PROPOSAL

FOR

THE DEVELOPMENT OF A NATIONAL MECHANISM FOR HEALTH CARE TECHNOLOGY ASSESSMENT

IN

THAILAND

BY

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1 INTRODUCTION

Current concerns

The health care system of Thailand is in a process of change. Some of the major concerns in current health policy making seems to be the following:

1.health care financing and issues of reimbursement ,
2.the increasing fraction of privately delivered health services,
3.increasing costs of health care,
4.effectiveness and efficiency in the delivery of health care,
5.quality of care,
6.accessibility and trust.

In addition to these there are serious concerns also about:

1.the rapid introduction, diffusion and use of sophisticated, and
2. particularly expensive although effective, medical technology throughout the country.

This has been approached by several means; increased attention in general to the matter, investment in health services research, the development of a system of hospital accreditation, the development of guidelines and other systems of quality assurance, and to the development of a national mechanism for technology assessment in health care.

Health care technology is an undismissible part of any nations health care system. During the last decades Thailand has increased its technological base for health care substantially by investments in knowledge transfer and the importation of equipment, devices and pharmaceuticals. This process has basically gone well, however, there are several emerging problems related to the acquisition, diffusion and use of modern medical technology, as well as concerns about the effectiveness and efficiency of established procedures in health care.

Some of these matters will briefly be dealt with here, namely;

1.the fact that an increasing amount of difficult choices will appear, as more medical technologies become available in Thailand. This will call for priorities to be made, which in turn will require information about not only safety and efficacy but also about effectiveness and costs of different technological options in health care,

2.the questions of appropriate diffusion of technology throughout the country, which is related both to the needs of the population, and to the availability of financial and other resources and to alternative options,

3.the rapidly increasing volume of new knowledge produced primarily in applied clinical research, but also in health services research, in health economics and in the field of technology assessment with implications not only for clinical decision making and medical practices but increasingly so also for policy making in health care,

4.the importance of assessing both new and established technologies for health care.

Increasing choices - need of priorities

As Thailand invests more in medical technology it is obvious that more choices will be presented. The pressure of making choices will come from the outside by the multinational industry in medical care, and from the inside by pressures from medical specialists, from the media, and from the informed general public and patients.

In the long run, it does not seem possible for any country to balance the rapidly increasing technological possibilities for medical care and public and professional demand against resources available for health care. Therefore choices will undoubtedly become increasingly difficult, and as much information as possible about the relative value of investing in different technological options will be needed.

Appropriate diffusion of health care technology

When considering the placement of any high technology service in the public sector, the ministry of public health in Thailand makes use of a fairly elaborated process of discussions and negotiations, taking place at the local, regional, interregional and national level. There is no department or institution in the country which regularly could support this decision making process by data and facts about recent findings from clinical research, and the relative cost-effectiveness of proposed investments. However, common sense is used along with considerations of the needs of the population, the distribution of already existing technology, and judgements of the overall implications of specific investments are made from a societal point of view. It is not known whether such considerations are prevalent in the private sector, however, it seems obvious that there is little or no coordination of investments in medical technology within this sector. In the long run this may well have damaging consequences for both public and private health care.

Competition for patients tempts the private sector to aquire high technology to enhance an institutions image,

resulting in an oversupply of services, sometimes far beyond the true population needs. This maldistribution of technology is questionable from many points of view.

Since modern medical technology theoretically may be accompanied with a broad range of indications for its use, and since an investment must pay back, it becomes tempting to expand its medical indications for use, sometimes beyond any benefit to the patient. This phenomenon is quite visible in Thailand, for example in the frequent advertising directed towards potential patients, including offers of tests by the use of sophisticated technology, which carry no scientific evidence of good to the people these advertisements are directed at.

Another example is that the capital of Thailand reportedly is equipped with more CT-scanners than the number available in the whole country of U.K. Further, overinvestment means lower volume per service which for many clinical procedures, particularly in surgery, is associated with poor outcomes for the patients. The public needs to be protected from the inferior quality of care produced by overinvestments in medical technology. At the end, all overinvestments and maldistribution of technology are paid for by the population at large, and no country can in the long run afford to pay for escalating overinvestment in medical technology.

Increasing volume of clinical studies and assessments

In all countries the medical profession by tradition have been left free to select technologies for the diagnosing and treatment of their patients. This has often worked satisfactory, largerly due to a general sense of strong responsibility among the medical profession, indepth training and specialised skill, performed in an environment of strong social control, overseen by peers.

Nevertheless, the rapid growth of medical technology, and the increasing volume of new knowledge from basic and applied clinical research have made it virtually impossible for even specialists to keep up with the development in medicine. Many inappropriate practices have crept into health care and ineffective and obsolete practices may continue despite overwhelming evidence that these should be dropped.

Some examples of poor investments are found in Thailand as in other countries. Thus, a number of procedures, devices and equipment of no evidence of benefit to the patient are reportedly in wide use, for example in the treatment of patients with back pain by invalid physiotherapeutic and orthopaedic practices. Routine chest x-ray, electrolyte tests, and electrocardiograms are done routinely before surgery, in spite of available scientific evidence of no benefit at all for neither the surgeon nor the overwhelming majority of patients in elective surgery. Screening for prostate cancer has been scientifically

shown to produce more harm than good for the patients. Ultrasound examinations lacks indication in elective toncillectomy. Annual health check ups by the use of CT-scanning is not only inappropriate but unethical in view of the potential amount of false positive findings, and its concomitant medical or surgical inverventions.

Assessment of both new and established technologies

Many innovations in medicine transform into applicable medical technology, of potential great benefits to the patients. Although the new technology could prove to be both more effective and cost-effective in comparison with established practices there may be obstacles for it to get a place in the practice of medicine, particularly if it carries high and clearly visible investment costs.

At the same time there are many established medical technologies which have never been assessed in terms of effectiveness and cost-effectiveness, and which are in a sense blocking the market for new innovations. Some estimates show that as much as 70 to 80 percent of the procedures used in health care have never been evaluated for their relative cost-effectiveness. There are also many, so called small ticket technologies in use in medicine, which do not require high costs of investment, such as new pharmaceuticals for the treatment of mild hypertension, but which are so frequently used that their added yearly costs would cause serious concern among policy makers, if they only were visible. Another concern in this respect is the common tradition in medicine of practicing new technology along with the old, although the latter was supposed to be replaced by the new. Therefore, also established technologies need to be assessed and, if proven to be less effective, should be replaced.

2 HEALTH TECHNOLOGY ASSESSEMENT (HTA)

Definitions and scope

Technology means: the application of findings from research.

Health care technology is usually defined as vaccines, pharmaceuticals, equipment and devices, medical and surgical procedures as well as measures for prevention and rehabilitation of disease.

This broad definition does not mean that health care technology is everything. It is simply used to define the scope of *assessment* of health care technology.* Its scope should cover all health technology in Thailand, including both the public and the private sector.

Technology assessment in health care is a multidisciplinary field of policy analysis. It studies the medical, social, ethical, and economic implications of the development, diffusion and use of health technology. The process of technology assessment briefly includes 1) identification of technologies in need of assessment, 2) critical and systematic reviews of clinical and economic research on the subject, 3) primary studies of missing facts (usually information on cost-effectiveness), 4) synthesis of the information available, and 5) diffusion of the results. Thus, HTA is not directly aimed at, or directly involved in, aspects of regulation or decisions about financing or payment, however, it exists to assist decision makers in such areas.

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*Since this is often a source of confusion a simplified example may serve as an illustration for the need of a broad definition and at the same time make clear the difference between technology and technology assessment. An assessment of a device, for example for mammography, may be done by establishing its safety and efficacy, i.e. that the device actually is performing what it is supposed to do, namely to produce images of the breast. This is usually the responsibility of FDA. However, such an assessment does not tell anything about the value of performing mammography. In aiming at this, the assessment must proceed and include information about sensitivity and specificity, which in turn require epidemiological information about the prevalence and incidence of breast cancer. Further the assessment must include information about the outcome of different interventions, which means that the assessment must include analysis of clinical research performed in the field. In order to tell anything about the relative value of mammography vs other means of detecting breast cancer disease, cost-effectiveness analysis of alternative options have to be performed. Finally, the value of mammography is dependent on its indications for use, whether for clinical use or for screening, for different age groups, for different intervals, number of views per breast etc. In turn this means that skill in epidemiology, health economics and other disciplines needs to be brought in and thereby are also policy issues of approriate diffusion of the technology on the agenda. The concept of technology *assessment* in health care therefore needs a broad definition of technology.

The overall objective of HTA is value for money, i.e. to make best use of available resources for health care. It is doing so by providing unbiased, scientifically based information about the medical, social, ethical and economic implications of specific technologies for health care.

National strategies for HTA

Formal HTA has a history of about 20 years. It is now both an established field of research and a field of assistance to health policy making in about 35 different countries around the world.

The majority of these countries have established governmentally funded agencies, with no regulatory functions, but with the mandate to produce scientific evidence of medical technology and its implications for health and quality of life of the public, including analysis of appropriate diffusion and use of technology as well as economic analysis of different policy options in health care.

At the operational level there are quite a variety of solutions between these countries, particularly in the methodology of synthesizing the evidence and in the dissemination of its findings. It seems quite obvious that the interpretation of evidence needs to be made in the light of cultural, geographical and other circumstances related to each individual country, or for that matter, related to each region of a particular country.

The bulk of the work in HTA is a systematic and critical review of the international scientific literature. This part of the work is usually done either in-house by the agency or by commissioned research performed by individual groups at other institutions, by universitites, consulting agencies etc. A minority of the established governmental agencies in the field do not do systematic reviews but use the technique of consensus conferences among experts to reach conclusions about certain technologies.

The diffusion of the results takes many forms. All agencies are publishing reports, press releases, and arrange conferences. Some develop specific means of dissemination by making use of the research community, the existing network of hospital and health centers in the country, and by appointing special agents or ambassadors throughout the country, who inform about the findings in very much the same way as the pharmaceutical industry have been successful in doing about their products.

3 PRESENT CONCERNS ABOUT HEALTH TECHNOLOGY ASSESSMENT IN THAILAND

Summary of views expressed in meetings

During the cource of this consultancy, meetings took place with about 20 people representing different organisations and institutions. (See appendix 1). The following gives a brief description of views raised in general and on HTA in particular. It must be noted that this does not necessarily reflect respective institutions' or organisations' standpoints on the matter, but rather a blend of views expressed by the individuals interviewed.

NESDB

At the macro-economic level there are several major concerns for the country, including issues on: economic stability and attention to the balance in between the money sector and the productive part of the economy; the need to increase productivity and export and pay more attention to income distribution and thereby increase the capacity of the country; the need to reduce capital investment and focus on investment in human capital; the need to define the role of the government; the need of getting more of skilled people in the public sector; and finally the need of using existing resources within the public sector more effective.

It is foreseen by NESDB that technology assessment in health care will play a role in the process of reform by realizing pieces of its aim, particularly in the efforts to make use of existing resources more effectively, but also by broaden the competence in the public sector.

MOPH

The ministry strongly agrees on the need to do comprehensive HTA at the national level and particularly emphasized the need to create networking and a strong reputation of such an activity, which could be privately or semiprivately organized. It was stressed that a national mechanism must be unbiased, and serve the public and the society. It should also actively push for the government's policies in health care. The Medical Council composes a strong board with certain mandates touching on the issues of HTA, however, it was thought that a national HTA mechanism would need its own Board for its particular purposes.

The ministry felt there are many reasons for HTA in Thailand. In particular because of the fact that the country imports a lot of expensive technology, and because there are overinvestments in some technology.

The ministry has been using some means to control technology. Mainly by redrafting obsolete health laws, and

by the use of opinions based on expert groups. Presently these activities include an effort to develop a system for accreditation of hospitals, and to introduce the DRG system. Reconsidering health care financing is likely to come in the future, as well as defined catchment areas for hospitals, which both may be reforms useful to implement the results of HTA.

A national mechanism for HTA would need an operational unit and it was thought it should include a small staff and attract the brightest and the best, who would connect with researchers from various fields. It should produce information also of technical value for the medical profession, which will increase from about 20,000 to 25,000 doctors by the turn of the century.

As to financing, the ministry does not believe that neither the medical profession nor the hospitals would be willing to pay for the kind of information that HTA-studies would produce. Instead it was elaborated that a national mechanism could be created by some fund, partly financed by the government, since it would seem possible for the government to support a non-profit organization dealing with HTA.

A good starting point would be to bring in the Royal Colleges into this activity, and to pay attention to implementation from the very beginning. For this also the medical schools must be an important target group. HTA must also be strongly linked to policy decision making. It was especially pointed out that it would be important to arrange meetings and discuss HTA also with representatives of the private sector, for example through the existing networks of the private hospitals.

The ministry maintained that HTA should become part of the curriculum of the medical schools in the future. Some aspects of HTA are already now available for medical students, and by special postgraduate training cources, including teaching in the methodology of evaluation, health economics and cost-effectiveness analysis etc.

The health care system currently has its own way of rationalizing technology. About 20 percent of all technological investments are done directly by the hospitals from their own budgets, built up by their own revenues and contributions from the government. The remaining fraction of 80 percent is referred to the Ministry as requests. The decision making process is elaborate and complicated but usually begins at the local or regional level by having the parties involved to negotiate and agree on technological investments of joint interest for several areas of the country, for example investments in high technology, dialysis centres, burn care, organ transplantation, trauma care and ambulances, etc. Further discussions, negotiations and priorities take place at the Ministry including the parties involved.

FDA

FDA believes there is a clear need to assess also other technology than pharmaceuticals, particularly from a cost effectiveness point of view. The main problem foreseen for this, however, is the skilled people needed which the country presently does not possess. Until further it was suggested that the country could deal with HTA by establishing some kind of a national committee, make use of experience from other countries, and provide training on how to assess for those who will be engaged in this activity.

FDA lacks the expertize needed to deal with the broader issues of HTA. The mandate and performance of FDA is not oriented towards questions of effectiveness, and toward issues of the clinical, ethical, social, and economic implications of medical technology but concentrated on specific technical aspects of medical products -the premarketing control of pharmaceuticals and devices. The methodology in assessing equipment and devices follows very much the model of pharmaceutical control, i.e. product safety, efficacy, and guality. FDA would welcome results from HTA-studies as a valuable contribution to its own basis for decision making, and in evaluations of both pharmaceuticals and medical devices.

University

The academic community is well aware of the importance of HTA and its potential long-run implications for medical practices and improved health services.

The present discussions on how to deal with HTA in Thailand at a practical level focus much, maybe too much, on quality of care, the development of practice guidelines and accreditation of hospitals.
One aspect of HTA is to create networking, and specifically to get the medical profession involved. The colleges of physicians are not only important but could actually also serve as a resource for the work to be done, not the least in disseminating the findings from HTA studies. By such a deliberate search for cooperation the profession will become not only interested in the matter but also fully realize the need for HTA. Furthermore, the medical societies can be used for the development of guidelines.

Another aspect on HTA is the methodological skill needed for this, i.e. the critical review of the scientific litterature, as well as the need to follow the development of the methodologies in the field. Anecdotal studies were accepted not too long ago, but methodology has improved and now this type of studies are not longer acceptable. Todays requirements of RCT_s may not be the ultimate but a development of the methodologies will take place as the

information technology improves. The introduction of meta-analysis is a sign of this.

A third aspect on HTA is its broad definition. If it is going to include everything, from clinical research to organisational and managerial aspects of health care, it may be too much to undertake. Its scope needs to be defined to solid technologies, although it is realized that assessments necessarily will touch also on some of the softer aspects of medical technology.

A fourth aspect is the approach or the character of HTA in practice. Will it be sort of regulative and negative or come in as a friend trying to help? After all, the basic thinking in medicine is to do good for the patient. If one does not know how to do this HTA must be seen as something that can assist and help, not as something that is an obstacle.

A fifth aspect of HTA is the education of the public and the profession. Neither are entirely mature or trained for this new view, of assessing medical technology from a broad and societal perspective, although this can be shifted rather quickly. Once again it is important that this is handled carefully and positively. One aspect of the Thai culture to have in mind, is that people do not like to criticize other.

Finally, HTA must be done by some autonomous body with the authority of the state. It may be set up as a program, mainly on function rather than structure.

For a national mechanism to function effectively it was emphasized that this would need to be run by trusted people. Further there would be a need of a specially trained core group which would have strong links to the development in research methodology. The program could partly be supported from research funds. It would be of great value to have at least one demonstration project performed rather quickly to illustrate the importance of a national mechanism for HTA in Thailand.

CHE

The center for Health Economics could contribute much in economic analysis of the implications of both diffusion and use of medical technology, as well in analysis of reimbursement issues related to the use of technology. CHE believes that health technology assessment is very much needed in Thailand, in particular the concomitant cost-effectiveness analysis of technology.

CHE also pointed at the need to pay attention to training and skill in health economics, since it was envisioned that in the future every hospital would like to build up some capacity to interpret the findings of HTA and adapt these to local circumstances, to the need of the

population, to locally available resources and other technological options.

TDRI

TDRI emphasized that technology assessment in health care must be viewed from a very broad perspective, and that many organisations and institutions, with overlapping functions, are or will somehow become involved in this. TDRI further believes that there essentially is no problem with overlapping, rather this should be viewed positively as a source for competition.

A lot must be rethinked, however, when HTA is coming up on the agenda. It's not only about health care in the past but also about its future. An important question in this respect will be how to create networking between existing organizations. It was pointed out that HTA will be a time-consuming activity, requiring sustainable resources, to change a professional culture. Skilled people who can deal with and interpret the information will be needed for this which was deemed not possible without further training of Thai people in this specific field. The skill could preferably be developed in collaboration with some internationally well recognized organization on HTA.

HTA was also seen as a potential contribution in solving a small piece of a much bigger problem, namely to reform the public organizations of Thailand, which, among other things would require new incentives to attract qualified people to the public sector.

It was further thought that the private sector must be brought into this activity, not only for their own interest but also for making clear what might be at stake when findings from HTA-studies will touch on the use of the legal framework available.

TDRI tentatively recommends that a program be established, that a board is appointed, and that several committees for different purposes are identified. Further, that this national mechanism is given independence and first of all demonstrate its value.

TDRI believes it could and would like to play a role in a national HTA-system by carrying out macro-economic and health policy research, particularly in identifying policy options for decision makers. However, presently the institute has very limited experience of projects in health care. Currently there is only one ongoing study in health care on the technical aspects of a paging system.

HSRI

Staff members of HSRI believe strongly in the need of HTA and its importance for improved health services. There is a feeling that many people will be involved in this in the future and that HTA eventually will permeate the whole of

the health care system. It is also realized that as many people as possible should be encouraged to work on this.

A common response on HTA in Thailand is that the department of medical devices at FDA take care of this. However, they are dealing only with safety and efficacy, and are neither monitoring the effective use of drugs, nor the effectiveness of equipment or devices. Their mandade and skill is in the premarketing control of safety and efficacy.

HSRI also thought initially that Thailand could approach HTA like ECRI in the U.S. is doing, namely to produce information about equipment, however, soon realized this is not enough. Needed are also analyses of effectiveness and cost-effectiveness, of diffusion and appropriate use etc., and that quite some effort must go into dissemination of information, with the ultimate objective of implementation and changing of practice.
There is currently no centralised information system on health care in Thailand. For example, data on incidence and prevalence of diseases, and data on existent technology are not at all readily available. Several institutions and departments within the ministry gather different types of data, as does the private sector, however, these are not easily accessible. This is seen as an obstacle to efficient HTA, however, a national mechanism for HTA could actually improve the situation, since it is in all parties interest to collaborate and consequently to make data accessible for all.

It is well recognized that HTA could contribute to the development of guidelines, however, this is viewed as a specific and separate activity which in the long run should be carried out by those who are most concerned about clinical decision making and its technical details and who also have the skill for elaborating on it, namely the Royal Colleges of the medical profession.

HSRI believes that an independent organization, funded by the government, would be needed for a national mechanism on HTA and that the private sector must be, and would be interested in participating in this activity. Further, a national mechanism for HTA should not be regulatory but rather it should monitor technology. There are several examples of studies in the past which illustrate that this may work well in Thailand. HTA in Thailand would need to be linked with policy makers and the research community. The mechanism for accreditation of hospitals will be one of the many important users of the information that HTA will produce.

HSRI own mandade include certain features of HTA, however, not specifically focused on this. Although the technology assessment program of HSRI formally began quite recently some ad hoc activities of HTA were in place already a few years ago. HSRI then asked for bids on projects about

Thalassemia, Coronary Heart Disease and Hormone Replacement Therapy after Menopause.

The present HTA program of HSRI is divided into the following four components:

1) The establishing of an information center and international linkages in HTA.
2) Assessment of priorities, establishment of a mechanism for hospital accreditation, and a national mechanism for HTA.
3) The development of evidence based medicine and clinical guidelines.
4) The rational use of drugs.

The program includes a technical committee, composed of about 20 people, which meets once every month. This committee discusses issues on all components of the HTA program.

It is estimated that there are an equivalent of one or possibly two people full-time working on the HTA program, plus the equivalent of one full time administrative support, incl dissemination of reports etc which is done from the office. HSRI is in the process of hiring coordinators for each of the four components of the HTA program.

Recently HSRI made new announcements and asked for bids on literature reviews of Chronic Diseases and Acute Infections. HSRI has just received about 15 proposals but has not yet made decisions on these. It is required by the HSRI that the proposals specify the magnitude of the problem/the burden of disease and its economic implications, who would benefit from the review, who will be responsible for it, and that it provides an outline of the report including a section of recommendations of what should be done. This is very similar to how some agencies for HTA are working in other countries. In terms of financing HSRI allocate 3-5 million Baths per year for the entire HTA program, except for projects on appropriate utilization of drugs.

HSRI does not have any report on HTA compiled yet. When these are finalized they would be published in the Thai language but HSRI has not discussed whether there should be a special series, colour, style etc of these.

HSRI has two monthly newsletters printed in about 10,000 copies each and distributed free of charge. Also it issues a quarterly scientific Journal on Health Services Research. HTA findings could be disseminated through these channels.

4 PROPOSAL FOR A NATIONAL MECHANISM ON HEALTH TECHNOLOGY ASSESSMENT IN THAILAND

Background

Presently there are many organisations, institutions and individuals interested in HTA in Thailand. In practice there are also many groups that perform studies which clearly may be deemed to be bits and pieces of HTA.

However, as described above, HTA aims at making the synthesis of evidence from a variety of research areas, in particular from applied clinical research, health economics and the field of research on social and ethical implications of technologies in health care. HTA is concerned about the application of research under defined circumstances, i.e. the need of the technology, its indications for use, its appropriate diffusion, its requirement on skill and experience, and the cultural and social environment in which it is going to be applied as well as about its demand on limited resources whether nationally or locally. Such a syntesizing body currently does not exist in Thailand.

The skill and expertize to do HTA in Thailand is very promising, as is the potential networking structure for effective diffusion of results from HTA studies. Moreover, there is a widely recognized need and support for a national mechanism of HTA with its great potential for improved health services in Thailand.

Prerequisites

The medical profession, the patients and the general public must be placed in focus of such an activity.

Health care policy making at large emerges, not in isolation, but from values and attitudes continuously created, shaped and reshaped in the interfaces and processes in between these groups. The aim of HTA to assist in health policy making should be viewed from this perspective. Thus, a first premise is that a national mechanism for HTA must be created so it eventually will be considered as an asset and valuable service function, in several respects, to both the medical profession, the patients and the public.

A further starting point is that a national mechanism for HTA must provide unbiased, valid, and useful information based on scientific evidence. This is obviously not only a question of technical skill and competence, but also a matter of reliability and trust. In order to achieve this among the target groups mentioned, it is necessary to get very respected individuals who the target groups can identify with, rather than institutions and organisations, as representatives of the national mechanism.

Finally, this mechanism must be independent, however, it needs to have the authority of the government and should therefore be financed by the government.

A National Council

These statements suggest the establishment of a national council, committee or board for HTA, composed of individuals who in this position would not represent any organisation, institution or interest group. However, they would need to be selected from different areas of the public and private health care system, excluding the pharmaceutical and other health technology industry as having a vested interest in HTA. The aim of this National Council would be to improve the health services by providing scientific facts and conclusions about the appropriate diffusion and use of health care technology in Thailand.

The Council would not have any regulatory function but only serve all involved in health care with scientific facts about specific health technology, including conclusions and recommendations based on evidence, not opionions.

Operational functions

At the technical or operational level the National Council would have a secretariate or unit which performs HTA, including a special resource for dissemination of findings and conclusions.

For this secretariate there would be a need for a critical mass of competent researchers (from the fields of epidemiology, clinical research and health economics) specially trained in systematic reviews of the scientific literature in health care.

The aim of this operative function would be to:

- commission and assist in HTA-research, based on critical reviews of relevant scientific studies from several disciplines on specific medical technologies,

- commission and assist in primary research on the cost-effectiveness of specific medical technologies,

- carry out research on current diffusion and use of health technology in the country and provide syntheses of the results of these activities,

- interact with all project groups in the HTA process,

- provide training programs for project group members,

- provide the standing Scientific Committee and the Council with appropriate material for decision making as

to conclusions and recommendations based on findings from HTA.

For effective dissemination of findings of HTA-studies the Council would need a special task force or resource within the secretariate at the operational level. The aim of this resource would be to make the results accessible at all levels of health care throughout the country. In turn this would require the creation of a national network for dissemination, the production of a range of targeted information material, based upon the scientific findings, and directed towards the target groups including the massmedia, and the organization of seminars and conferences on the themes of the findings. The national network for dissemination could mainly be built on the existing structure of professional colleges, medical schools and hospitals in the country, but also by the use of new means of marketing research results, for example by the establishment of Ambassadors of the National Council who would have as their function to make results known primarily within the medical community.

See further the organizational chart in appendix 2.

Scientific committees

The operative function will need expert assistance from a variety of disciplines in medicine which have clinical and other information helpful in pilot studies, and in the selection of priority assessments. Further, while the foundation of HTA to a large extent always will be the existing scientific literature, the findings need to be interpreted in the light of both clinical experience, and local and cultural circumstances.

Therefore an ad hoc scientific committee should be appointed for each subject of HTA. By this mechanism there will gradually be an increasing number of professionals attached to the whole program, who have experienced a comprehensive and critical review of a specific technology. These people then also will become helpful in and part of the network needed for effective dissemination of results.

Experts are, however, by definition very close to a specific subject and may therefore be implicitly subjective in their interpretation of evidence. To cope with this potential bias, and to further increase the corps of professionals who will contribute to diffusion of results;

- a *standing scientific committee*, composed of people from different fields of health care, should be appointed as an advisory body to the operative functions and to the National Council.

Networks

HTA will assist in the development of evidence based health care, rather than opinion based medicine in Thailand.

In this process HTA will eventually permeate the health care system and grow into a movement and an attitude -of sound critical views on the diffusion and use of technology, instead of investments in and diffusion of technology in an uncontrolled fashion. This movement will exist alongside actual assessments of health technology which will take place in many settings. It is therefore important that the network of the Council will become as broad as possible.

Although much of the network will be created naturally as the Council begins its operations it seems important to get certain actors into the Council's network from the start. Either represented in the Council as individuals, and/or on the committees, and/or as stakeholders who the Council on a regular basis should inform, in particular about conclusions drawn from the results of its work.

The Ministry of Public Health, including the Food and Drug Administration, the National Economic and Social Development Bureau, and the Royal Colleges of Medicine are seemingly the most important bodies for this networking.

The research community, the medical schools, and the hospitals will be incorporated into the network at the operational level; by the commission of research, by appointments to the scientific committees, as external reviewers, and as associates or ambassadors of the Council in the dissemination processes.

Besides these, many individual decision makers, such as clinicans and hospital directors, and also many institutions and organisations would be expected to make use of the information produced by the Council and thereby become a natural part of the network.

International collaboration

HTA is increasingly becoming international just like the biomedical research community as a whole, and like the pharmaceutical and medical device industry.

For any country at the beginning of its HTA activities, like Thailand, international cooperation gives the opportunity to make use of a large amount of work already done in other countries. As has been pointed out earlier, the core of HTA is the critical review of the international literature in medicine. Although the findings of this need to be interpreted country by country, it is increasingly feasible to make use of already published assessments as the methodology in HTA is becoming more and more international as well.

The potential of international communication and cooperation was early realized by those working on HTA. Researchers in the field of HTA together with policymakers, clinicians and industrial representatives joined together about ten years ago to form The International Society for Technology Assessment in Health Care ISTAHC, which now has about 1,000 members from all over the world.

ISTAHC issues a newsletter and a peer reviewed Journal; The International Journal of Technology Assessment in Health Care, and holds annual meetings. These give an opportunity for those working in the field to keep up to date with new methodology for assessment and diffusion, new policy options, and results of studies performed in different countries.

Some of the professionals belonging to ISTAHC are working in governmental agencies more directly focused on policy making. These agencies have come together and formed a network of governmentally funded HTA programs, called INAHTA, The International Network of Agencies for Health Technology Assessment. This network encompasses about 300 people working in 25 agencies, located in15 different countries. INAHTA issues a monthly newsletter, including reports on recently published material within the Network, runs joint assessment projects, and compiles a registry of published, ongoing and planned HTA projects. INAHTA also holds annual meetings in connection with the ISTAHC meeting. There are about 400 ongoing HTA studies within INAHTA. See appendix 2.

Another international activity important for HTA is the Cochrane Collaboration. This is a network of mainly clinical researchers all over the world, who form groups to do systematic reviews of all randomized clinical trials in specific areas of medicine. Currently there are about 150 Cochrane collaborative groups working on different topics. The Cochrane collaboration has a database and issues their findings in CD-Rom.

The European Union has funded a rather extensive collaborative project called the EURASSES project, which aimed at harmonization of the methodology in HTA; exploring mechanisms for efficient dissemination of HTA results; investigating the means of linking HTA to financing and reimbursement; and developing the process of making priorities in the process of HTA. This project is currently continuing under the name of HTA Europe and includes a series of seminars throughout Europe on different topics, like the development of early warning systems for medical technology, the future of HTA in the European health systems etc.
More information on these and other international activities in the field of HTA are now available at the Internet.

5 EVALUATION OF PERFORMANCE

The Thailand Council on Technology Assessment in Health Care will eventually be well known for its independent, and strictly scientific review of the effectiveness and efficiency in health care by its assessment of health care technology.

It is of utmost importance that such a body will be continously scrutinized as to its own performance, and that this is done by researchers independent of the Council.

Based on experience it will take about three years for the Council to achieve any measureable effect of its work, and therefore it is proposed here that an independent evaluation takes place after three years. This evaluation should focus on the operational function of the council, its productivity, the quality of the material produced, and on different target groups (in particular the community of clinicians in the country) knowledge about and attitudes towards the Council and HTA in general. The evaluation at this stage should not be too concerned about measurable effects in terms of changes in clinical practice, since this will not appear within a period of three years.

Other types of evaluations which will give indications of performance of the Council are ongoing, yearly surveys of knowledge about the Council and its production, and ad hoc reviews of certain aspects of clinical practices for each of the projects. These ad hoc reviews need to be performed before a specific report is released, and then repeated once every year for at least three years. It need not be a complicated procedure, but focus on specific aspects of clinical practices only, in particular those that are likely to be affected by any of the conclusions the Council may arrive at.

The structure of the National Council of Health Technology Assessment in Thailand

THE NATIONAL COUNCIL

Responsible for overall policy

- makes priorities
- appoints the director
- appoints the scientific committees
- approves of results of assessments
- approves of conclusions and recommendations

THE STANDING SCIENTIFIC COMMITTEE

- gives advice to the Council and the secretariate
- reviews findings from assessment
- appoints external reviewers
- writes summaries of HTA-reports and approves of conclusions and recommendations
- participates in the working groups

THE SECRETARIATE

Needs a critical mass of staff

- runs the operational functions of the Council
- participates in all project groups
- finalizes reports for approval
- produces synthesis of findings from research

DISSEMINATION	**PROJECTS**	**INTERNATION**
		COLLABORATION
Extramural research	Project Committees	External reviewers
*systematic literature reviews	*review manuscripts	
*economic analysis	*compile further data as needed	
*analysis of current diffusion and use	*finalise reports for the secretariate	

APPENDICES

1.LIST OF PEOPLE INTERVIEWED

2.PROJECTS WITHIN INAHTA

LIST OF PEOPLE INTERVIEWED/MET WITH DURING THE TIME OF SEPTEMBER 8 - 22,1997.

Anuwat Supachutikul, Health Systems Research Institute, HSRI.
Boonlert Kongkamee, M.P.H., Director, Medical Device Control Division, FDA, Ministry of Public Health.
Chantana Jutiteparak, Senior Expert, Food and Drug Standards, FDA, Ministry of Public Health.
Charas Suwanwela, M.D., Professor of Surgery (Neurosurgery), Chulalongkorn University.
Chitr Sitthi-Amorn, Professor, School of Public Health, Chulalongkorn University.
Kaemthong Indaratna, Ph. D., Professor, Faculty of Economics, Chulalongkorn University.
Montchai Chalaprawac, M.D., Faculty of Medicine, Chulalongkorn University.
Narintr Tima, Research Program Manager, Health Systems Research Institute, HSRI.
Nit Chantramonklasri, Ph. D., Vice President, Thailand Development Research Institute Foundation, TDRI.
Raymond C.W. Hutubessy, Associate Professional Officer, WHO, Faculty of Economics, Chulalongkorn University.
Somsak Chunharas, Director, Health Systems Research Institute, HSRI.
Supachai Kunaratanapruk, M.D., M.P.H., Assistant Permanent Secretary to the Minister of Health, Ministry of Public Health.
Suwit Wibulpolprasert, M.D. Director, Bureau of Health Policy and Planning, Ministry of Public Health.
Waranya Pataraşuk, Associate Professor, Faculty of Economics, Chulalongkorn University.
Viroj Tangcharoensathien, M.D., Ph.D., Health Systems Research Institute, HSRI.
Aphaluck Bhatiasevi, News Reporter, Bankok Post.
Araya Thawornwanchai, News Reporter, The Nation.
Pattra Julawanna, MS.P.H., Freelance Researcher
Monkol Na Songkhla, M.D., Department of Medical Sciences, Ministry of Public Health.
Thamarak Karnpisit, Deputy Secretaries-General, Office of the National Economic and Social Development Board.

Publications from INAHTA Agencies

(sorted by subjects headings)

Organisation	Title	Language	Publication year
Alternative medicine			
AHFMR	Alternative interventions survey	English	1996
GR	Alternative modes of treatment and scientific research	Dutch	1993
Blood pressure			
SHPIC	Ambulatory blood pressure monitors	English	1996
SBU	Moderately elevated blood pressure	Swedish	1994
		English	1995
Cancer			
NHS CRD	The management of primary breast cancer	English	1996
AETS	Breast cancer mass screening with mammography	Spanish	1995
CAHTA	Approach to the utilization of screening mammography in two health regions	Catalan Spanish	1995
CCOHTA	An overview of major breast screeening studies and their findings	English French	1992
CETS	Screening for breast cancer in women aged 40-49 years	English French	1993
CAHTA	Breast cancer screening in Catalonia: cost-effectiveness, impact in health care and cost of breast cancer therapies.	Spanish	1996
OSTEBA	Early detection of breast cancer in the Basque country	Spanish	1994
AHTAC	Prostate cancer screening (consumer statement)	English	1996
AHTAC	Prostate cancer screening (executive summary)	English	1996
AHTAC	Prostate cancer screening (technical report)	English	1996
NCCHTA	Diagnosis, management and screening of early localised prostate cancer	English	1997
NCCHTA	The diagnosis, management, treatment and costs of prostate cancer in England and Wales	English	1997
SBU	Mass screening for prostate cancer	Swedish	1995
		English	1996
CETS	Screening for cancer of the prostate: an evaluation of	English	1995

	benefits, unwanted health effects and costs	French	
DSI	Prostatic cancer in the Nordic countries	Danish	1992
ANDEM	Clinical and economic evaluation of the therapeutic use of cyclotrons in oncology	French	1995
DSI	Avoidance of deaths from cancer, consensus statement	Danish English	1990
GR	Quality and allocation of care in oncology	Dutch	1993
GR	UV radiation from sunlight	Dutch	1994
SBU	Radiotherapy for cancer vol 1 & 2	Swedish English	1996

Cardiology

CAHTA	Cardiac pacemakers, electrodes and cardioverter defibrillators - Health products comparison	Catalan Spanish	1996
CAHTA	Valvular cardiac implants - Health products comparison	Catalan Spanish	1995
CAHTA	Transmyocardial laser revascularization (in press)	Catalan	
CAHTA	Oxygenators, reservoirs (venous, cardiotomies) - Health products comparison	Catalan Spanish	1995
CEDIT	Transmyocardic laser revascularization	French	1996
CETS	Revascularization procedures for the treatment of stable angina pectoris - A state of the art	English	1996
CETS	Technological trends in cardiology	French	1996
SHPIC	Stents for coronary artery disease	English	1996
CEDIT	Thoravision	French	1996
AHTAC	Paediatric heart transplantation	English	1996
AHTAC	Superspeciality service guidelines for adult heart transplantation services	English	1996
CCOHTA	Coronary stents: clinical experience and cost-effectiveness	English	1997
CCOHTA	The use of nitrates in chronic stable angina	English	1996
AHTAC	Heart and lung transplantation programs	English	1993
AHTAC	Superspecialty service guidelines for acute cardiac interventions	English	1995
AHTAC	Superspecialty services guidelines for heart transplantation	English	1995
ANDEM	New techniques of coronary angioplasty	French	1992
CAHTA	Patterns of utilization of thrombolytic treatment in a catalan health region	Catalan Spanish	1995
CCOHTA	Chelation therapy and atherosclerosis coronary artery disease	English	1993

		French	
CCOHTA	Thrombolytic therapy: current status	English	1992
		French	
GR	Cardiac arrhythmias. Catheter ablation, arrhythmia surgery and cardioverter defibrillator implantation	English	1993
GR	Heart surgery and interventional cardiology for adults	Dutch	1995
		English	
GR	Heart surgery and interventional cardiology for children	English	1993
SBU	Coronary artery bypass graft and percutaneous transluminal coronary angioplasty - a literature review and ratings of appropriateness and necessity	English	1994
SBU	The role of percutaneous transluminal coronary angioplasty in coronary revascularization: evidence, assessment and policy	English	1992

Cerebrovascular system

NHSCRD	Stroke rehabilitation	English	1992
SBU	Stroke	Swedish	1992

Dentistry

CEDIT	Oral implants II	French	1996
ANDEM	Oral implantology. Current state of knowledge	French	1993
DSI	Alternatives to the dental filling material amalgam	Danish	1991

Diabetes

SHPIC	Preventing blindness in diabetes	English	1996
OSTEBA	Economic evaluation of the nonmydiatric retinal camera for diabetic retinopahty	Spanish	1996
SBU	Diabetic retinopathy - the value of early detection	Swedish	1993

Diagnostic imaging

CEDIT	Extremity-dedicated magnetic resonance imaging	French	1996
CEDIT	Interventional MRI	French	1996
OSTEBA	Guidelines on the use of Imaging Magnetic Resonance	Spanish	1997
CCOHTA	Magnetic field strength issues in magnetic resonance imaging (MRI)	English	1993
		French	

SBU	Magnetic resonance imaging	Swedish	1992
AHFMR	Bladder ultrasound scanning for the measurement of post-void residual urine volume	English	1996
CAHTA	Assessment of low osmolar contrast media	Catalan Spanish	1993
CAHTA	Guidelines for the use of low osmolarity contrast agents	Catalan	1994
CEDIT	C arm for digital neuroangiography	French	1996
CEDIT	Thoravision	French	1996
CEDIT	Charpak's multiwire proportional chamber (MWPC): Application to a low dose x-ray system	French	1996
CEDIT	Tele-transfer of angiographic images	French	1996
VATAP	Positron Emission Tomography	English	1996
OSTEBA	Iodinated contrast media in radiodiagnosis	Spanish	1995

Diagnostic tests

VATAP	Assessing diagnostic technologies	English	1996
ANDEM	Indications for routine preoperative examinations	French	1992
ANDEM	Opportunity of a screening program of hemochromatosis in France	French	1995
CCOHTA	Influence of educational interventions on the test ordering patterns of physicians	English French	1992
DSI	Future laboratory technologies for community care	English	1991
GR	Testing and prediction	Dutch	1993
OSTEBA	Healthy/asymptomatic patient preoperative evaluation	Spanish	1994
SBU	Preoperative routines	Swedish	1989

Dialysis

AETS	Assessment of the different types of dialyzer membranes for ESRD	Spanish	1996
AHTAC	Guidelines for renal dialysis and transplantation services	English	1992

Ethics

GR	Privacy in postmarketing surveillance	Dutch	1993
GR	Proper use of human tissue	Dutch	1994

Gastrointestinal system

SHPIC	Dyspepsia, peptic ulcer & helicobacter pylori	English	1996

CCOHTA	Pharmaceutical management of gastroesophageal reflux disease	English	1996
ANDEM	Value of echoendoscopy in gastrointestinal disease	French	1994
SBU	Gastroscopy in the diagnosis of dyspepsia	Swedish	1990

Genetics & Molecular Biology

NCCHTA	Screening for fragile X syndrome	English	1997
GR	Genetic screening	Dutch	1994
SBU	Genetic diagnosis by PCR	Swedish	1993

Guidelines & Methods

NHSCRD	Undertaking systematic reviews of research on effectiveness. CRD guidelines for those carrying out or commissioning reviews.	English	1996
NHSCRD	Ethnicity and health: reviews of literature and guidance for purchasers in the areas of cardiovascular disease, mental health and haemoglobinopathies.	English	1996
SBU	Literature searching and evidence interpretation for assessing health care practices	English	1993
SFOSS	Manual for standardisation of T.A. (3rd edition)		1996
OSTEBA	The prioritization of evaluation topics of health	Spanish English	1996
AHTAC	Superspeciality service guidelines for adult heart transplantation services	English	1996
OSTEBA	Guidelines on the use of imaging magnetic resonance	Spanish	1997
OSTEBA	Evidence interpretation	Spanish	1997
ANDEM	Introducing a quality programme for improvement in healthcare organizations	French	1996
AHTAC	Guidelines for renal dialysis and transplantation services	English	1992
AHTAC	Superspecialty service guidelines for acute cardiac interventions	English	1995
AHTAC	Superspecialty services guidelines for heart transplantation	English	1995
AHTAC	Superspecialty services guidelines for liver transplantation	English	1995
CAHTA	Guidelines for the use of low osmolarity contrast agents	Catalan Spanish	1994
NHSCRD	Implementing clinical practice guidelines: can guidelines be	English	1994

	used to improve clinical practice		
OSTEBA	Guideline to handle chronic leg ulcers in primary health care	Spanish	1995
TNO	Guidelines for home-monitoring of risk-pregnancies using cardiotocography	Dutch	1994

Gynecology & Obstetrics

NHSCRD	Preventing and reducing the adverse effects of unintented teenage pregnancies	English	1997
NHSCRD	The management of subfertility	English	1992
GR	Assisted fertilization: ICSI	English	1996
AETS	Pathological complications of menopause	Spanish	1995
ANDEM	Clinical and economic evaluation of Doppler in obstetrics	French	1995
CCOHTA	An annotated bibliography of the costs and benefits of prenatal screening programs	English French	1991
CEDIT	Computer assisted screening of cervico/vaginal smears	French	1996
CETS	Risks of occupational anesthetic gas exposure for the pregnant woman and the fetus	English	1996
DSI	Vaginal bleeding disorders, consensus statement	Danish English	1993
SBU	Hormone replacement therapy	Swedish	1996
SBU	Hysterectomy - ratings of appropriateness	English	1995
ANDEM	Fetal telemonitoring (FTM)	French	1992
TNO	Guidelines for home-monitoring of risk-pregnancies using cardiotocography	Dutch	1994

Hematology

ANDEM	Assessment of the results of allogenic bone marrow transplantation and the French bone marrow donor registry	French	1993
ANDEM	Capacity of HIV1 P24 antigen screening to reduce the current residual risk of contracting HIV infection following transfusion	French	1991
ANDEM	Evaluation of screening tests to prevent transfusion-associated non-a non-b hepatitis	French	1991
ANDEM	Opportunity of a screening program of hemochromatosis in France	French	1995
GR	Allogenic bone marrow transplantation: the need for transplants up to the year 2000	Dutch	1994

SBU	Bone marrow transplantation	Swedish	1991

Homecare

NCCHTA	Home parenteral nutrition: a systematic review	English	1997
AETS	Long-term oxygen therapy and mechanical ventilation at home	Spanish	1995
CAHTA	Home mechanical ventilation	Catalan	1994
TNO	Guidelines for home-monitoring of risk-pregnancies using cardiotocography	Dutch	1994

Infections & Immunology

CEDIT	The potential risks of transmission of Creutzfeldt-Jakob disease associated with the reuse of single-use catheters and permanent pacemakers	English French	1996
CEDIT	Intravenous immuno-globulines	French	1996
CETS	The potential risks of transmission of Creutzfeldt-Jakob disease associated with the reuse of single-use catheters and pacemakers	French	1996
GR	Adverse reactions to a vaccinations in the national immunization programme in 1994	Dutch	1996
GR	Compulsion and pressure in tuberculosis control	Dutch	1996
GR	Protection against diphtheria	Dutch	1996
GR	Protection against hepatitis B	Dutch	1996
ANDEM	Capacity of HIV1 P24 antigen screening to reduce the current residual risk of contracting HIV infection following transfusion	French	1991
ANDEM	Evaluation of screening tests to prevent transfusion-associated non-a non-b hepatitis	French	1991
GR	Adverse reactions to vaccinations in the national immunization programme in 1992	English	1993
GR	Influenza vaccination: season 1993-1994	Dutch	1994
GR	Women and children with HIV-infection or aids	Dutch	1995

Liver

CEDIT	Transjugular intrahepatic porto-systemic shunt	French	
AETS	Indications and contraindications of the liver transplantation and retransplantation	Spanish	1995

AHTAC	Liver transplantation: a further review	English	1993
AHTAC	Superspecialty services guidelines for liver transplantation	English	1995
GR	Planning liver transplantations. Critical remarks on a draft-regulation	Dutch	1993

Miscellaneous

CETS	The impact of renal extracorporeal shock-wave lithotripsy on the use of resources in the Quebec health care system	English French	1994
SBU	Lithotripsy of kidney stones and gallstones	Swedish	1990
CAHTA	Review of the scientific evidence of commercial products based on electromagnetic fields	Spanish	1996
DSI	Biosensors in medicine, a proactive technology assessment	Danish	1990
GR	Risk is more than just a number	English	1996
GR	Requirements for expertise in radiation applications in medicine	Dutch	1996
NHSCRD	Hospital volume and healthcare outcomes, cost and patient access	English	1996
GR	Brain death criteria	Dutch	1996

Musculoskeletal system

OSTEBA	INAHTA. Recommendations on diagnosis and therapy for osteoporosis	Spanish	1996
AHCPR	Bone densitometry: patients with end-stage renal disease	English	1996
NHSCRD	Screening for osteoporosis to prevent fractures	English	1992
DSI	Osteoporosis. Consensus statement	Danish	1995
OSTEBA	The problem of osteoporosis in the Basque country	Spanish	1994
CAHTA	Bone densitometry assessment	Catalan, Spanish	1993
SBU	Bone density measurement	Swedish English	1995
CCOHTA	Chiropractic treatment of neck and back disorders: a review of selected studies	English French	1992
SBU	Back pain — causes, diagnosis, treatment	Swedish	1991
SBU	The problem of back pain proceedings from a conference	Swedish English	1989
GR	Risk assessment of manual lifting	Dutch	1995
NHS CRD	Total hip replacement	English	1996
SBU	Bone-anchored implants in the head and neck region	English	1988

AHCPR	Bone densitometry: patients receiving prolonged steroid therapy	English	1996
CAHTA	Use of calcitonin in the treatment of idiopathic osteoporosis	Catalan	1995
ANDEM	Evaluation of bone mineral density measurement	French	1991

Neurology

CEDIT	Phrenic nerve stimulator	French	1996
GR	Interferon-beta-1b in patients with multiple sclerosis	Dutch	1996
CCOHTA	Interferon beta 1-B and multiple sclerosis	English	1996
CAHTA	Epilepsy surgery	Catalan Spanish	1993
SBU	Surgery for epilepsy	Swedish	1991

Ophthalmology

ANDEM	Corneal graft	French	1996
CAHTA	Intraocular lenses - Health products comparison	Catalan Spanish	1996
CAHTA	Phototherapeutic keratectomy with excimer laser	Catalan Spanish	1996
CAHTA	Endocyclodestruction with ophthalmologic laser microendoscope	Spanish	1996
CAHTA	Accessories for eye surgery (glaucoma implants and valves, viscoelastic solutions) - Health products comparison (in press)	Catalan	
OSTEBA	Economic evaluation of the nonmydiatric retinal camera for diabetic retinopahty	Spanish	1996
ANDEM	Evaluation of excimer laser for photofractive keratectomy	French	1992
CAHTA	Refractive laser surgery	Catalan	1993
CEDIT	Excimer laser in ophthalmology	French	1994
CETS	The screening of primary open-angle glaucoma	English French	1995
DSI	Cataract surgery in hospitals and office based practices	Danish	1992
GR	Lasers in sight. Laser correction of refractive errors	English	1993
OSTEBA	Laser excimer in ophthalmology	Spanish	1995
SBU	Diabetic retinopathy - the value of early detection	Swedish	1993

Organizational

ANDEM	Medical record in ambulatory practice	French	1996
CEDIT	Exploration and setting of assessment priorities in ambulatory services	French	1996
VATAP	Transferring managed care practices to VA	English	1996
CAHTA	Catalonian register of medical technology equipment, 1992-1993	Catalan	1994
DSI	Electronic health communication in the Funen county, a description and evaluation	Danish	1995
SBU	Prioritising and rationing in health care - actual trends in the USA. Report from a conference	English	1991

Otology

CEDIT	Cochlear implants	French	1996
CETS	Cochlear implants in adults, adolescents and children	French	1996
ANDEM	Cochlear implant in prelingually deaf children	French	1994
NHSCRD	The treatment of persistent glue ear in children	English	1992

Paediatrics

CEDIT	Sleep apnea syndrome(VI) polysomnography in preterm-infant	French	1996
AHTAC	Paediatric heart transplantation	English	1996
NHSCRD	Preventing unintentional injuries in children and young adolescents	English	1996
ANDEM	Cochlear implant in prelingually deaf children	French	1994
CCOHTA	Exosurf neonatal for surfactant replacement therapy	English French	1991
NHSCRD	The treatment of persistent glue ear in children	English	1992
DSI	Extremely preterm infants, consensus statement	Danish English	1990
GR	Heart surgery and interventional cardiology for children	English	1993

Pain

CCOHTA	Transcutaneous electrical nerve stimulation and pain management	English French	1995

Pharmaceuticals

GR	Interferon-beta-1b in patients with multiple sclerosis	Dutch	1996
CCOHTA	Interferon beta 1-B and multiple sclerosis	English	1996
CAHTA	Patterns of utilization of thrombolytic treatment in a Catalan health region	Catalan Spanish	1995
CCOHTA	Thrombolytic therapy: current status	English French	1992
CAHTA	Use of the calcitonin in the treatment of idiopathic osteoporosis	Catalan	1995
CAHTA	Cystic fibrosis and recombinant human dornase (RHDNASE)	Catalan, Spanish	1995
CCOHTA	Pharmaceutical management of gastroesophageal reflux disease	English	1996
CCOHTA	Pulmozyme: Clinical and economic impacts	English	1996
CCOHTA	Finasteride: Clinical and economic impacts	English	1996
CCOHTA	The use of nitrates in chronic stable angina	English	1996
CCOHTA	Chelation therapy and atherosclerosis coronary artery disease	English French	1993
CCOHTA	Exosurf neonatal for surfactant replacement therapy	English French	1991
CCOHTA	A survey of investigational new drugs and emergency drug release policies	English	1991
DSI	Anticoagulant therapy in the Nordic countries	Dan,Swe ,Norw,E ng	1994
GR	Marihuana as medicine	English	1996

Prevention, primary/secondary

SHPIC	Preventing blindness in diabetes	English	1996
GR	Protection against diphtheria	Dutch	1996
GR	Protection against hepatitis B	Dutch	1996
NHS CRD	Preventing falls and subsequent injury in older people	English	1996
NHS CRD	Preventing unintentional injuries in children and young adolescents	English	1996
NHSCRD	Cholesterol screening and treatment	English	1993

Psychiatry & Psychology

NHSCRD	Brief interventions and alcohol use	English	1993
NHSCRD	The treatment of depression in primary care	English	1993
DSI	Schizophrenia, consensus statement	Danish English	1993

Pulmonary system

AHCPR	Lung-volume reduction surgery for end-stage chronic obstructive pulmonary disease	English	1996
AETS	Long-term oxygen therapy and mechanical ventilation at home	Spanish	1995
AHTAC	Heart and lung transplantation programs	English	1993

Radiotherapy

SBU	Critical issues on radiotherapy	English	1996
SBU	Radiotherapy for cancer vol 1 & 2	Swedish English	1996
GR	Stereotactic radiotherapy: the gamma knife and other techniques	Dutch English	1994

Rehabilitation

NHSCRD	Stroke rehabilitation	English	1992
SBU	The treatment and rehabilitation of traffic accident victims	Swedish	1994

Screening

NCCHTA	Screening for fragile X syndrome	English	1997
CAHTA	Breast cancer screening in Catalonia: cost-effectiveness, impact in health care and cost of breast cancer therapies.	Spanish	1996
CAHTA	Breast cancer screening in Catalonia: cost-effectiveness, health care impact and cost of the treatment of breast cancer	Spanish	1996
CAHTA	Approach to the utilization of screening mammography in two health regions	Catalan Spanish	1995
CCOHTA	An overview of major breast screeening studies and their findings	English French	1992
CETS	Screening for breast cancer in women aged 40-49 years	English French	1993

OSTEBA	Early detection of breast cancer in the Basque country	Spanish	1994
AHTAC	Prostate cancer screening (consumer statement)	English	1996
AHTAC	Prostate cancer screening (executive summary)	English	1996
AHTAC	Prostate cancer screening (technical report)	English	1996
NCCHTA	Diagnosis, management and screening of early localised prostate cancer	English	1997
SBU	Mass screening for prostate cancer	Swedish English	1996
CETS	Screening for cancer of the prostate: an evaluation of benefits, unwanted health effects and costs	English French	1995
ANDEM	Capacity of HIV1 P24 antigen screening to reduce the current residual risk of contracting HIV infection following transfusion	French	1991
ANDEM	Evaluation of screening tests to prevent transfusion-associated non-a non-b hepatitis	French	1991
ANDEM	Opportunity of a screening program of hemochromatosis in France	French	1995
CCOHTA	An annotated bibliography of the costs and benefits of prenatal screening programs	English French	1991
CEDIT	Computer assisted screening of cervico/vaginal smears	French	1996
CETS	The screening of primary open-angle glaucoma	English French	1995
GR	Genetic screening	Dutch	1994
NHSCRD	Cholesterol screening and treatment	English	1993
NHSCRD	Screening for osteoporosis to prevent fractures	English	1992
SBU	Diabetic retinopathy - the value of early detection	Swedish	1993

Sleep

CEDIT	Sleep apnea syndrome(VI) polysomnography in preterm-infant	French	1996
CEDIT	Sleep apnea syndrome (v): Telemedicine in the management of sleep apnea syndrome	French	1996
ANDEM	Evaluation of the application of nocturnal nasal continuous positive airway pressure (CPAP) in the treatment of obstructive sleep apnea	French	1992

Sterilization

AHFMR	Alternatives to ethylene oxide/chlorofluorocarbon	English	1996
CETS	Impact of the regulation respecting ozone-depleting substances on the reuse of single-use devices	English French	1995
CCOHTA	Reuse of single-use cardiac catheters	English French	1991

Surgery

ANDEM	Hysterectomy - ratings of appropriateness	English	1996
CETS	Variations in rates of tonsillectomy, adenectomy and myringotomy in Quebec	English	1996
CAHTA	Dye lasers - Health products comparison	Catalan Spanish	1995
CEDIT	Endoscopy in neuro-surgery	French	1996
CEDIT	Tele-medicine in the management of neuro-surgical emergencies in Paris	French	1996
AHCPR	Lung-volume reduction surgery for end-stage chronic obstructive pulmonary disease	English	1996
AETS	Surgery for benign hypertrophia of the prostate	Spanish	1996
ANDEM	Evaluation of laparoscopy in intestinal surgery and gynecological surgery and its economic implications	French	1994
CAHTA	Ambulatory surgery	Catalan, Spanish	1992
CAHTA	Epilepsy surgery	Catalan, Spanish	1993
CAHTA	Minimum standards required for a laser treatment controlled area	Catalan	1991
CAHTA	Mission, objectives and implementation of a multidisciplinary lasertherapy platform	Catalan, Spanish	1993
CAHTA	Refractive laser surgery	Catalan	1993
CAHTA	Stereotactic radiosurgery	Catalan	1993
CCOHTA	Gallstone therapies	English French	1991
CCOHTA	The introduction of laparoscopic cholecystectomy in Canada and Australia	English French	1994
CEDIT	Excimer laser in ophthalmology	French	1994
CETS	The cost of conventional cholecystectomy, laparoscopic	English	1993

	cholecystectomy and biliary lithotripsy	French	
CETS	The introduction of laparoscopic cholecystectomy in Quebec: Effects on intervention rates and resource utilization	English French	1995
CETS	Variations in the frequency of surgical procedures by region in the province of Quebec	English French	1993
DSI	Cataract surgery in hospitals and office based practices	Danish	1992
GR	Heart surgery and interventional cardiology for adults	Dutch English	1995
GR	Heart surgery and interventional cardiology for adults	English	1995
GR	Heart surgery and interventional cardiology for children	English	1993
GR	Lasers in sight. Laser correction of refractive errors	English	1993
GR	Stereotactic radiotherapy: the gamma knife and other techniques	Dutch English	1994
OSTEBA	Laser excimer in ophthalmology	Spanish	1995
SBU	Surgery for epilepsy	Swedish	1991
SBU	Vascular surgery for arteriosclerosis in the legs	Swedish	1990
TNO	Lasers in health care, effectiveness, cost-effectiveness, and policy implications	English	1991
TNO	Minimal invasive surgery	English	1993
ANDEM	Silicone gel breast implants	French	1992

Telemedicine

CEDIT	Sleep apnea syndrome (v): Telemedicine in the management of sleep apnea syndrome	French	1996
CEDIT	Tele-medicine in the management of neuro-surgical emergencies in Paris	French	1996
CEDIT	Tele-transfer of angiographic images	French	1996
ANDEM	Fetal telemonitoring (FTM)	French	1992
FinOHTA	Telemedicine applications in Finland 1996	Finnish	1996

Transplantation

AETS	Indications and contraindications of the liver transplantation and retransplantation	Spanish	1995
AHTAC	Paediatric heart transplantation	English	1996
AHTAC	Pancreas transplantation	English	1996
AHTAC	Superspeciality service guidelines for adult heart transplantation services	English	1996
AHTAC	Guidelines for renal dialysis and transplantation services	English	1992
AHTAC	Heart and lung transplantation programs	English	1993
AHTAC	Liver transplantation: a further review	English	1993
AHTAC	Superspecialty services guidelines for heart transplantation	English	1995
AHTAC	Superspecialty services guidelines for liver transplantation	English	1995
ANDEM	Assessment of the results of allogenic bone marrow transplantation and the French bone marrow donor registry	French	1993
GR	Allogenic bone marrow transplantation: the need for transplants up to the year 2000	Dutch	1994
GR	Planning liver transplantations. Critical remarks on a draft-regulation	Dutch	1993
SBU	Bone marrow transplantation	Swedish	1991

Urology

AHFMR	Bladder ultrasound scanning for the measurement of post-void residual urine volume	English	1996
AHTAC	Prostate cancer screening (consumer statement)	English	1996
AHTAC	Prostate cancer screening (executive summary)	English	1996
AHTAC	Prostate cancer screening (technical report)	English	1996
OSTEBA	Benign prostatic hyperplasia. Diagnosis and treatment	Spanish	1997
NCCHTA	Diagnosis, management and screening of early localised prostate cancer	English	1997
NCCHTA	The diagnosis, management, treatment and costs of prostate cancer in England and Wales	English	1997
SBU	Mass screening for prostate cancer	Swedish English	1996
AETS	Surgery in benign hypertrophy of the prostate - standards of appropriate use	Spanish	1996
AHTAC	Treatment options for benign prostatic hyperplasia	English	1994

ANDEM	Heat treatment of benign prostatic hyperplasia	French	1991
CCOHTA	Cost effectiveness and cost utility analyses for the treatment of benign prostatic hyperplasia	English French	1995
CETS	Diathermy and balloon dilatation treatment of benign prostatic hyperthrophy: a technology brief	English French	1993
CETS	Screening for cancer of the prostate: an evaluation of benefits, unwanted health effects and costs	English French	1995
DSI	Prostatic cancer in the Nordic countries	Danish	1992
OSTEBA	Therapy for benign prostatic hyperplasia	Spanish	1994

Vascular system

AHCPR	Plethysmography: safety, effectiveness and clinical utility in diagnosing vascular disease	English	1996
AETS	Endovascular stents for the treatment of peripheral arterial disease for lower limbs	Spanish	1996
ANDEM	Endovascular stent treatment of aortic aneurysms	French	1995
ANDEM	Evaluation of new endoluminal revascularization techniques for lower limb arteries	French	1993
SBU	Vascular surgery for arteriosclerosis in the legs	Swedish	1990

Wounds & Injuries

NHSCRD	Preventing falls and subsequent injury in older people	English	1996
NHSCRD	Preventing unintentional injuries in children and young adolescents	English	1996
OSTEBA	Guideline to handle chronic leg ulcers in primary health care	Spanish	1995
SBU	The treatment and rehabilitation of traffic accident victims	Swedish	1994