

Health technology assessment in Finland

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Since the 1990s, health policy makers in Finland have been supportive of evidence-based medicine and approaches to implement its results. The Finnish Office for Health Technology Assessment (Finohta) has grown from a small start in 1995 to a medium-sized health technology assessment (HTA) agency, with special responsibility in providing assessments to underpin national policies in screening. External evaluations enhanced the rapid growth. In the Finnish environment, decision making on health technologies is extremely decentralized, so Finohta has developed some practical tools for implementing HTA findings. The Managed Uptake of Medical Methods program links the hospital districts to agree on introduction of technologies. The Ohtanen database provides Finnish-language summaries of major assessments made in other countries.

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THE HEALTHCARE SYSTEM IN FINLAND

Finland with its 5.3 million inhabitants is a Nordic democracy and a member of the European Union (EU). Health services are funded mainly by taxation and organized by local authorities in 350 municipalities. The private sector provides some 15 percent of all health services, especially occupational health care, which is subsidized by the employers, and dental care. Physicians in public health services are mostly salaried, with additional fee-for-service payments. Many primary care centers use a mixture of capitation fees and salaries.

The local authorities account for two thirds of health-care spending; state subsidies are used to even out differences between wealthier and poorer municipalities. National health insurance premiums are collected through taxation and used to cover subsidies for medication of chronic illnesses, physiotherapy, dental care, sick leaves, and the use of private health services. The role of voluntary health insurance is marginal.

Legislation guarantees universal access to health care for all. Maternity care, well-baby clinics, and occupational health care are free of charge, while small user fees are collected for other services. Maximum fees for consultations with general practitioners and dentists are under €20 and a

day as a hospital inpatient costs €30. If citizens are unable to pay user fees, they can apply for support from social welfare services. Details of the legislative and funding arrangements have been described earlier (7).

Restructuring in Process

Many municipalities in Finland are too small to organize their health services alone: some have less than a thousand inhabitants and few have more than 30,000. This means that local authorities often must join in setting up primary care centers, and always to provide secondary care through hospital districts. New legislation will restructure public health care in 2010, strengthening links between primary and secondary care, while leaving the responsibility for provision of care to local authorities. The government is also urging communities to merge into larger units to have reasonable population bases for organizing services in health care, social welfare, and education.

An increasing shortage of physicians has lately made it difficult to find trained experts in several specialties, including psychiatry, oncology, and primary care. Private entrepreneurs have started to supply locum tenens physicians—often recent graduates from medical schools—to hospitals

and health centers, typically for higher compensation than permanent workers get. Especially small health centers in sparsely populated areas are short of doctors. Some communities now purchase their entire primary care service package from private companies.

Two successive governments have supported increasing the role of private enterprise and tendering for contracts in health care. Thus, many public health services have been redesigned into companies; for example, one university hospital has spawned companies providing laboratory services, imaging services, cardiology services, and operations for hip and knee endoprostheses.

POLICIES AND REGULATION

For decades, Finland had extremely centralized planning mechanisms for health services. This was replaced in 1993 by state subsidy block grants that local authorities distribute between health care, basic education, and social welfare services. The Council of State declares overall policy targets at the national level, while the Ministry of Social Affairs and Health (MOH) gives more detailed guidance on services. State research institutes provide necessary information for planning and regulating services.

Local authorities join together in regional coalitions to set up hospital districts for providing secondary care. Each of the twenty hospital districts operates several general and psychiatric hospitals; the districts are also responsible for the quality of laboratory and imaging services in their area. Five university hospitals provide highly specialized tertiary services to two to five other hospital districts. Hospital districts are governed by elected boards, representing the local authorities funding the services. Although mostly concerned with overall strategic issues, these boards may take a stand on more detailed matters, such as implementing certain technologies.

Policies for prevention and health promotion are outlined in 4-year governmental plans and discussed in a broadly based advisory board in more detail. For health promotion, the approach is to include health in all policies, and there are special programs for cancer prevention, heart health, and diabetes (17). Currently, the main focus for prevention is on the health of the young and the old (11) and on preventing alcohol-related problems (13).

Evidence-Based Health Policy

Since 1995, the Finnish Medical Society Duodecim has produced national evidence-based guidelines together with specialist societies (9). These Current Care guidelines are targeted at both primary and secondary care and freely available (www.kaypahoito.fi/en). Each guideline provides structured, regularly updated summaries of the diagnosis, treatment, and prevention of common health problems, based on systematic literature searches. In 2008, there were eighty-eight full guidelines available and some twenty new ones in production.

Hospital districts can customize these guidelines regionally and use them to plan care pathways.

In 2002, wide public policy discussions were set up by the MOH, covering structural and procedural issues from alcohol policies to the training of healthcare leaders. The ensuing policy document (10) reconfirmed support to evidence-based policy approaches, including increased state funding for health technology assessment (HTA) and national clinical guidelines production.

Legislation aiming at reducing waiting times in health care was passed in 2005. Acute consultations must be arranged without delay, the maximum waiting time for primary care consultations is 3 days, and nonacute hospital care must be provided within 6 months. To support this policy, the MOH organized some sixty expert groups to write national recommendations on care pathways and acceptable waiting times. The majority of these documents referred to the relevant Current Care guideline.

An evidence-based approach to health policy is widely accepted in principle, although actual policy situations do not always allow time enough for collecting sufficient evidence to support decisions. Increasingly, permanent structures are used to provide evidence for policy decisions. In 2008, the government launched a project to merge Stakes (The National R&D Centre for Welfare and Health) and the National Public Health Institute (NPHI) into a new National Institute for Health and Welfare (THL). One of the stated reasons for this was to facilitate increased research support for policy decisions.

Harmonizing Screening Policies

In 2003, the MOH appointed a Working Group on Screening to evaluate and advice all screening programs implemented on a national basis. The list of screenable health problems includes over sixty conditions, so prioritization is necessary. The Working Group on Screening typically commissions the Finnish Office for Health Technology Assessment (Finohta) to provide a full assessment of screening methods to be used as a basis of policy proposals.

In 2006, the Government issued a Screenings Decree (1339/2006), laying down criteria for screening examinations offered publicly. Concurrently, the MOH published a handbook for the municipalities (12), describing in detail the screening programs all communities must provide: breast cancer, cervical cancer, and a screening program for fetal anomalies.

Little Regulation of Technologies

The MOH may regulate the introduction and implementation of healthcare technologies by legislation to ensure that sufficient services are provided in an equitable manner. This option is used sparingly and most often in agreement with the hospital districts. Legislation covers, for example, organ transplantations and rare metabolic diseases.

In 2006, the Ministry of Social Affairs and Health gave a Decree (767/2006) specifying the need to centralize certain health services regionally in addition to what already was agreed on at the national level. In 2007, the MOH requested the five university hospital regions to provide an overview of the agreements made on this centralization. The content and practices of centralizing services varied widely. A more detailed follow-up plan is being worked on, and apparently the MOH will continue to monitor centralization and their effects.

The private sector can introduce any technologies that fulfill the necessary safety requirements. Coverage for interventions can be applied for from the Social Insurance Institution (SII), which maintains a positive list of disease-intervention pairs eligible for coverage. Full coverage is given only for medications of certain life-threatening diseases and for drug costs overrunning €590 per year. Physician consultations, examinations, dental services, and physiotherapy are covered partially, currently at a rate corresponding to less than half of the market cost of these services (www.kela.fi).

INTRODUCTION OF HTA TO FINLAND

Medical technology appeared in Finnish discussions in early 1980s. The medical profession, hospitals, and healthcare managers all considered HTA to be a useful tool from the outset. Two successive working groups of the Medical Research Council first defined the term and then recommended that a center for HTA be set up at least in one university. However, permanent funding remained a problem.

The Finnish Society for Technology Assessment in Health Care was established in 1987. Early adopters of the HTA idea acquired training abroad. Finland was represented on the Board of ISTAHC and arranged to hold its international congress in Helsinki in 1991. Technology assessments were produced by university groups and national research institutes, and consensus conferences flourished. Finland participated actively in European projects developing HTA, notably EUR-ASSESS.

A national unit for technology assessment was proposed by three more national working groups in 1992–94. Finally, the governmental plan for 1995–98 appointed Stakes as the hosting organization for HTA in Finland (7). Here, the position was close to the Ministry of Welfare and Health, but at a sufficient distance from everyday politics.

Networking from the Start

Finohta was established at Stakes in 1995; its task was to support and coordinate HTA-related work in Finland and to promote and mediate high-standard, multidisciplinary assessment research. Some HTA was already taking place at universities, the National Agency for Medicines, and the SII, without much coordination of methodologies or topic areas (7).

Finohta appointed an Advisory Board for linking with organizations and a Scientific Board to prioritize topics and monitor the quality of Finohta's work. Members of both boards have actively supported the work and spread information about HTA and Finohta.

Starting with three employees, Finohta marketed the concept of HTA among clinicians and clinical researchers also by supporting clinical studies: some 40 percent of the budget was used for funding trials and systematic reviews (7). Especially orthopedic surgeons set up randomized trials with Finohta support, finding several interventions to be either ineffective or clearly more effective than conservative approaches. Changes in clinical policies following the publication of these studies would be interesting to evaluate, using the health registers housed at THL.

THL provides administrative support and close contacts with other healthcare researchers, and national health registers kept by THL contain essential information for HTAs. Within THL, Finohta reports to and receives requests from the Ministry as part of a larger organization, not in direct hierarchical relationship.

This independent role in providing information around policy issues is crucial in dealing with healthcare providers and policy makers; also health ministers contact Finohta directly with assessment questions. Such requests have top priority, and rapid replies can be provided in urgent policy situations; however, Finohta never proposes a line of action, only offers evidence to be used as a basis of policy decisions.

SUCCESSFUL STEPS

HTA units in small countries must be flexible and innovative. Sensible division of labor between evidence-based medicine (EBM) organizations helps avoid double work: Finohta houses the Finnish Branch of the Nordic Cochrane Centre and communicates closely with guideline producers (Current Care) and units assessing drugs (e.g., SII). Methodology is discussed and shared, and the new HTA textbook (8) is used by for training staff as well as clinicians starting in Finohta projects.

Finohta readily borrows good ideas. The new national program for Managed Uptake of Medical Methods (MUMM) was inspired by British and Danish examples. Two other projects benefited from international collaboration: the Ohtanen database provides Finnish-language summaries of assessments from other INAHTA agencies, and the European Network for HTA (EUnetHTA) has drafted a joint model for context-independent HTAs.

Policy Advice by HTA: Screening Policies

Most importantly, HTA agencies provide evidence for major policy decisions. The MOH has specified screening as a priority topic for HTA in Finland. The national Working Group on Screening has commissioned several major assessments from Finohta (Table 1).

Table 1. Health Technology Assessments on Screening Topics by Finohta

Breast cancer screening	(2000)
Colorectal cancer screening	(2000)
Screening for rare metabolic diseases in newborn infants	(2004)
Screening for hearing loss in newborn infants	(2005)
Maternal ultrasound and serum screening for fetal abnormalities	(2005)
Breast cancer screening, update	(2006)
Preventing group B streptococcal infection in newborn infants	(2007)
Screening for rare metabolic diseases, update	(2008)

The assessment on fetal screening resulted in legislative change for all screening decisions in 2006 (2). Until then, only screening for breast cancer and cervical cancer were legislated to cover certain age groups using defined methods. In contrast, municipalities were free to decide which structural and chromosomal aberrations they screened for during pregnancy and how. Fetal screening was provided in several different ways; some screening programs were far from optimal, and women in different communities had unequal access to services. In Finland, a pregnant woman can request an abortion up to the 24th week of pregnancy if a major fetal malformation is diagnosed.

The MOH Screening Group requested a full HTA report comparing the various options for fetal screening programs. Finohta also considered ethical, legal, social, and organizational aspects of screening. The report (1) was widely covered in the media, and the Ministry arranged an open seminar to discuss the results. Consequently, the Working Group on Screening recommended that legislation should encompass all screening programs through a Decree of the Council of the State. Such Decree can be amended more flexibly than a law or statute. The umbrella decree on screening now lists the basic principles of screening and allows for the addition, change, or removal of screening programs (2).

MUMM

Encouraged by examples from abroad, Finohta started together with hospital districts in December 2005 the MUMM program, to ensure that all new health technologies adopted into Finnish secondary health care are effective and safe (6). The main motivation for MUMM was the amount of new diagnostic and treatment methods available. So far, uptake of new methods has been within the discretion of the hospital districts or even single clinicians. There has been no method to ascertain that the uptake is based on reasonable effectiveness data, and that patient safety can be guaranteed.

In the MUMM program, representatives from all hospital districts form an Advisory Board and identify new methods needing assessment. On chosen topics, Finohta together with two to three clinical experts from hospital districts pro-

duces a rapid systematic review, the results of which are used by the Board to produce guidance on uptake. Hospital districts can agree on providing the technology in every district or in selected hospitals only.

So far, the MUMM program has produced twelve rapid reviews, published in the Finnish Medical Journal. The Board recommendations on uptake do not legally bind the districts, but it is unlikely they would completely ignore these and fail to implement the guidance.

Ohtanen

Medical experts in any country read original studies in English, but healthcare decision makers prefer brief summaries in their native language. To cover this need, the Finohta medical writers' team created the Ohtanen database. Finohta writers read assessments from our INAHTA sister organizations in seven languages and condense them to two-page Finnish-language summaries.

The structured summaries cover the study question and the main results, and give a link to the original report. These summaries can be produced in a few days if needed. The medical writers follow the Web pages of our sister institutes and systematically select most relevant reports for summarization. For reports less relevant from the Finnish perspective, only the title translation and link are included in the database.

Whereas Finohta otherwise refrains from evaluating medicines, according to a national division of labor, Ohtanen summaries cover medicines too. The national structure for regulating and evaluating drugs is currently under reorganization. Because information needs for new drugs are acute, the Ohtanen reports on medicines are appreciated for filling this gap to some extent.

EUnetHTA

The EUnetHTA project facilitates HTA information sharing within Europe. This 3-year project is funded by the EU, bringing together sixty-four organizations from thirty-one countries. As a Lead Partner, Finohta coordinates the production of a generic model for HTAs.

The information structure of current HTA reports varies widely: in some countries, HTA focuses on clinical effectiveness, safety, and cost-effectiveness of technologies, while others also consider issues such as ethics or social impact. The need for a transparent structure and rigorous handling of information calls for standardization. This is especially important for safety and effectiveness data, but also country-specific information could be presented using a shared structure. Steps toward definition of international standards have been taken by INAHTA and previous European Projects (EUR-ASSESS and ECHTA/ECAHI).

The EUnetHTA Working Group produced a Core Model for a generic, transferable HTA report. This model defined and standardized elements of an HTA, providing tools to tackle variation in the structure and contents HTA reports.

Table 2. Selected Recommendations from Finohta Evaluation in 2004 (3)

Finohta should not make recommendations or take primary responsibility for implementing recommendations
Questions posed by the Ministry and their answers should be made public
The primary target of Finohta should be organizations, not individual clinicians
Finohta should support systematic reviews, economic analyses, and implementation research
Finohta should continue being active in the international HTA field

The Model enables future cross-national use of HTAs through a shared, detailed structure suggesting which information items may belong to an HTA. The model uses nine domains: Description and technical characteristics of the technology to be assessed; its current use; safety; effectiveness; cost; and the ethical, social, organizational, and legal aspects relevant to the technology (4).

EVALUATIONS OF FINOHTA

The Finnish policy decision to support evidence-based work included a major budget increase for Finohta: from €1.2 million in 2003 to €3.5 million in 2008. Before the budget growth started, Stakes commissioned an external evaluation of Finohta from international experts (3), providing useful guidance for managing the growth (Table 2).

From 2004 to 2007, Finohta staff increased from twenty-two to forty-seven. Because several staff members hold part-time positions, person-years increased from eleven to twenty-seven. We established a second office in Tampere, allowing closer contact with local health services and Tampere University Hospital.

At the end of the growth period, we again invited an external evaluation. Dr. Karen Facey's appreciative inquiry (5) highlighted successful results of Finohta expansion: MUMM, Ohtanen, and EUnetHTA. More importantly, it pointed out the need to improve HTA project management and to think about involving patients in assessment processes.

Finohta staff participated in strategy revisions after each evaluation. In 2008, preparing for the merger of Stakes and the NPHI, we updated our strategy to follow the novel strategy of the new National Institute for Health and Welfare (THL), starting in January 2009.

Tailored Recruitment and Flexible Staffing Policies

Finohta prefers to employ healthcare professionals with several years of experience from patient work. Staff is encouraged to hold part-time positions in hospitals or primary care, to maintain links with the clinical community, keeping a reality check on the importance of our work. The downside of this (as our external reviewer remarked) is that physicians

may consider Finohta as a stepping stone for more attractive salaries and higher positions in health services.

For recruiting new staff, Finohta designed processes based on our needs and relevant literature (16). We create a detailed job description and build a systematic interviewing process around it. For each position, five to ten applicants are invited for a structured interview with three to four future colleagues; this precedes a practical task related to the job. A homework assignment then asks the applicants to write a piece based on a lengthy HTA document. The hours put into the interviews have resulted in recruiting skilled and motivated staff.

The 4-year growth period allowed us to hire ten medical writers in 2005. Intensive introductory training for them together as a group covered HTA methodology widely. The training brought the group together, and they have continued developing their work processes actively.

Our host organization has flexible policies on telecommuting, and the Finnish legislation secures long paid leaves for parenthood. Finohta has celebrated the arrival of eight staff babies in 3 years, giving us the opportunity to build new relationships by recruiting temporary staff. Part-time positions, parental leaves, several office locations, and telecommuting present a challenge in keeping projects on time and team spirit up.

Academic work is regarded useful for Finohta when the topics are relevant to HTA. Most HTA projects produce a scientific paper in a refereed journal, but the Finnish-language publication is prioritized, as our main task is to provide evidence to support local policy decisions. The high quality of Finohta work is reflected in our papers shortlisted for best article in the *International Journal of Technology Assessment in Health Care* on 3 consecutive years, and winning the title once (14).

DISCUSSION

Finland is a small country with a homogeneous health service system. For decades, Finnish health policy has been singularly supportive of evidence-based approaches in health care: both the national HTA unit and the guidelines organization are funded from state budget. The concepts of evidence and effectiveness are popular among decision makers, although evidence is not always applied to actual decisions, because the hospital regions independently decide about their budgets.

In this decentralized model, the implementation of evidence depends on the level of enlightenment of the recipient. Regulation is rarely used in its heavy forms (statutes or funding limits) to support or prevent the use of a particular health technology. "Effectiveness" and "evidence" are often mentioned but more sparsely applied; everyday practice may remain unchanged although solid evidence is available. For administration and management, evidence is rarely called for yet.

Collaboration Essential

No country will ever have sufficient resources to produce all HTAs needed for everyday practice; innovative collaboration within and between countries is needed. The European HTA network is building excellent structures for this. Good communication between organizations supporting EBM both in Finland and at the Nordic level is also essential—small countries need each other.

Unlike the British National Institute for Health and Clinical Excellence (NICE), the four Nordic HTA offices have no regulatory powers; instead, they remain at some distance from policy processes. Close relationships with Nordic sister units have helped Finohhta to develop HTA methodology and provided support during the inevitable ups and downs of medium-sized state organizations. The years in EUnetHTA work have equipped us with new methodological skills; Finohhta has gained international acclaim for developing assessment tools for ethical issues (15) and screening (2).

Two international evaluations (3;5) have directed Finohhta toward more effective work processes compatible with its advisory position. The development of new products has reflected customer needs. International information is rapidly mediated to Finnish health care through the Ohtanen database, and the hospitals get assessments to support their decisions through the MUMM program. Formal evaluations of MUMM and Ohtanen are being planned.

Need for EBM Training

Academic teaching of EBM methodology in Finnish universities is patchy and uncoordinated. Some universities offer workshops in critical appraisal of literature; others have basic courses in health economics; and the new HTA textbook (8) could be used for structuring the teaching. However, there are no chairs for EBM, and methodological studies during specialist training are optional. National EBM units must thus train their own staff.

A national HTA unit in a small country needs to be well linked with clinical experts, policy makers, and EBM partners both nationally and internationally. In a responsive national environment, high quality assessments done timely, transparently, and on relevant topics can make a difference.

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