Health technology assessment in Canada: diversity and evolution

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ABSTRACT

- Canada has health technology assessment programs at national, provincial and local levels.
- The programs have been complementary in providing advice to decisionmakers in health care.
- A national strategy for the management of health technologies is expected to strengthen communication with policy areas.

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For editorial comment, see page 262. See also pages 283 and 289

The first Canadian health technology assessment (HTA) program was established in Quebec in 1988. It was mandated to produce assessments of health technologies, to counsel the Minister for Health and Social Services, and to disseminate its findings to key constituencies of the Quebec health care system.[1] Since that time, HTA in Canada has evolved to include activities at the national as well as the provincial level, reflecting the organisation of that country's health system. In this article, I give a brief overview of these and expected future developments, and suggest where Australia might learn from the Canadian experience.

Health and health technology assessment in Canada

In Canada, provincial and territorial governments are responsible for organising and delivering health services for their residents. The health insurance plans that provide coverage to Canadian citizens are publicly funded and administered on a provincial or territorial basis, within guidelines set by the federal government.[2] The federal role also includes regulatory approval for pharmaceuticals and devices. HTA has been used to inform decisions on procurement and withdrawal of health technologies, on insurance plan coverage, on referral of patients for treatment in other jurisdictions, on clinical practice for older technologies, and on the development of specific programs.[3-5]

Most HTA activity has been associated with government-funded programs with permanent evaluation staff, although groups in universities and other organisations have made important contributions. In 1989, the national Canadian Coordinating Office for Health Technology Assessment (CCOHTA) began operations, and several other provincial programs followed. In 2006, CCOHTA became the Canadian Agency for Drugs and Technologies in Health (CADTH), reflecting an expanded role as the national technology agency. There are currently government-funded provincial programs in Quebec (*Agence d'Évaluation des Technologies et des Modes d'Intervention en Santé* [AETMIS]), Ontario (Medical Advisory Secretariat) and Alberta (Institute of Health Economics [IHE]). These programs are principally concerned with assessing health technology, and their findings and recommendations contribute to decisions made by government bodies and others about the dissemination of technology.

In addition, there have been several initiatives (through activities within health regions and hospitals) to put HTA in place at a local level to take account of specific organisational or clinical requirements. For example, in Montreal, the McGill University Health Centre established an HTA unit to provide advice on resource allocation decisions. Recommendations from 16 reports were all incorporated into hospital policy with estimated budget savings of about $3 million per year.[6] In Alberta, an ambassador program has been used to increase awareness of the best evidence on management of chronic non-cancer pain, with clinicians and HTA specialists (the ambassadors) holding interactive sessions with individuals representing 14 health and administrative disciplines in eight health regions.[7]

CADTH and the three existing provincial programs contribute to information exchange and collaborative activities with groups in other countries. All are members of the International Network of Agencies for Health Technology Assessment, a group of organisations from 23 countries that provides a forum for the pursuit of interests common to HTA agencies. CADTH undertakes "horizon scanning" activities to provide advice on technologies that are not yet widely used in Canada; this includes exchanging information with other agencies as a member of the Euroscan network.

The range of HTA products (eg, reports, briefs and electronic bulletins) from the various programs has widened over the years. Major reports on long-term projects have been supplemented by shorter, rapid assessments to meet requests for urgent advice (see Box). For example, an assessment in Alberta on the use of osteogenic protein-1 implant for the treatment of fractures[8] was completed in 2 months in response to a request from a regional health authority, and assisted the development of clinical guidelines for local use of the technology.

Most of the assessments have been targeted to government decisionmakers, but health care institutions, health professionals and patient associations have also been clients after approaching HTA programs.[3,4] Assessment proposals from non-government organisations are also considered by CADTH, AETMIS and IHE. Clinical effectiveness and economic aspects have been the areas most frequently assessed, with fewer HTA reports considering social or ethical issues.[9]

A review of the national and three provincial programs found that there had been little duplication of HTA activity. Different programs sometimes examined the same technology, but when this occurred there was a variation in the subject of the assessment, or a need for an updated assessment based on new evidence.[4] The HTA programs often adapt the content of their assessments to the "jurisdictional" context, depending on whether the questions being addressed apply to local, regional or national health technology issues.[9]

Does health technology assessment matter?

Because Canadian jurisdictions are autonomous on health insurance coverage issues, there is not such a clear link between HTA advice and implementation of national policy as may occur with some Australian HTA. In Canada, influence is more usefully considered in terms of individual provinces. A detailed study of the impact of 21 assessments in the Quebec health system found that all but three of the reports were found to have influenced

Examples of Canadian health technology assessments

Health technology assessment agency	Lengthy assessments	Rapid assessments
Canadian Agency for Drugs and Technologies in Health (CADTH)	Teriparatide and bisphosphonates for treatment of osteoporosis in women, November 2006	Lubiprostone (a chloride channel activator, for chronic idiopathic constipation), January 2007
	Non-physicians performing flexible sigmoidoscopy for screening, January 2006	Radiofrequency ablation in the treatment of kidney cancer, February 2006
	Telephone triage services: systematic review and a survey of Canadian call centre programs, December 2003	
Agence d'Évaluation des Technologies et des Modes d'Intervention en Santé (AETMIS)	Visual mobility aids for patients with night blindness, September 2006	Vacuum-assisted breast biopsy, June 2006
	Telehealth: clinical guidelines and technological standards for telerehabilitation, March 2006	
Institute of Health Economics (IHE)	Intensive intervention programs for children with autism, February 2001	Advance directives and health care costs at the end of life, July 2005
	Surgical treatments for deep venous incompetence, July 2003	
Medical Advisory Secretariat (MAS)		Metal-on-metal total hip resurfacing arthroplasty, February 2006
		Balloon kyphoplasty, December 2004
McGill University Health Centre (MUHC)		Probiotics in the prevention and treatment of *Clostridium difficile* diarrhoea, March 2005

policy.[10] Cost savings as a result of using the HTA findings were estimated at between $16 million and $27 million per year.[10] A study on rapid assessments undertaken as part of the Alberta HTA program found that 18 of 20 reports had an influence on policy, or provided guidance for decisionmakers.[5] Alberta has now implemented a decision-making process for funding of health services that are a priority from the provincial perspective, which links policy areas with HTA and input from interested parties.[11]

Assessments of pharmaceuticals undertaken by CCOHTA have had an influence on separate provincial decision plans over many years. Guidelines for economic evaluation were developed and used for this work.[12] In 2002, CCOHTA was given responsibility for the Common Drug Review, which provides a single process to assess new drugs for potential coverage by participating drug benefit plans.

Lessons for Australia

The provincial HTA programs in Canada do not have an equivalent in Australia. Useful assessment occurs at the state level in Australia on an ad-hoc basis, but establishment of HTA programs could provide continuity of evaluation expertise to deal with local issues. The Victorian Policy Advisory Committee on Clinical Practice and Technology initiative may help to meet this need in Victoria. Reports from HTA programs are available in both countries, but, in Australia, little is available in the public domain on assessments of pharmaceuticals associated with submissions to the Pharmaceutical Benefits Advisory Committee. Wide availability of Canadian HTA reports on the efficacy and cost-effectiveness of pharmaceuticals provides a more transparent picture of issues relating to that type of health technology.

The Canadian HTA programs provide advice relating to health insurance coverage decisions, but this aspect is less dominant than in Australia, where much of the focus has been on providing input to national health insurance programs. Further, Canadian HTA has assessed a broader range of topics, including issues relating to organisation and operation of health services. This wider scope has included HTA activity at the local level, as mentioned earlier, which is an area of assessment activity that seems more advanced than is currently the case in Australia.

Canada may also be better placed than Australia in the use of HTA programs to deal more generally with information requests on health technology. CADTH operates a Health Technology Inquiry Service for those involved in planning and providing health care in Canada. The Alberta HTA program handles requests for information from a range of government and non-government organisations and individuals.

Also, the Canadian programs have been active in promoting studies on HTA. For example, CADTH provides capacity-building grants, currently aimed at programs that focus on use and impact of HTA in decision making, and projects that develop decision-maker support tools. AETMIS offers documentation services intended primarily for health assessment researchers, and is a partner in an international masters program in HTA.

Future developments

The organisation of HTA, whether on a national basis or more locally, will be influenced by the size and nature of the health care system and the types of questions that HTA is asked to address. Canadian HTA has developed as a mixture of national and regional approaches. The national and provincial programs have been complementary in providing assessment on many types of technology for different levels of decision making. This successful mix of initiatives seems likely to continue.

The future of HTA in Canada will be influenced by a national strategy for the management of health technologies approved by health ministers in 2004.[13] The strategy includes provisions to strengthen the exchange of information between HTA programs and to provide better communication between HTA and policy

areas. Mechanisms include a health technology strategy policy-sharing forum for finding areas of common health technology policy interest between jurisdictions and a health technology analysis exchange to coordinate the provision of research evidence and policy advice. CADTH provides the secretariat for both mechanisms. These processes will build on Canadian experience over the last decade, and they promise to increase the usefulness of HTA as a means to inform health policy decisions.

Competing interests

David Hailey developed and directed a health technology assessment (HTA) program for the province of Alberta while at the Alberta Heritage Foundation for Medical Research, Edmonton. He was a member of the Scientific Advisory Panel of the Canadian Coordinating Office for Health Technology Assessment (now Canadian Agency for Drugs and Technologies in Health [CADTH]) for a number of years. He continues to undertake HTA work for both CADTH and the Institute of Health Economics, which now has responsibility for the Alberta HTA program.

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