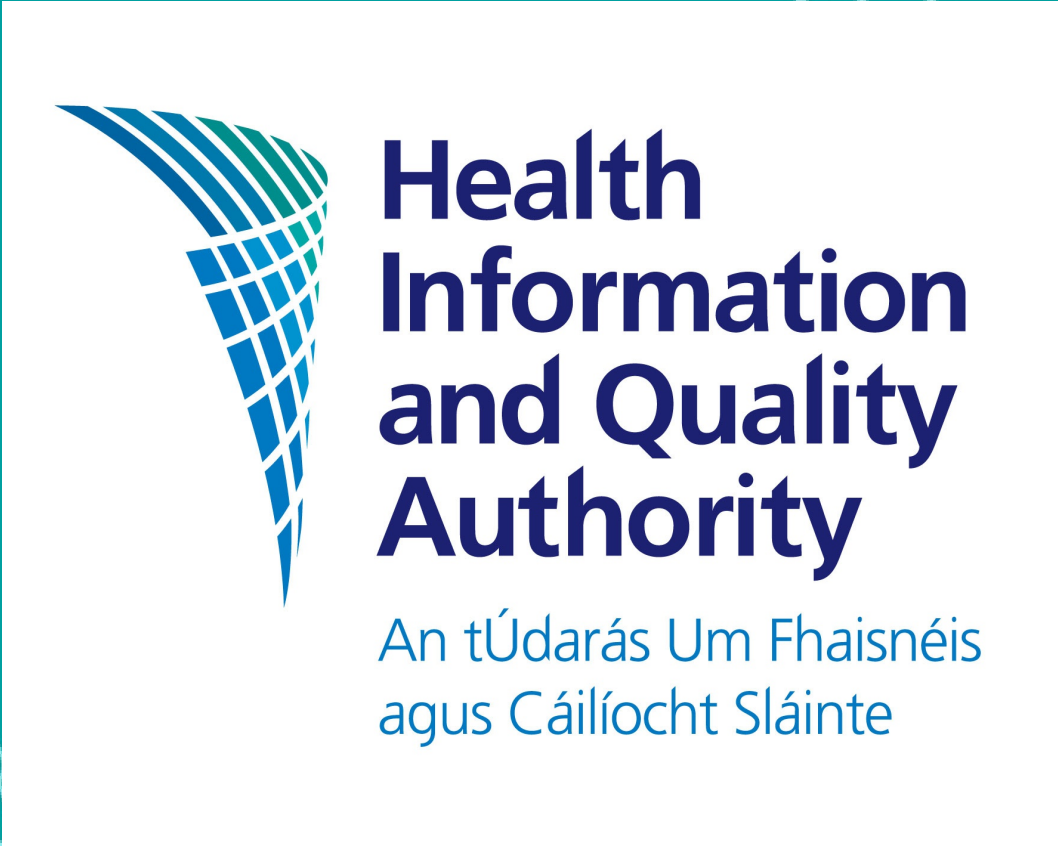


An overview of the challenges in the HTA of interventions involving healthcare reorganisation

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Background

Most health technology assessment (HTA) is focused on pharmacological treatments and devices. Those assessments are concerned with the replacement of one intervention with another, and the associated impact on health outcomes and resource use. Such assessments use widely accepted methods that have been developed and refined over a long period of time. Although a typical pharmacological or device HTA may include components of organisational change, they are often a minor aspect or may be considered minimally disruptive.

Assessments of interventions that are associated with major organisational changes are less common. The focus may be less on clinical effectiveness and safety and more on feasibility and identifying potential barriers to implementation.

The aim of this study was to outline the key challenges to the assessment of healthcare reorganisation interventions.

Methods

HIQA HTA has been active for over 15 years, during which time assessments have been completed on a wide range of topics including immunisation and screening programmes, surgical interventions, devices, and disease management programmes. We identified three HTAs that included a major reorganisation component:

- domiciliary invasive ventilation for adults with severe spinal cord injuries¹
- repatriation of paediatric haematopoietic stem cell transplant services to Ireland²
- treatment and transport options for priority 1 transfer patients.³

The three HTAs were reviewed for content and methodology.

We sought common themes in the three case studies that were distinct from typical pharmacological and device assessments. We were particularly interested in features that are associated with limited methodological guidance or that potentially deviate from the content of frameworks for the conduct of HTA, such as the EUnetHTA Core Model®.

Results

Case study 1: domiciliary ventilation

Domiciliary ventilation is considered the standard of care for ventilator-dependent individuals with spinal cord injuries where clinically appropriate. Although it is standard practice in Ireland to discharge these patients home as soon as it is safe to do so, there are substantial barriers to the provision of homecare services for these patients. Some of these patients remain hospitalised for a prolonged period of time, often several years, before being discharged home, which has substantial implications for patient and family quality of life and for health service provision.

The assessment identified the key barriers and potential solutions to overcome those barriers. The assessment required substantial engagement with service providers within the the hospital and community care sectors. A feature of the assessment was the regional variation in community care capacity and how this may create geographic inequities.

Case study 2: paediatric stem cell transplants

Allogeneic haematopoietic stem cell transplant (HSCT), sometimes known as a bone marrow transplant, is the internationally recognised standard of care for children with certain inborn errors of metabolism, inborn errors of immunity and haemoglobinopathies. While HSCT is available in Ireland to children with haematological malignancies and certain benign conditions, children with these other conditions requiring HSCT must travel abroad to avail of this treatment, creating challenges for patients and their families.

The assessment involved extensive engagement with the families of patients to gain a better understanding of the challenges facing them in accessing treatment abroad. Identifying the commonalities and the issues that could potentially be resolved through repatriation of the services was complex. Furthermore, it was essential to determine the differences in the service provided in Ireland and abroad, and how that might impact on the acceptability of repatriation.

Case study 3: priority 1 transfers

Priority 1 transfer patients mostly comprise children who require emergency transfer to specialist centres in the UK for heart or liver transplant procedures. Patients must present at the transplant centre in the UK within four hours of notification of a donor heart becoming available and within six hours of a liver becoming available. There is no dedicated air ambulance service in Ireland for Priority 1 transfers and all services are provided on an “as available” basis; to date transfers have primarily been provided by the Air Corps and Irish Coast Guard. The HTA evaluated the treatment and transport options for Priority 1 transfer patients.

The assessment required engagement with two Government Departments other than Health. Logistics and other considerations can be very different in other departments, resulting in a steep learning curve. Developing an appropriate understanding of issues relied primarily on information provided by stakeholders.

We identified five main types of challenge arising that are particular to HTAs of healthcare reorganisation:

Governance issues

Reorganisation can shift responsibilities and accountability within the system, so consideration needs to be given to potential governance issues.

Lack of applicable literature and data

Organisational interventions are generally not supported by clear evidence of effectiveness and safety. Healthcare organisation is generally tailored to a particular jurisdiction and system. Relevant literature is often limited, creating a reliance on information from stakeholders who may be difficult to identify and may not be impartial.

Increased importance of stakeholder engagement

Reorganisation can also impact many clinical and patient groups who can identify barriers to implementation based on experience or anecdotal evidence. Extensive stakeholder engagement is therefore vital to inform these HTAs.

Geographic inequity

Organisational changes can create geographic disparities and inequities for service users. Such changes can, for example, be associated with a move from primary to secondary care. Geographic issues are not typically considered in the assessment of a treatment or device, but should be addressed.

Perspective

Reorganisation can also shift costs to patients in numerous ways, which can also create inequities in access to services. The chosen perspective is important and adequate steps should be taken to identify costs accruing to patients.

Conclusions

Findings

HTAs of healthcare reorganisation can be challenging to perform and require a mix of approaches that don't neatly fit into the classic HTA methods. Of particular note are the limited availability of relevant data and evidence on the effects of reorganisation on patient outcomes and costs. Healthcare organisation varies significantly across countries, and the experience and outcomes in one country may be of limited applicability to another setting.

In conducting such HTAs, flexibility is key to ensuring that the decision maker's needs are adequately addressed for the safe reorganisation of services. It is critical to involve key stakeholders directly in the process because the available literature will often not give assessors the necessary understanding of the main issues. Stakeholder engagement should ideally include patients and those directly involved in patient care, as they will be best placed to identify feasibility issues or challenges that could prevent successful implementation.

References

1. Health Information and Quality Authority. Health Technology Assessment of Domiciliary Invasive Ventilation for Adults with Spinal Cord Injuries. HIQA, Dublin; 2023
2. Health Information and Quality Authority. Repatriation of paediatric haematopoietic stem cell transplant services to Ireland: a Health Technology Assessment. HIQA, Dublin; 2023
3. Health Information and Quality Authority. Health technology assessment evaluating the treatment and transport options for Priority 1 transfer patients. HIQA, Dublin; 2017.

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