

The impact of the National Institute for Health Research Health Technology Assessment programme, 2003–13: a multimethod evaluation

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Scientific summary

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Background

The Health Technology Assessment (HTA) programme supports research that is tailored to the needs of UK NHS decision-makers, patients and clinicians. The programme is part of the National Institute for Health Research (NIHR) and funds both primary research and evidence syntheses.

Objectives

This study reviewed the impact of the NIHR HTA programme from 2003 to 2013. It considered a broad range of impacts, spanning academic, health policy, clinical practice, health and economic outcomes. Although the study's approach was largely retrospective, reviewing impact from 2003 to 2013, it also included a forward-looking component, which considered how the HTA could increase its impact in the future.

Methods

We explored a wide range of impacts resulting from HTA programme-funded research and the HTA programme. We carried out an analysis of impact across the HTA programme using the following methods:

- *Interviews* ($n = 20$) Senior stakeholders from academia, policy-making organisations and the HTA programme.
- *Bibliometric analysis* Citation analysis of publications ($n = 1087$) arising from HTA programme-funded research.
- *Researchfish survey* Electronic survey of all HTA grant holders ($n = 619$) [excluding Technology Assessment Reports (TARs)].
- *Payback case studies* ($n = 12$) In-depth case studies of HTA programme-funded research, which included document review, interviews and bibliometric analysis.

This multi-method study allowed us synthesise data from multiple sources to identify key findings regarding the impact of the HTA programme.

Results

Impact of the Health Technology Assessment programme, 2003–13

NHS and patients

Health Technology Assessment programme-funded research has had a range of impacts on patients through changes in health policy, clinical practice and patient choice. Interviewees highlighted that the National Institute for Health and Care Excellence (NICE) and the HTA programme have a joint impact on clinical practice. The HTA programme funds research that feeds into both NICE TARs and NICE guidance, which have an impact on clinical practice. Consequently, it is not possible to attribute the resulting impact on clinical practice to either organisation, as both contribute to that impact. Interviewees also described direct ways in which the programme has had an impact. For example, as the major funder of clinical research in the UK, the programme has an impact on the quality of care changing clinical practice.

However, HTA programme-funded research primarily has an impact on patients through funding high-quality trials and evidence syntheses, which then result in improved guidance for clinicians, which, if implemented, improve patient care.

Because the HTA programme explicitly focuses on topics of importance to patients and the NHS, it delivers evidence when there is little or no commercial or academic incentive to undertake research.

Policy

The HTA programme has an impact on UK policy, by providing high-quality evidence to policy-makers. NICE and the National Screening Committee (NSC) are key users of HTA research, which was illustrated in the case studies. In the case studies, the main routes to policy impact were changes in clinical guidelines (as evidenced by citation of the research within the guidelines) or through a NSC pilot. The programme has close relationships with both NICE and the NSC. The TAR programme illustrates one way in which the HTA programme works closely with NICE. However, case studies and interviewees also identified other users of HTA research in the policy community.

International

Health Technology Assessment programme research has an impact on policy and practice internationally. Interviewees and the case studies provided evidence on the use of HTA programme-funded research outside the UK, particularly by other HTA organisations, policy-makers and systematic reviewers. The programme also has an international influence through its leadership in HTA methods and research funding, and by playing an important role in a wider international movement recognising the importance of this type of research. The HTA programme and NICE have also had a joint impact internationally, which is similar to the joint impact of the two organisations mentioned above. Insofar as HTA research underpins NICE guidelines, and policy-makers abroad use NICE guidance to inform their own decisions, then the two organisations can be said to have a joint impact internationally.

Academic

Interviewees reported that HTA programme-funded research is considered academically rigorous. We found that this was reflected in the bibliometric data, with citation levels at more than double the expected level for the field, although it is important to note that citation levels are an imperfect indicator of quality, as high citations may also result from negative citation, self-citation and increases in the popularity of a particular research field. The HTA programme has made a substantial contribution to health research through the publication of the vast majority of HTA programme-funded research in the open access *Health Technology Assessment* journal, as well as by encouraging independent publication of HTA programme-funded research in other peer-reviewed journals. One notable exception is the TAR stream of HTA research, which primarily assesses commercial HTA studies to support appraisal by NICE. TARs are not typically published externally, as the data that underpin the assessments are provided in confidence by industry.

The research system

The HTA programme contributes to building research capacity through supporting the development of skills of individual researchers within a research team, sharing methods and expertise, and supporting the development of networks. Interviewees viewed the HTA programme as an important funder of clinical research that has played an important role in building and retaining capacity in HTA research in the UK.

The HTA programme has also had broader impacts on the research system. The programme has played a role in the increasing focus not just on effectiveness, but also cost-effectiveness, in evidence-based medicine. It has contributed to a cultural change in attitudes towards the importance of evidence-based medicine, including health-economic evidence, both within the research community and in the NHS.

Industry and the economy

The HTA programme tends to fund research when there is no commercial incentive to undertake research, such that HTA programme-funded research has little overlap with industry-funded research. However, it is clear that HTA programme-funded research has had impacts on the pharmaceutical, diagnostic and device industries, and the wider economy. The impacts we identified in our case studies were mainly the refinement of products, or the development of a new market by showing the value of a class of device/diagnostic, but it was not possible to quantify these impacts. The HTA programme also affects industry through input to specific decisions taken by NICE, and, more broadly, by shaping the way in which NICE assesses new medicines, diagnostics and devices.

Looking at the economy more broadly, the evidence generated by the HTA programme supports the decisions of NICE and can inform the spending and treatment decisions in the NHS more directly, which should increase the cost-effectiveness of care provided in the NHS.

Ways to maintain and increase impact

Provide targeted support for dissemination

The dissemination of HTA programme-funded research is a potential weakness that is highlighted both across the programme and through the case studies. Dissemination of HTA research is largely academic focused and support for dissemination is not always available. Two of our case studies suggest that a targeted approach could be taken, allowing the HTA to make best use of its dissemination resources. Funding for dissemination could be allocated after the bulk of the research is completed and the key study results are known. This allows better decisions on targeting resources. For example, if HTA programme-funded research indicates that existing practice is appropriate, there is no need for widespread dissemination. The case studies also suggest that resources could be targeted to account for existing commercial interests in the area (i.e. the extent to which other stakeholders are likely to champion, or oppose, the study findings). Resources could be targeted when there are important results that should be implemented, but when it is unlikely for other stakeholders to do this or in cases in which the results run counter to vested interests.

Maintain close relationships with National Institute for Health and Care Excellence and the National Screening Committee, but also consider working more closely with other policy-making organisations

The close relationships that the HTA programme has with NICE and the NSC are crucial to the impact that the HTA programme has on health policy and clinical practice, and should be maintained. However, NICE and the NSC are not the only routes through which the HTA programme can have an impact on health policy and clinical practice, and they are not the only users of HTA programme-funded research. The HTA programme could increase its impact by working more closely with other guideline-producing organisations.

Maintain good relationships with researchers and flexibility in the way the programme supports research

Researchers are generally positive about their relationship with the HTA programme, the programme's level of oversight and supportiveness, and their interactions with HTA programme management. In some cases, interaction with HTA programme management directly contributed to the success of particular studies. Interviewees praised the level of flexibility and academic freedom that the HTA programme offers. Maintaining good relationships with researchers is likely to be beneficial in helping the HTA programme to facilitate the impact of the work it funds. Although the TAR programme provides a direct link to NICE, and a clear and timely route to impact on health policy, particular consideration may need to be given to this programme, which has proved challenging for academics. Because TAR centres operate in different ways, it may be possible for them to learn from each other about how best to manage the demands of producing TARs for NICE alongside pursuing other academic interests. As the funder of all TAR centres, the HTA could provide a convening function for this learning.

Maintain the academic quality of the work and the focus on NHS needs

Interviewees commented on the importance of the combination of research that is both academically rigorous and of relevance to the NHS. This balance has been a feature of the HTA programme since its inception, and it will be essential for maintaining the impact of the work.

Consider funding research on the implementation of HTA programme-funded research

Several of the case studies noted that the cost information provided in HTA studies is incomplete, which limits the impact of the research. For example, the short-term costs of the implementation of new technologies in the NHS are often not assessed in HTA programme-funded research. The implementation of new technologies in the NHS may also have an impact on existing health-care infrastructure, the health-care workforce and the organisation of health-care services. As policy-makers do not make decisions based on the effectiveness and cost-effectiveness of health-care interventions alone, there is scope to increase the impact of HTA programme-funded research by funding research on the impact of the implementation of new health-care technologies or interventions in the NHS. The selection of relevant studies for this type of analysis could be on the basis of the likely importance to the NHS, policy-makers and clinicians.

Improve the transparency of the priority-setting process and monitoring of the impacts of patient and public involvement

Interviewees recognised the HTA programme as one of the first public funders of research to require patient and public involvement (PPI) and reported that it has continued to be viewed as a leader in this area. However, the impact of PPI on HTA programme-funded research is not clear, as the programme does not seem to monitor the impact of PPI. Similarly, some aspects of the priority-setting process are not transparent. The HTA programme provides information provided at the programme level about the priority-setting process, but it is difficult to trace the origins of particular pieces of commissioned research. In both cases, increased transparency, monitoring and measurement of the effectiveness of PPI and the priority-setting process would not only allow the programme to better demonstrate its commitment to PPI and the quality of its priority-setting process, but also allow programme management to better understand the effectiveness of both processes and how they could be improved.

Consider ways to protect the future of the programme through improved recognition and planning for change

Looking forward, the HTA programme faces a range of potential challenges. While the NHS continues to face increasing budgetary challenges, there is likely to be increasing pressure on budgets for any elements of the health-care system that are not delivering front-line care. Providing evidence on the effectiveness and impact of the programme will be important, as the programme looks to secure funding in the future. A rolling programme of case studies to build a library of impact stories could contribute to such evidence. It will be important to ensure that the ease of demonstrating impact is not taken as a proxy for the significance of that impact. It will also be important to clarify the role of the programme relative to other bodies such as NICE and the rest of NIHR, a relationship that is not always clearly understood by all stakeholders in the health system.

Interviewees reported that it will be important for the HTA programme to continue adapting to the needs of a changing NHS, ensuring that the research it funds is timely and relevant. In particular, interviewees noted a need to consider succession planning as key individuals, who have been important to the success of the programme, depart. HTA seems to have been successful at adapting to the changing needs of the NHS over the last 20 years and the programme will need to maintain this adaptability to ensure that it meets the future needs of the NHS.

Conclusions

The HTA programme has had impacts on patients, health policy, clinical practice, the research system and industry and the economy. These impacts stem from the quality of the research, the focus on NHS priorities, good governance and close relationships with key policy stakeholders. To maintain or increase this level of impact, the HTA programme could facilitate wider uptake by providing targeted funding for dissemination, and additional cost analysis. Maintaining and building on existing relationships within academia and the policy community could also play a role, as well as increased monitoring and transparency around important processes such as PPI and priority setting.

In a changing landscape, the programme needs to maintain its ability to change and adapt, while still delivering its mission to 'ensure that high-quality research information on the costs, effectiveness and broader impact of health technologies is produced in the most effective way for those who use, manage and provide care in the NHS'.

Research recommendations

Potential areas for future research include investigation of the impact of PPI on HTA research; a rolling programme of case studies to provide a detailed and evolving understanding of the routes to impact of HTA research; and work considering how to measure the impact of studies that do not recommend a change in practice.

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Reviews in *Health Technology Assessment* are termed 'systematic' when the account of the search appraisal and synthesis methods (to minimise biases and random errors) would, in theory, permit the replication of the review by others.

HTA programme

The HTA programme, part of the National Institute for Health Research (NIHR), was set up in 1993. It produces high-quality research information on the effectiveness, costs and broader impact of health technologies for those who use, manage and provide care in the NHS. 'Health technologies' are broadly defined as all interventions used to promote health, prevent and treat disease, and improve rehabilitation and long-term care.

The journal is indexed in NHS Evidence via its abstracts included in MEDLINE and its Technology Assessment Reports inform National Institute for Health and Care Excellence (NICE) guidance. HTA research is also an important source of evidence for National Screening Committee (NSC) policy decisions.

For more information about the HTA programme please visit the website: <http://www.nets.nihr.ac.uk/programmes/hta>

This report

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