



The International Network of Agencies for Health
Technology Assessment

The Influence of Health Technology Assessment
A conceptual paper

April 2014

Document prepared by

David Hailey (ASERNIP-S)

Karen MacPherson (HIS)

Alicia Aleman (MSP-Uruguay)

Rugayah Bakri (MaHTAS)

for the INAHTA Working Group on HTA Influence

Contact Information

INAHTA Secretariat

c/o Institute of Health Economics

#1200, 10405 Jasper Avenue

Edmonton, Alberta, Canada T5J 3N4

Tel: +1 780 401 1770

Mobile: +1 780 278 7043

Fax: +1 780 448 0018

Email: INAHTA@ihe.ca

Web: www.inahta.org

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Foreword

The objectives of this paper are to provide a high level overview of concepts related to the influence of health technology assessment (HTA) that have been discussed between INAHTA members, and to give a general outline on this topic for those who are interested in HTA.

The paper draws in part on suggestions made in the table discussions at the 2012 Annual Meeting of INAHTA. Issues discussed included definition of HTA influence, methodology for its assessment, reporting and communication, use of information on HTA influence, and barriers to recording HTA influence.

1. Scope and definitions

Health technology assessment (HTA) is the systematic evaluation of properties, effects, and/or influences of health care technology. It may address both the direct, intended consequences of technologies and their indirect, unintended outcomes.

The primary purpose of HTA is to inform decisions relating to national, regional or local health care systems. Such decisions may relate to the procurement, funding or appropriate use of health technologies and also to disinvestment in obsolete or ineffective technologies [1].

A secondary purpose is to contribute to global knowledge on assessment of specific technologies. HTA provides source material for research and for guidelines and other documents. Examples of types of decisions informed by HTA are shown in Table 1.

Table 1: Stakeholders and types of decisions informed by HTA

<i>Organizations or individuals</i>	<i>Types of decisions that are informed</i>
Government agencies, parliaments	Regulatory approval, reimbursement, public health programs, research funding
Health care professionals	Adoption of technologies, practice guidelines
Hospital and other health care administrators	Equipment procurement, availability of procedures, service delivery
Private sector insurance	Scope and extent of coverage
Manufacturing industry	Product development, marketing
Patients, carers, and their representatives	Guidance for treatment and support, access to services; shared decision making with health care professionals
General public, citizens	Information for future decisions on health care
Legal professionals	Judges' decisions after demands for the use of high cost health care technologies
Academia	Information for future health care professionals, decisions on research

Definition of HTA influence

If the purpose of HTA is to inform decisions, description of its influence must consider whether the information provided has had any effect on the decision makers and in what way.

There may be no common definition of HTA influence. Various types of outcome may be of relevance. The influence of an assessment may depend heavily on administrative frameworks, overall context and types of stakeholder. In principle, influence could include decisions taken, behaviour change and knowledge awareness, among other outcomes.

In this paper HTA influence is considered broadly as any action or activity that can be credibly linked to information provided by an HTA to a decision maker.

Levels of assessment

Assessment of influence might be applied to individual reports, to HTA generally or to HTA agencies. In this paper, the focus is often on the influence of individual HTA reports, which has been the perspective taken in other INAHTA work [2, 3]. Information from appraisals of a number of individual reports could contribute to a description of the influence of HTA generally.

Some examples are also given of the assessment of HTA agencies and programs, which have considered HTA influence but also other aspects of the agencies' work.

This paper has a focus on issues that will be practicable and of value to assessment programs and to the decision makers they inform.

2. Context

HTA programs combine detailed scientific analysis and interaction with various players in the health care sector to provide a particular type of policy advice. The influence of HTA programs is in part determined by the quality of their reports, but also by how effectively their findings are disseminated and by broader relationships between other organizations.

Health systems, mandates of agencies

The influence of HTA has to be placed in the context of the health systems it informs. Any influence of HTA will depend on how information it provides is used and the status that the guidance has, for example whether it is mandatory. As the decision makers will be outside the HTA agency or program, influence will depend on the actions of third parties. A target for an assessment report may be, for example, an advisory body or a policy area within a health ministry. The target will be working within a framework determined by policy, administrative arrangements and organizational structure. Together, these will contribute to the context in which decision-making is carried out, with input from the HTA.

Any HTA program will have overall reporting obligations to some governance entity. The governance entity may determine and monitor the mandate of the HTA program and suggest directions at a high level – such as whether there is to be a focus on assessment of particular types of technology. Governance may be in relation to specific health care programs or organizations. Certain values may be brought to the HTA program.

Formulation of questions

A key part of the relationship between the health care decision maker and HTA is the formulation of questions – deciding which issues to study and which approaches to take. The organizations, or possibly individuals, that are the main targets for an assessment will often play a major part in raising and helping define the HTA question(s). Typically, there will be an interactive process between the requestor of an HTA and the program.

Purpose of the HTA

Following from formulation of the question is the purpose of the HTA. A framework developed by INAHTA [4] gives eight types of decision that might be informed by HTA. These are *coverage, capital funding, formulary, referral for treatment, program operation, guideline formulation, influence on routine practice* and *indications for further research*. Other types of decision not considered in the framework include those taken through a judicial process.

HTA conclusions

The context of HTA includes the conclusions reached by the assessment report. Not all HTA reports will include recommendations, but the direction of findings will provide important information to the decision maker and also a reference point for any future influence.

The influence of HTA can also be considered in the context of the HTA - policy cycle, and when in a technology's life cycle it is being assessed. An HTA report may be associated with policy

change and implementation, leading to a change in practice. Subsequent use and performance of the technology is monitored and, where appropriate, reassessed with preparation of a new HTA report. Through this process HTA contributes to the making of informed policy choices. In practice, resource constraints will place limitations on the numbers of health technologies that can be followed up in this way by HTA organizations [1].

Levels of influence

In principle, there will be interest in the influence of an HTA:

1. *On policy and administrative decisions:* Much of the focus on HTA influence has been in these areas.
2. *On subsequent administrative action:* Administrative action is dependent on the availability of effective machinery and the willingness of the decision maker to make use of it. The HTA agency may be distanced from this process; other influences on the decision maker can become more significant.
3. *On delivery of health care and on the health status of patients:* Changes to health care and/or health outcomes related to a health technology may have a weak link to an HTA report. Influence of an HTA report on subsequent action and outcomes within a health care system depends on the actions of many individuals and organizations.

For point 1, there is need for effective dissemination from the HTA agency or program. For points 2 and 3, there is a need for effective administrative machinery. For point 3, there will be many other influences on eventual outcomes [5].

3. Factors that affect the influence of HTA

Formulation of the question

Agreement between the HTA program and the decision maker at the start of the project on the scope, approach, and time line of the assessment will be an important factor in the subsequent influence of the HTA report.

The decision maker will need to be clear on what parts of the question of interest are likely to be usefully addressed by HTA and to what extent. Those in the HTA program will need to confirm that the proposed task is within its mandate and that the nature of the request is matched by the resources available. The focus of the assessment should be clarified and refined through iterative discussions. Other matters for discussion may include how the HTA will be used by the decision maker, and the types of decision that it is likely to influence. Possible difficulties with the process and approaches to addressing these are shown in Table 2 [6].

Table 2: Possible difficulties associated with formulation of the HTA question

<i>Area of difficulty</i>	<i>Features</i>	<i>Possible approaches</i>
Inadequate definition of the question(s).	Unclear on purpose of work, policy implications. Uncertain resource implications.	Dialogue with organization/ person requesting the HTA. Refine focus of the assessment through discussions.
Inappropriate question.	Question is outside mandate of the HTA program. Unnecessary duplication of earlier work.	Deny support for project; suggest alternative sources of advice. Provide information on material that is already available. Apply consistent criteria for refusal of requests.
Scope of assessments: technologies considered, questions addressed.	Suggestions that HTA program resources should be applied to other topics or forms of analysis.	Keep under review; provide information to show HTA products are consistent with the program's mandate and address relevant issues.
Unrealistic time frame.	Too little time for assessment, having regard to other work, resources available, data available.	Negotiate realistic time frame; consider partial assessment, more limited analysis as interim step.
Lack of understanding of how the technology may be used in the local context.	Uncertainty on relevance of the question, or of studies from other regions, to the local health system.	Use local experts to define the scope of the technology and to provide a clearer idea of current and future uses

An added difficulty in some jurisdictions is policy makers asking questions that are later identified by clinical experts as clinically inappropriate. The policy makers have insufficient clinical knowledge to fully understand the implications of what they are asking for and the HTA agency is caught between them and the clinical opinion leaders.

Approach used in the assessment

Much of HTA is concerned with secondary research, providing a synthesis of primary studies and making use of systematic reviews. However, the approach taken will reflect the question that has been raised, and characteristics of the decision problem. Granados [7] has illustrated the use of different approaches in HTA to assist clinical decision making with examples from the Catalonian HTA program. Process variables associated with oxygen therapy were addressed through a local survey of patients. Examination of varying quality of cardiac surgery at different centres was assisted by use of risk-adjusted mortality analysis. Future use of low osmolar contrast media was assessed through a systematic review and cost effectiveness analysis, and a systematic review was used to assess the efficacy of the transmyocardial laser for severe coronary disease.

Quality of the HTA report

The perceived technical quality of the report will be an important factor on its influence. Presentation and accessibility to the intended audience should also be considered. Other elements of quality are the relevance of the findings to the policy issue and whether the

conclusions are realistic in political terms. The level of trust that the decision makers have in the producers of the HTA report will be an important factor.

Timeliness of the HTA

From a decision - making perspective, if an HTA does not meet the specified deadline the opportunity to influence the decision may be lost, and other sources of advice may become more significant. If a full answer to the question is unlikely in the time available, this needs to be established early and clearly. Interim advice, including rapid assessments, may be a useful option.

The urgency of the decision maker's request may change and should be kept under review. A review of a Canadian HTA program noted the considerable delay that occurred with an assessment of ovulation induction therapy to inform a coverage decision. There was apparent loss of interest by the client after considerable work had been done. The matter was resolved with re-negotiation of the question following advice by the program. HTA information was eventually of importance in helping the client formulate a position on use of the technology in management of ovulatory failure to facilitate conception and use in association with assisted reproductive technology [8].

Effectiveness of HTA dissemination

Dissemination, the process by which decision makers are informed and influenced, is an integral and challenging part of HTA. The essence of effective dissemination is that it is an interactive exchange between researchers or other knowledge mobilization staff and those they are intending to influence. A study undertaken by EUR-ASSESS distinguished between diffusion – a passive process by which information is spread; dissemination – an active process of spreading a message to defined target groups; and implementation – a more active process which includes interventions to reduce or remove barriers to change, and activities to promote change [9].

To be useful, the HTA product must be adopted by the client, and perhaps other parties, and used to inform a policy or decision. A risk from ineffective dissemination is that the key messages from the HTA product will be ignored or misunderstood.

Identifying the needs and skills of clients, and translation of HTA evidence into readable and digestible information are key challenges. Such issues are addressed in some HTA programs through knowledge mobilization (KM), a process that includes dissemination.

KM refers to moving available knowledge from HTA into active use. It involves knowledge sharing between producers and users of HTA, often with the help of third parties or intermediaries. KM is a spectrum of activities which vary with the type of research, the timeframe, and the audience being targeted. The intent is to make HTA findings matter more in policy and practice for organizational and system improvement. Approaches may include provision of summaries of HTA projects, use of online resources, decision aids, and workshops.

Machinery available to decision makers

The influence of an HTA depends on action by the target(s) of the assessment as well as the information provided. A target may be, for example, an advisory body, a committee or an individual. The target may be working within a framework determined by government policy, administrative arrangements and organisational structure. Together, these will contribute to the context in which decision-making is carried out, with input from the HTA.

Secondary influences of an HTA may arise through consequences of decisions taken as a result of the information provided. For these to occur, the decision makers will need to have access to effective policy or administrative instruments and have the will to use these. Examples of secondary influences include level and conditions of reimbursement, controlled introduction of a new technology, and decrease in use of a technology for inappropriate applications.

4. Reasons to assess HTA influence

Quality assurance for the HTA program

Assessment of HTA influence is desirable to provide feedback on the quality of the HTA process and to check on any difficulties with the policy areas that it is informing.

Information on the influence of HTA reports and other products is a useful aid to management of an HTA program. Such information can help to identify factors that determine the influence of assessments, and support better targeting and the development of dissemination strategies [1]. Information on influence can provide an input to evaluation of the overall effectiveness of an HTA program, taking account of assessment and resources components [10].

Details of HTA influence will also be helpful as input to the work program, for example regarding decisions on whether to follow up completed reports with further assessment.

Overall, the influence of HTA reports is a key indicator of the output and performance of the HTA program. Supervising institutions may request reports on the outcomes of HTA in order to justify the use of resources.

Reporting obligations

It is also prudent for HTA programs to have some measure of the outcomes of their efforts for the purposes of audit and review. As noted previously, HTA programs will have overall reporting obligations to governance. Reporting to funders of the HTA program will be important to demonstrate that objectives have been met. Demonstration of the influence of the HTA program will help to get and keep government and/or other funding and resources for the organization.

Contribution to information and knowledge about HTA

Information on the influence of assessments can have a wider role in making a contribution to a broader perspective of HTA's achievements and usefulness.

Examples from INAHTA members

Table 3 shows results from a survey of INAHTA agencies on the use they made of information on the influence of their products. Information on the influence of HTA products was generally made publicly available outside the agency by seven of the respondents.

Examples include material:

- gathered during evaluations of the agency and its work;
- in summary documents on publicly-funded technologies released by the government that outline the reasons for the decisions undertaken by the policy body;
- in hospital policy decisions; and
- as input to HTA databases.

Table 3: Use made by 14 INAHTA members of information on HTA influence

<i>Use by the agency</i>	<i>Number of responses</i>
Internal management	11
Report to funders, clients	8
Archive for program records	8
As input to the work program (e.g. follow up of HTAs)	7
Advice to governance (e.g. governing Board or parent organization)	7

Further indications of reasons for measuring HTA influence are provided by statements in reports on reviews of HTA programs.

KCE, Belgium [11]

"The purpose of this document is in first instance a political one. Under the present coalition agreement, the Minister for Social Affairs and Public Health must annually present a report to the Parliament on the extent to which the KCE reports were implemented.

"Impact" was defined as the extent to which project-specific conclusions and/or recommendations were taken on board. This type of impact is a multi-level one, depending on the target group (government, patient, care institution, individual care provider).

Aside from being a useful policy instrument, this report is also a valuable tool for the KCE itself as it offers a number of elements which will allow us to enhance our know-how on impact evaluation and improvement."

HIS, Scotland [12]

“A survey was undertaken in 2008 to assess how key decision makers in NHS Scotland accessed information on new technologies and their expectations of the newly constituted Scottish Health Technologies Group (SHTG). This follow up evaluation was undertaken in 2011 to provide a measure of how well SHTG is performing within its role and to guide the future direction of the group.”

MaHTAS, Malaysia [13]

“The general objective of this study is:

To determine the impact of HTA products in influencing decision of health care providers, policy makers, and researchers in matters relating to health technology

This study will not only benefit to the Ministry of Health, HTA unit and all the public hospitals in Malaysia, but also to the researcher and academicians who are interested in this area. The benefits of this study are as follows:

To assist the HTA unit to make decisions about program identification, continuation and delivery

To enable the HTA unit to improve its product presentation and dissemination strategy to its stakeholders

To assist the HTA unit by strengthening and improving the assessment by looking at the outcomes.”

SBU, Sweden [14]

“The Government has issued instructions requiring SBU to carry out a number of specific assignments. We are to evaluate healthcare methods from a medical, economic, social and ethical point of view. Furthermore, SBU is to disseminate its assessments such that care providers can take advantage of its conclusions, as well as monitor use of the knowledge that has been passed on and the results that have been achieved. This report attempts to examine the success of the latter assignment, i.e., to monitor knowledge use and results.

SBU has no decision-making power and must therefore rely on its trustworthiness and its ability to disseminate knowledge and use effective implementation strategies.”

AHFMR, Canada [8]

Reports on the operation of an HTA Unit, which included consideration of HTA impact, provided an overview of the effectiveness of the Unit as an aid to its future management.

“Most of the HTA reports produced by the Unit appeared to have had a useful influence on decision making. Time taken for review and production of longer reports, and limited support available for dissemination activities were matters related to HTA influence that were in need of ongoing management.”

5. Indications and measures of influence

Core issues are whether HTA influences decisions and to what extent. A starting point in assessing influence is getting feedback from the decision maker following dissemination of an HTA.

Indications of influence

The INAHTA framework [4] provides basic indications of types of influence that an HTA might have:

- HTA considered by decision - maker (the HTA was considered but further influence was not obvious/ apparent).
- Acceptance of HTA recommendations/ conclusions (clear acceptance of HTA findings often, but not necessarily, linked to action by the decision maker).
- HTA demonstrated that a technology met specific program requirements (in circumstances where the HTA and its findings are linked to a program, for example where minimum standards must be met before some type of approval is given).
- HTA material is incorporated into policy or administrative documents (material in an HTA is cited in subsequent documentation).
- HTA information is used as reference material (the HTA is used by decision makers, and others, as an ongoing source of information).
- HTA is linked to changes in practice (the HTA may be one of a number of factors influencing such change)
- No apparent influence

Other measures

The indications listed above may be supplemented by other measures of influence such as awareness of or satisfaction with the HTA program and its products. These may be useful in indicating the level of contact with the HTA program and possible gaps in communication. They should be regarded as limited measures of HTA influence, which implies actual decisions or activities as a result of assessment information and findings.

Examples of assessments from INAHTA members that illustrate some of these indications of influence are shown in Table 4 [3].

Table 4: Examples of influence of assessments from INAHTA agencies [3]

<i>Technology</i>	<i>Direction of findings</i>	<i>Issue</i>	<i>Indications of influence</i>	<i>Details</i>
Autologous blood donation Quebec, Canada (AETMIS)	No clear advantage over existing alternative technology Few reasons to support	The HTA provided input to guideline development and program management	Recommendations/ accepted. Material incorporated in policy or administrative documents. Used as reference material	Used to inform a general statement on ministerial policy. Used by hospital managers to establish rules concerning utilization of services
Triptans for acute migraine, Canada (CADTH)	No differences between triptans	The need for further assessment was indicated by a rapid HTA, leading to follow up HTAs	Further research work undertaken, building on the information provided in the HTA	Governments reviewed the HTA report and had additional research questions that built on the information already provided.
Excimer laser in refractive surgery (myopia), Spain (AETS)	Effective but optical correction is more cost-effective. Some risks were not established	Informed decisions	Issue and HTA report considered by a national expert group on ophthalmology	Decision makers considered the expert group's findings
Filler material for the treatment of HIV lipodystrophy, Spain (AETS)	Insufficient evidence of effectiveness and safety. Suggested providing support for further research	Denial of coverage	The procedure was not included in the benefits package of the Spanish National Health System	Some consideration of HTA by decision maker The topic was prioritized for research
HPV vaccine , Brazil (DECIT/CGATS)	Effective in countries with good diagnostic coverage. In local context costs might be unacceptable, coverage was still low for other technologies eg Pap smear	Indicated the need to consider information on the technology in the context of the local health care system that the HTA was informing	Consideration of HTA by decision maker. Showed the necessity of identifying costs and value of the National Policy on Detection of Uterine Cancer	Vaccine not introduced at that stage, other priorities in this area
Double balloon enteroscopy, Australia (AHTA)	Effective and likely to be safer than the alternative technology.	Informed decisions on coverage - input to a decision making process of the Department of Health and Ageing	Recommendation for public funding for DBE in the diagnosis and treatment of patients with obscure gastrointestinal bleeding	Recommendation accepted by Minister
Robotic surgery, USA (VATAP)	No clear advantage over standard procedures.	Newer technology with no advantage over existing alternatives. Report identified those applications with best evidence of offering safe and cost-effective alternatives to current practices	Report had a major influence on decisions	Cautious introduction of the technology

6. Assessment of influence

Who does the evaluation?

Almost inevitably the HTA program will itself be involved at some level. Probably there will be important details to consider that only the program can access readily.

As a minimum the HTA program needs to know where its reports are going, whether they have been received, if they have been understood, if there are any difficulties, and whether further work is needed. And, if there are difficulties, whether the decision maker's point of view is consistent with the position agreed to at the start of the assessment.

Contracting assessment of influence to an external evaluator may be an option. It can be useful to get perspective and opinion from outside the program, if the contractor is competent and suitably informed.

Approaches to assessment of influence

Both quantitative and qualitative measures may be used; in practice, much of the reporting of influence may be qualitative. The INAHTA HTA influence survey found that e - mail and surveys were the most common approaches to obtaining feedback on the influence of HTA products. Also used were telephone, video or face to face meetings and reviews of publications and data bases [2].

Other approaches included:

- Reviews of whether assessed technologies get funded, and if the funding decision and description are consistent with the HTA and the evidence presented.
- Use of liaison officers in different jurisdictions to make local connections.
- Direct observation or participation in policy discussions.
- Checks on meeting reports to see which horizon scanning products are taken forward for technology appraisal and/or guidance.

As a basic routine, it would be appropriate to obtain sufficient information on each assessment for the agency or program to decide on one of the INAHTA framework categories of HTA influence:

- Minimal
- Some consideration of HTA
- Some input to decisions
- Major influence on decisions

Preferably, compare the rating given with external opinion, for example from the organization that requested the HTA, and from professional bodies.

Follow up with decision makers

The influence that an HTA report will have is highly dependent on the dissemination process. As part of that process, the HTA agency should aim to generate some reaction from decision makers to the material and advice that have been provided. Such feedback gives some initial indication of possible HTA influence [1].

A routine monitoring system introduced in Québec has been used to measure some outcomes of the HTA process and products [15]. Six months after publication of a report, requesters (representatives of the organization that made the request) and users (representatives of the organizations targeted by the recommendations) were invited to participate in a 15-minute semi-structured telephone interview. Interviewees were invited to comment on the following issues:

- Dissemination of the report by requesters and users
- Satisfaction of requesters regarding services
- Satisfaction of requesters and users regarding reports
- Utility of the knowledge produced in the reports
- Use of the knowledge produced in the reports
- Relevance of the recommendations
- Intention to adopt the recommendations

This monitoring system does not measure the actual influence of an HTA report, but rather the reactions of the primary target towards the report, and their intention of action. However, the perceived relevance of recommendations and intention to adopt them can be used as a proxy for influence.

Healthcare Improvement Scotland uses after action review methods to solicit feedback through a standard form distributed to all topic referrers on completion of each evidence review [16]. There are four questions dealing with opinions on the review (What did we do well? What did we do less well? Were there any differences between what you expected and what you received? Are there any lessons for us to learn from this project?). A final question relates to HTA influence (What impact has the SHTG evidence review and advice had within NHS Scotland?).

The feedback received to date has been used to improve processes within the assessment program. The information on HTA influence was of a preliminary nature. “While the reported impact of the work of the SHTG is encouraging, we are not able to assess what difference, if any, SHTG evidence reviews and advice have made to patient care. This would involve much more comprehensive evaluation and resources” [16].

Evaluation of HTA programs

Reviews of short term influence of HTA reports

The KCE study considered the impact of 78 reports published by the agency during 2009-2011 [11]. Sources used varied from report to report and included staff working on the projects, relevant websites, legislation and media articles.

Areas where HTA impact were considered included the political-legislative and economic domain, care and patient organizations, public opinion, the media and the scientific forum. The impact on the political-legislative domain was graded as direct impact (at least one recommendation was implemented) and indirect impact (recommendations featured in debate on the topic in question but had not as yet been implemented). A grade of "not measured" was given to impact of 11 reports containing recommendations aimed at individual health care professionals (mainly practice guidelines) or dealing with methodological issues.

About half of the remaining 67 reports were deemed to have had a direct impact and about one third were currently under discussion. In the case of one HTA report a decision was taken that went directly against the KCE recommendations.

HTA influence as part of a broader review of an HTA program

The review of MaHTAS was based on a survey of persons in public hospitals, state and district health departments, research institutes and the Ministry of Health [13]. Much of the detail was in terms of overall output from the HTA agency, with some details relating to assessment of specific technologies. Impact of HTA was one of six sections in the survey questionnaire with responses provided using a 5 point Likert scale. A second phase of data collection involved interviews with personnel from organizations under the Ministry.

High proportions of respondents agreed that HTA reports from the program were considered by decision makers, that their recommendations were accepted, that HTA information was incorporated into policy or administrative documents and that HTA was linked to change in policy and to resource allocation decisions.

Between 43% and 53% of respondents reported awareness of HTA reports on five technologies, and between 16% and 30% had made use of one of the reports. There was lower awareness of another category of HTA products, Technology Reviews.

Reviews of the Alberta HTA program [8] included some information on the influence of its reports. For the most part, this reflected the experience of program staff in managing individual projects, and there was also supporting information through documents from clients and other organizations. The data therefore gave a "snapshot" of the program's influence, but there was no detailed study to substantiate the opinions presented. Using the INAHTA classification, of 36 reports 3 had minimal influence, 11 had some consideration, 19 provided input to decisions and 3 had a major influence.

Longer term influence – effects on clinical practice

SBU has systematically sought to measure the extent to which it has affected clinical practice through surveying practice patterns before and after the publication of its reports. A 2010 overview considered older reports, those from 2006-08 for which some influence should be visible, and those from 2009 whose influence might not yet be fully apparent [14].

Examples of influence of the older reports included decrease in routine X-ray examinations, ECGs or clinical laboratory tests on healthy people without previous relevant diseases; decreased use of devices for bone density measurement after SBU found that there was insufficient evidence to recommend their use in screening; rapid increase in the prescription of the most effective medications in treatment of alcohol and drug dependency; and increase in the national participation rate for mass hearing screening of newborns.

Examples from the 2006-2008 reports included redesign of procedures for mild head injury, with increase in use of CT and decrease in hospital observation; data for the design of healthcare programs for treatment of chronic pain; and development by professional bodies of guidelines for diagnosis, follow-up and treatment of glaucoma.

7. Challenges

Resources and data for assessment

Any detailed appraisal of HTA influence, especially in the longer term, can become a significant research project. Such projects may be resource intensive, and be undertaken only occasionally. Measuring health – related outcomes can be time-consuming and may require long-term follow-up. Availability of data may be an issue; access to records may need to be negotiated, or surveys of users of health technologies put in place.

However, the degree of difficulty depends on level of detail sought and time line. Short - term evaluation of influence on decision makers may need only modest resources. Essentially it is a question of incorporating approaches to obtaining indications of influence into the routine management of an HTA program. The examples given previously of the experience of some INAHTA members show the potential for building on the relationship between the HTA program and the decision maker.

External influences

An HTA program may have substantial control over output of its products and of its internal management. Other areas, including overall influence, will tend to be outside the control of the program. The influence of the HTA program will in part be determined by the effectiveness of other organizations. Inefficiencies in client and other organizations external to the HTA program may undermine the potential influence of HTA products and contribute to difficulties in their production.

Changes to health care and health outcomes may have a tenuous link to the HTA report. There is an inherent difficulty in determining how third parties actually use the specialised HTA

information that has been provided [10]. Influence of an HTA on subsequent action and outcomes can sometimes be discerned but activities and performance within a health care system may be influenced by many factors.

Opinion and changes in bureaucracies

Typically there will be many influences and inputs to policy making, including political influences. A study by Ross [17] gave an indication of what factors are seen as useful by Australian health care decision makers. Evaluation-related input, including economic information, was seen as influential on decisions for allocation of resources. However, more important factors were considered to be political views (including government philosophy), existing policies, administrative feasibility, timing, and equity.

There will also be numerous other influences on policy decisions. For example, in Scotland government chose to fund transcatheter aortic valve Implantation (TAVI) on a limited basis due to political pressure despite advice that this was not supported by published clinical and cost effectiveness evidence.

Another hurdle for researchers in disseminating their findings is the volatility of policy areas, with rapid turnover of staff and reshaping of administrative structures. Decision makers will move on and their successors will need educating. Such changes to personnel strengthen the need for decision makers to be provided with clear descriptions of the technologies that are the subject of the assessment.

Other factors

The HTA process can reach conclusions and deliver messages that are unpopular in some quarters. Health technologies may not meet the expectations of their proponents, on the basis of available evidence. Definitive answers sought by policy makers may not be deliverable in the absence of data and presence of complicating or confounding factors.

Risks to the operation of the HTA program may have an effect on its influence. A type of risk identified in a review was that “stakeholders, policy-makers or vested interests may wish to interfere or influence the independence of the scientific process or findings and interpretation of an HTA” [6]. Such a risk is not always easily related to elements in the HTA process like preparation of the report and dissemination that are usually considered.

8. Reporting and communication

Targets for HTA influence information

Data related to HTA influence are important for those who manage an HTA program and for the staff who work within it. It is also essential for there to be appropriate reporting back to governance and to sources of funding. Provision of information outside the program may require consideration, including use that might be made of it and which details of HTA influence are appropriate for wider release.

One approach could be to provide only 'good' examples of influence to foster an awareness of HTA and its benefits. On the other hand, 'failures' as well as successes need to be considered and acted on if influence measurement is to be useful for HTA program management, and as feedback to clients.

A balance must be struck between prudent management of risks, and maintaining the benefits from the HTA process. Overall, open provision and wide distribution by HTA programs of information on their influence is recommended. If an HTA program becomes overly concerned about risk, then it is likely that its output will suffer and its influence decline, in turn generating the major risk of becoming irrelevant and dispensable [6].

Approaches to providing information

As suggested by some of the approaches discussed in this paper, details of HTA influence may be appropriately included in outputs from HTA agencies, such as annual reports, newsletters and website articles. These outputs should be supplemented if possible by articles in peer-reviewed journals.

Experience with systematic reporting of HTA influence

When the INAHTA framework for reporting on impact of HTA reports was developed, it was envisaged that it might be used as a basis for systematic reporting by member agencies, through the website, of basic information on HTA influence. This remains an option, though use of the framework for routine reporting has been limited. A possible future direction for INAHTA members would be to prepare annual reports on the influence of their HTA products, rather than a separate response for each report. The framework might be a helpful resource in collecting information for such reports. Continued collection of this material is important, both to provide an information repository, and to ensure that HTA agencies consider this aspect of their work.

References

1. Hailey D, Babidge W, Cameron A, Davignon L-A. *HTA agencies and decision makers. An INAHTA guidance document*. INAHTA, May 2010. Available <http://www.inahta.org>
2. INAHTA Working Group 3. *Survey on the measurement of HTA influence*. October 2011. Available: <http://www.inahta.org/>
3. Hailey D. A preliminary survey on the influence of rapid health technology assessments. *Int J Technol Assess Health Care* 2009; 25: 415-8.
4. INAHTA. *Framework for reporting on impact of HTA reports*. December 2003. Available: <http://www.inahta.org/>
5. INAHTA Working Group 3. *Measuring and reporting the impact of Health Technology Assessments*. November 2002. Available: <http://www.inahta.org/>
6. Hailey D, Juzwishin D. Managing external risks to health technology assessment programs. *Int J Technol Assess Health Care* 2006; 22: 429-35.
7. Granados A. Health technology assessment and clinical decision making; what is the best evidence? *Int J Technol Assess Health Care* 1999; 15:585-92.
8. Alberta Heritage Foundation for Medical Research. *Review of Health Technology Assessment products 2003 – 2004*. Edmonton: AHFMR; Information Paper IP-23, 2005. Available <http://www.ihe.ca>
9. Granados A, Jonsson E, Banta HD et al. EUR-ASSESS Project Subgroup Report on Dissemination and Impact. *Int J Technol Assess Health Care* 1997;13 (2):220-86.
10. Alberta Heritage Foundation for Medical Research. *Elements of effectiveness for Health Technology Assessment programs*. AHFMR, Edmonton: HTA Initiative #9, 2003. Available <http://www.ihe.ca>
11. Vinck I, Lona M, Swartenbroekx N. *Impact of the KCE reports published in 2009-2011. Methodology (MET)*. Brussels: Belgian Health Care Knowledge Centre (KCE) 2013. KCE Reports volA. D/2013/10.273/xx.
12. Healthcare Improvement Scotland. *Research into the impact of the SHTG* 12-15. February 2012. Available from: http://www.healthcareimprovementscotland.org/our_work/technologies_and_medicines/shtg_ad_hoc/evaluation_report.aspx
13. Norezam S, Bakri,R, Sabirin J, Ghazali I. *The impact of Health Technology Assessment in the Ministry of Health Malaysia*. Putrajaya: Ministry of Health, Malaysia. 2008, updated 2013.
14. Swedish Council on Health Technology Assessment. *Does SBU affect clinical practice? An attempt to estimate the impact of knowledge dissemination*. Stockholm; SBU, 2010.
15. Davignon L-A, Beauchamp S, Martin V. Logic model for improving the impact of a public HTA organization on decision making in the health system. Poster, HTAi 2009. *Ann Acad Med Singapore* 2009; 38 (Suppl) No. 6: S67.
16. Healthcare Improvement Scotland. *Summary of post-publication feedback on evidence reviews, SHTG* 13-33, June 2013.
17. Ross J. The use of economic evaluation in health care: Australian decision makers' perceptions. *Health Policy* 1995; 31:103-110.