

## Purchasing of medical equipment in public hospitals: The mini-HTA tool

Moreshnee Govender, Debjani B Mueller, Debashis Basu

The mini-health technology assessment (HTA) tool is valuable in assessing the quality of decisions regarding health technology management in South African public hospitals. The tool demonstrates the needs for improved decision-making and for developing an appropriate, customised instrument to support decision makers regarding medical device management.

Health technology in South Africa has changed rapidly over the past two decades. Current challenges include the introduction of

rapidly developing diagnostic technologies such as point-of-care testing (POCT) devices and national health insurance. The mini-HTA tool can play an important role in effective and efficient management of health technology in this setting.

*S Afr Med J* 2011;101:807-808.

**To the Editor:** Health technology assessment (HTA) is a multidisciplinary approach that involves the systematic evaluation of the consequences of technology on health care;<sup>1</sup> it facilitates evidence-based management decision-making in health care technologies and is applied at strategic and operational levels. HTA offers an excellent opportunity to enhance technology use in health care delivery.

In 1994, the Danish National Board of Health (later the Danish Centre for Evaluation and Health Technology Assessment – DACEHTA) recommended that a form capturing the HTA philosophy should be completed upon application for hospital devices and equipment. The form contained questions about technological, patient, organisational and financial aspects, and is recognised as the mini-HTA tool.<sup>2</sup> The need to apply this approach at the hospital level resulted in the development and widespread use of a version known as the mini-HTA tool, or hospital-based HTA. This tool offers a valuable and relatively quick decision support checklist for hospital managers to inform decisions about the acquisition of health technologies such as drugs, devices and other health interventions. Applying the tool to ensure informed decision-making regarding medical devices is important, since the latter consume a significant portion of health budgets. By 2006, the mini-HTA tool was being used in most Danish hospitals and was an important instrument in decision-making and implementation.<sup>3</sup> It was incorporated into the International Network of Agencies for Health Technology Assessment (INAHTA) toolbox.<sup>4</sup> Currently, South African public hospitals use no equivalent instrument, thereby compromising health technology management decision-making.

CMERC Health Technology Assessment Unit and School of Public Health, University of the Witwatersrand, Johannesburg  
Moreshnee Govender, MB ChB, MSc

Health Technology Assessment and Center for Research in Economics and Management in Health (CREMS), University Carlo Cattaneo (LIUC) and University of the Witwatersrand  
Debjani B Mueller, BSEE, Diploma Ingenieur Elektrotechnik

CMERC Health Technology Assessment Unit and Department of Community Health, Charlotte Maxeke Johannesburg Academic Hospital and University of the Witwatersrand  
Debashis Basu, MSc (Med), MPH, MBA, MMed, FCPHM (SA), PhD

Corresponding author: D Basu (Debashis.basu@wits.ac.za)

Our intention was to adapt and use the DACEHTA mini-HTA tool<sup>1</sup> to assess past decisions made by South African hospital managers, as applied to selected medical devices.

### Methodology

A cross-sectional survey using the adapted mini-HTA tool as a comprehensive questionnaire relating to decisions concerning patients, technology, economy and organisational influence of medical devices purchased over the past year was administered to 21 hospital managers.

### Results

Our study demonstrated deficiencies in medical device decision-making and the need for a decision tool to inform this process. Of the decisions assessed, 81% referred to devices used on patients. About two-thirds of these devices were different from those previously used, and only a third of decision makers considered alternatives and were aware of consumables used with these technologies. Only 10% could estimate the annual costs of related consumables and the additional or saved annual cost per patient/unit.

Many hospitals did not consider clinical need in terms of patient numbers and, more importantly, did not consider related risks (7.33%) or literature (10.43%) pertaining to the device introduced in their setting. More than half of the managers were unaware of the impact of these devices on the workload of their staff. Approximately half of the managers did no assessments on the effects of these devices on their organisation. The time from purchase of the device to delivery ranged from the same day to 9 months. In addition, only one-fifth of them were aware that the device was used in other facilities in South Africa or abroad, but the decision process did not use this information. Only two-thirds of the devices purchased had a maintenance plan. A third of the facilities had introduced point of care technologies in some departments, although there was no clear guideline in this regard.

### Discussion and conclusion

We demonstrated the value of the mini-HTA tool in assessing the quality of decisions made retrospectively and highlighting current management information gaps in South African public hospitals. The tool also demonstrated the need for improved decision-making and the need to develop an appropriate, customised tool to support decision makers concerning medical device management. The tool can support decision makers, especially with investment decisions for devices, and ensure 'value for money'.

Health technology in South Africa has changed rapidly over the past two decades.<sup>5</sup> Current challenges relate to the introduction of rapidly developing diagnostic technologies, such as point-of-care testing (POCT) devices such as the GenXpert, and the planned national health insurance. The mini-HTA tool can play an important role in effective and efficient management of health technology in this setting.

## References

1. INAHTA. Definition of HTA. <http://www.inahta.org/HTA> (accessed 20 June 2011).
2. National Board of Health. Introduction to mini-HTA – a management and decision support tool for the hospital service. 2005. <http://www.dacehta.dk/> <http://www.dacehta.dk/> (accessed 20 June 2011).
3. Ehlers L, Vestergaard M, Kidholm K, et al. Doing the mini-health technology assessments in hospitals: A new concept of decision support in health care? *Int J Technol Assess Health Care* 2006;22(3):295-301.
4. INAHTA HTA Toolbox. <http://www.inahta.org/HTA/Toolbox> (accessed 20 June 2011).
5. Govender M, Letshokogohla ME, Basu D. Health technology assessment – a new initiative in South Africa. *S Afr Med J* 2010;100(6):334.

*Accepted 27 July 2011.*



*At school, my best friend Frederika  
Was not what you'd call a great speaker.  
Whatever she uttered,  
She muttered and spluttered  
In a voice that got meeker and weaker.*

*Our class-teacher was fond of the lass,  
She decided to teach her to gas,  
Fred'rika had tuition  
In vocal transmission;  
Soon she talked the hind leg off an ass.*

*So great did her orat'ry grow  
That my friend got a TV Talk Show;  
You could hear Frederika  
In Rome, Costa Rica,  
Vancouver, Viet Nam, Idaho.*

*If you think that's the end, then despair,  
For our girl said rude things on the air:  
Now she's cleaning the bunks  
For some old Trappist monks  
And she won't speak a word while she's there.*

*MAK August 11 2006*

*Maurice Kibel*