying an MCDA framework. The quality, transparency, and timeliness of HTA processes have to be improved. Finally, duplication of efforts can be reduced if international collaboration is integrated into national HTA implementation.

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Supplemental Materials

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