

Safer introduction of new health technologies

PERSPECTIVES

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New health technologies must be assessed before they are introduced in the Norwegian Health Service to ensure that they are safe and effective. Mini-HTA can help prevent hospitals from adopting ineffective or harmful health technologies.

It is easy to be enthusiastic about the new health technologies and technological solutions that you hear about at international conferences for healthcare personnel. It is natural to think that patients in Norwegian hospitals should have rapid access to such innovations, whether they relate to assessment, treatment, nursing, rehabilitation or organisational interventions. In many cases, the introduction of new health technologies has taken place without sufficient evaluation of the existing evidence. Often this has gone well, especially when the new health technology has proved to be as safe and effective as first thought. However, a *new* health technology does not

necessarily mean a *better* health technology and many clinicians and hospital managers have found that new health technologies may be less satisfactory than indicated by the producer.

In 2013, the Ministry of Health and Care Services established a national system for the introduction of new health technologies in the specialist health service called the National System for Managed Introduction of New Health Technologies within the Specialist Health Service in Norway, '*Nye metoder*' (1–3). New health technologies must now be assessed *before* they are adopted.

Health Technology Assessments (HTAs) are either national assessments that are incorporated in national decisions, or mini-HTAs that support decisions in hospitals.

Mini-HTA

Mini-HTA is employed by hospitals when a professional community wants to introduce a new health technology (4, 5). HTA refers to the systematic retrieval, summary and critical assessment of research on the clinical effectiveness and safety of technologies used in the health service (6). An HTA also includes health economic analyses and evaluation of the ethical, organisational, legal or social consequences of introducing the health technology, if relevant. In this context, 'health technology' means all types of interventions used in the health service, for example diagnostic tests, medical, surgical and healthcare-related procedures, medical equipment and drugs.

Mini-HTA is a downscaled form of traditional HTA and is particularly suited to decisions that are to be taken at hospital level. It should be viewed within the context of the hospital's strategy, organisation, economy and practice. The following are examples of questions that will be evaluated in a mini-HTA: What is the clinical effectiveness of the new health technology and how safe is it compared with health technologies that are otherwise used in the hospital? What are the introduction and operational costs? Are there health technologies currently in use at the hospital that should be phased out if the new health technology is introduced? What organisational changes will be necessary?

Three parts

Several people are involved in the preparation of a mini-HTA, which consists of a form with three parts. Part 1, the main part, is filled in by the proposer, i.e. the clinician or manager who wants to introduce the new health technology. In addition, a librarian carries out a systematic literature search, and a controller performs cost analyses. Part 2 consists of a checklist for peer review. The peer reviewer must be a 'neutral' individual, for example an expert from another hospital, who checks that Part 1 of the mini-HTA has been performed satisfactorily. Part 3 is intended to be a recommendation to the decision maker, and this part is not mandatory. The decision maker will normally be the head of a clinic or a division, and in some cases the managing director.

All three parts of the mini-HTA form can be downloaded from the national database for mini-HTA (7). Part 1 of the completed assessments is published in the database. Mini-HTAs are publicly accessible in order to ensure transparency and to avoid duplication of the work by other hospitals that are interested in introducing the same health technology. Part 2 is always submitted to the database together with Part 1 to ensure that all published mini-HTAs are peer reviewed, but this part is not published. Part 3 is for internal use in the hospital only, and is therefore not submitted to the database.

When should an assessment be made?

It would not be rational to assess all new interventions in the specialist health service using the mini-HTA. Some new health technologies will have only minor consequences for patients and the hospital, and can therefore be introduced without further assessment. So where should the threshold be? The practice has been that the mini-HTA is performed when the decision maker or experts are unsure about whether the new health technology is efficacious and safe, or when it is necessary to evaluate the budgetary or organisational consequences.

In cases where the decision to introduce a new health technology must be taken at the national level, a national HTA must be prepared, and mini-HTAs are normally not considered to provide an adequate decision base. Examples of health technologies that *Nye metoder* has defined as necessary to decide at national level include all types of drugs that are to be financed by the Norwegian specialist health service, national screening programmes, health technologies with potentially significant consequences for the specialist health service, health technologies whose use is correlated with high risk (for example, implantable medical devices), and cases where a health economic evaluation is desired. Health technologies not included in these criteria can be assessed via a mini-HTA.

It is important to be aware that mini-HTAs can also be used by hospitals to assess existing health technologies that are under consideration for phasing out (disinvestment).

How does it work?

Oslo University Hospital published the first mini-HTA in October 2013. Between then and August 2017, a total of 45 mini-HTAs have been performed. Oslo University Hospital and Bergen Hospital Trust have produced most assessments – 25 and eight mini-HTAs, respectively. It is not surprising that the university hospitals produce the majority of mini-HTAs since they are usually the first to adopt new health technologies. The management at both hospitals have displayed a strong commitment and clear strategy to support mini-HTAs. Seven other health trusts have produced the remaining mini-HTAs.

Part 1 of each mini-HTA must end with a conclusion. This conclusion is simply a proposal to be considered by those who will take the final decision on whether the method will be introduced at the hospital or not. The actual decision in each case has been regarded to date as an internal matter for the hospital and has not been published. In 33 of the 45 published mini-HTAs, the conclusion was that the health technologies assessed should be introduced at the hospital in question. In the case of the remaining 12 assessments, the conclusion was that the health technologies should *not* be introduced. The reason in most of these cases was that the existing evidence was weak.

Advantages and disadvantages

Mini-HTA contributes to transparent and evidence-based decisions when new health technologies are introduced or outdated technologies are phased out in hospitals. The example above illustrates one of the purposes of mini-HTA, namely that a systematic review of the research documentation can reveal whether the available evidence is too weak for conclusions to be drawn. This enhances patient safety in hospitals in that the patients are offered diagnostics or treatment that are research-based. Moreover, the use of mini-HTAs can prevent economic and organisational surprises following the introduction of a new health technology to the hospital.

Experts who conduct mini-HTAs must use time that would otherwise be devoted to clinical work. The employer must therefore allow them to set aside time for this purpose. Working on the mini-HTA will often result in a stronger sense of ownership among clinicians and give specialists greater knowledge of the technology's effectiveness and safety.

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