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EVALUATION OF COST EFFECTIVENESS IN HEALTH CARE

Report on a WHO Meeting

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MANAGING HEALTH FOR ALL DEVELOPMENT

By the year 2000, management structures and processes should exist in all Member States to inspire, guide and coordinate health development, in line with health for all principles.

Keywords

COST-BENEFIT ANALYSIS
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1. INTRODUCTION

At the recent WHO Conference on European Health Care Reforms held in Ljubljana, Slovenia, 10-17 June 1996, the ministers of health of the European Region and their representatives agreed on a Charter which puts major emphasis on improving health outcomes, quality of care and cost-effectiveness. Progress towards health for all could be made in all countries if harmful, useless and not cost-effective health care strategies and actions could be identified, phased out and eliminated.

As part of this action, there have been a number of international and national efforts to evaluate the efficacy and effectiveness of health care delivery in practice, especially the procedures and technology applied in medical care, and to disseminate findings, and different approaches have pursued with different degrees of success. The component dealing with the analysis of cost-effectiveness and related economic outcomes is relatively recent and has been applied less consistently. This is likely to be a major factor for the relatively modest impact on clinical and other health care decisions. Moreover, health insurance and other third party payers across Europe express increasingly the need to contain cost and to focus on essential needs.

Therefore a meeting was called to exchange experience on, and review, methodology, organization, priority setting, dissemination and impact of cost-effectiveness evaluation on health care decisions, and make recommendations for strengthening the scientific basis of interdisciplinary approaches to the evaluation of cost-effectiveness of health care procedures and technologies.

The meeting was hosted and supported by the Federal Ministry of Health of Germany, and was organized in cooperation with the Hanover School of Medicine (Department of Epidemiology and Social Medicine), the University of Hannover (Research Unit for Health Economics and Health Systems Research) and the German Institute for Medical Documentation and Information (DIMDI), Cologne.

Experts and participants were drawn from 13 countries and included economists, epidemiologists, clinical researchers and policy makers. (A list is given in Annex 1.) The main topics discussed included the methods of cost-effectiveness (economic) evaluation, the use by decision-makers of studies and the ways of organizing cost-effectiveness evaluation of health care procedures and technologies (see programme in Annex 2).

In opening the meeting Dr. Z″llner pointed to the importance of economic evaluation in the context of health reform. He stressed it was also important to recognize that economic evaluation is not just about cost cutting, as it considers both costs and outcomes. There is still debate about the methodology and role of economic evaluation in health care and therefore it would not be possible to reach a consensus on all issues. Nevertheless, it ought to be possible to suggest ways forward that could be adapted in a flexible way by individual countries.

Participants were also welcomed, on behalf of the local organizers, by Professor Schwartz, who chaired the meeting with Dr. Weis as co-chair. Professor Drummand (English report) and Professor von der Schulenburg (German report) were asked to act as Rapporteur, together with Professor Buxton and Dr Busse.

2. TECHNOLOGY ASSESSMENT IN HEALTH CARE

Technology assessment in health (originating some 30 years ago in the United States of America) is a general term describing a range of approaches for the systematic analysis of health care programmes and procedures. Economic evaluation is part of a broader effort in health technology assessment, linked to other related initiatives in clinical guidelines development, quality assurance and evidence-based medicine.

Technology assessment should be a multidisciplinary effort, linked as closely as possible to the health policy process in a given country. An appropriate schema for health technology assessment should consist of the following four elements.

Identification
Early identification of emerging technologies is important so that assessments can be carried out on a timely basis. A system for identifying future technology would alert policy makers to technologies nearing readiness for diffusion, and assessments could be required or funded at that point.

Testing
A number of assessments should be made of technologies, including efficacy, safety and cost-effectiveness. (This is where economic evaluation links with the broader process.) These assessments need to be made on an iterative basis, as the technology may continue to improve as it diffuses, or be used for ever-broader indications.

Synthesis
Given the range of possible assessments, it is important to undertake a synthesis of all available information, especially that on efficacy and safety. Many technology assessments consist of careful syntheses, particularly in the absence of long-term prospective clinical studies. However, it is important to recognize the limitations of such syntheses and the growing trend to collect economic data alongside prospective clinical studies is to be welcomed.

Dissemination and implementation
It is important to have a strategy for disseminating the results of research and implementing the desired changes in health policy or clinical practice. Typically this has been the weakest link in the schema for technology assessment. A key issue is to identify the range of policy instruments for using the results of health technology assessments. These are likely to vary from country to country but include at the level of health care systems: (i) planning of specialist facilities or specific technologies, (ii) excluding technologies from public reimbursement and (iii) reforming payment systems for health care institutions (e.g., hospitals) or professionals; they sometimes also cover - with various implications for equity and efficiency: (iv) introducing copayments for service users and (v) encouraging competitive arrangements in the health care system.

In WHO's long standing experience, assessments of technology and evidence-based medicine will be able to promote quality in health care delivery only if they are embedded in a process that includes: (i) a protocol of key indicators that reflect best knowledge and evidence about the critical factors for success (from literature and consensus meetings); (ii) a participatory, voluntary and confidential system of hands-on experience with daily data collection, analysis and feedback that takes account of local conditions; (iii) a system of analysis of outcome and feedback to

clinicians asking the best achievers to come forward and share their methods and knowledge; and (iv) constant reinterpretation of "best available evidence" against benchmarks, leading to continuous learning and quality development.

Public institutions for technology assessment in Europe, with the sponsorship of the European Union, have established the EURASSESS project; the results of various working groups will be published during 1997.

3. OVERVIEW OF COST-EFFECTIVENESS ISSUES IN EVALUATION OF HEALTH CARE PROCEDURES AND TECHNOLOGIES

The growing interest in economic evaluation

Given the increased interest in cost-effectiveness, or value for money, in health care, there is a growing use of economic evaluation. Economic evaluation is a way of assessing the value for money from health care interventions by comparing the costs of alternatives with their consequences or outcomes. There are different forms of economic evaluation (e.g. cost-effectiveness analysis, cost-utility analysis, cost-benefit analysis), which employ the same basic methodology but differ in the way that outcomes are measured and valued. In connection with technology assessment they can shed light on what equipment and which procedures, should be offered, made available and paid (and at what level); how health services should be provided (e.g. use and location of technology, and functions and structure of care provision); who should use these services (e.g. access according to need by age, gender, socio-economic status, diagnosis etc.)

In recent years there has been a considerable increase in the number of published economic evaluations. Many of these have been in the mainstream medical journals, which have given consideration as to how such papers can be adequately refereed. To this end the *British Medical Journal* has recently convened an international working paper to develop standards for peer review of economic evaluations (BMJ Economic Evaluation Working Party, 1996).

Economic evaluation has also received increased recognition in the policy arena. For example, two jurisdictions, Australia and the Province of Ontario in Canada have made the provision of an economic evaluation a mandatory requirement for reimbursement (public subsidy) of their products. (Both jurisdictions operate a 'positive list' of drugs.)

In addition, the United States Public Health Service has convened a panel of experts to advise on cost-effectiveness analysis in health and medicine (Gold *et al*, 1996; see also Haddix *et al*, 1996). The panel's report has been discussed in an open conference, where the various government agencies in the US outlined their thoughts on the role of economic evaluation.

Methodological guidelines for economic evaluation

A major feature of the US panel's work was to specify guidelines for undertaking such studies, including a 'reference case' that should be reported in every published study. The development of guidelines and standards is also a feature of the initiatives in Australia and Canada. In addition, guidelines have been issued by governmental and non-governmental organizations in a number of European countries, including Belgium, Germany, Italy, Spain and the United Kingdom. These include the British Medical Journal guidelines for authors and peer-reviewers of articles mentioned earlier (BMJ Economic Evaluation Working Party, 1996).

The growth of interest in guidelines for economic evaluation is partly in response to concerns about deficiencies in the methodology of published studies. Whilst the general methodological principles are well-specified, there is still considerable variability in the approaches adopted by analysts (see also Journal of the American Medical Association, 1996).

Whilst there is a growing number of published studies, much less is known about the impact, on decision-making, of economic evaluations. In part this is due to the difficulties of demonstrating that a particular decision has been influenced by a given piece of information.

Impact of economic evaluation

In some instances it *is* possible to identify decisions that have been influenced by economic evaluation results. For example, in the United Kingdom the government commissioned an economic evaluation in order to inform its decision on whether or not to expand the heart transplant programme (Buxton, 1987). There are also a number of examples of the use of economic evaluation by the Health Insurance Executive Board in the Netherlands in deciding whether to reimburse specific technologies or procedures (Rutten and van der Linden, 1994).

However, although economic evaluation can make a *specific* contribution in settings where decisions are being made about the reimbursement or public finance of specific technologies, there is also a *general* contribution of such research. Namely, the purpose of economic evaluation, like all health services research, is to improve knowledge and reduce uncertainties. Therefore, health policy making can become more generally evidence-based, even though specific decisions may not be closely linked to particular study results.

Barriers to the use of economic evaluation

It is also clear that there are a number of potential barriers to the use of economic evaluation. These can be *budgetary/financial*, in that individual decision-makers may only have responsibility for expenditure on certain budgets, *managerial/political*, in that there may be other objectives in decision-making apart from cost-effectiveness, or *professional*, in that vested interests may be infringed. Furthermore, there may be a reluctance on the part of decision-makers to admit to the general public that the costs of interventions are being taken into account.

Priorities for economic evaluation efforts

Priority setting for health technology assessment in general, and economic evaluation in particular, is critical, since resources for these activities are limited. Therefore, it is important that decision-makers identify the topics that are most relevant to them, as researchers driven by their own professional interest may select irrelevant subjects for study. This, again calls for constant information exchange between practice, practitioners and research. As part of this process, the researchers must educate the decision-makers about the relative ease or difficulty of researching various topics and the expected costs and benefits of reducing uncertainty.

Economic evaluation methodology can be used in a number of ways. One approach would be to undertake a full study with a complex methodology. On the other hand, there is also a role for less complex studies if resources, the time available, or the information required, are in short supply. Indeed, preliminary studies could be performed at the early stages in the development of a health technology in order to inform whether, for example, more research is required. It is important that economic studies are timely, in relation to the decisions they seek to inform.

Finally, it is important that economic evaluations are relevant to the local setting in which the decision-maker is operating. This means that attention needs to be paid to the factors, varying from place to place, that might influence the cost-effectiveness of a given intervention. This is discussed further below.

4. METHODS OF ECONOMIC EVALUATION OF HEALTH CARE PROCEDURES AND TECHNOLOGIES

Assessing effectiveness

Economic evaluation relies heavily on the clinical evidence about the effectiveness of health care interventions. Therefore, its development is aided by initiatives like the Cochrane Collaboration, which seeks to undertake and disseminate systematic overviews of clinical trial evidence.

In undertaking systematic overviews, care is taken to reduce potential bias resulting from the under-reporting of negative findings. Therefore, it is likely that this will improve the quality and representativeness of clinical data used in economic evaluations.

A distinction often made in the clinical literature between evidence of *efficacy* (results obtained under highly controlled experimental conditions) and evidence of *effectiveness* (results obtained in actual clinical use). As far as possible economic evaluations should be based on evidence of effectiveness, since the objective is to estimate costs and consequences of health care technologies and interventions as they would be applied in the real world. Since the late 1980s the US Agency for Health Care Policy and Research has sponsored a number of patient outcomes research teams (PORT), emphasizing effectiveness.

It is worth noting that, although at first sight clinical and economic evaluation appear to be quite different activities, their data requirements overlap quite considerably. This is illustrated by Figure 1. For example, both clinicians and economists would be interested in data on survival and quality of life. On the other hand, economists, rather than clinicians, would be interested in costs. Also, economists may be happy to combine length and quality of life data in quality-adjusted life-years (QALYs), whereas clinicians may see less value in this approach.

Trials versus models

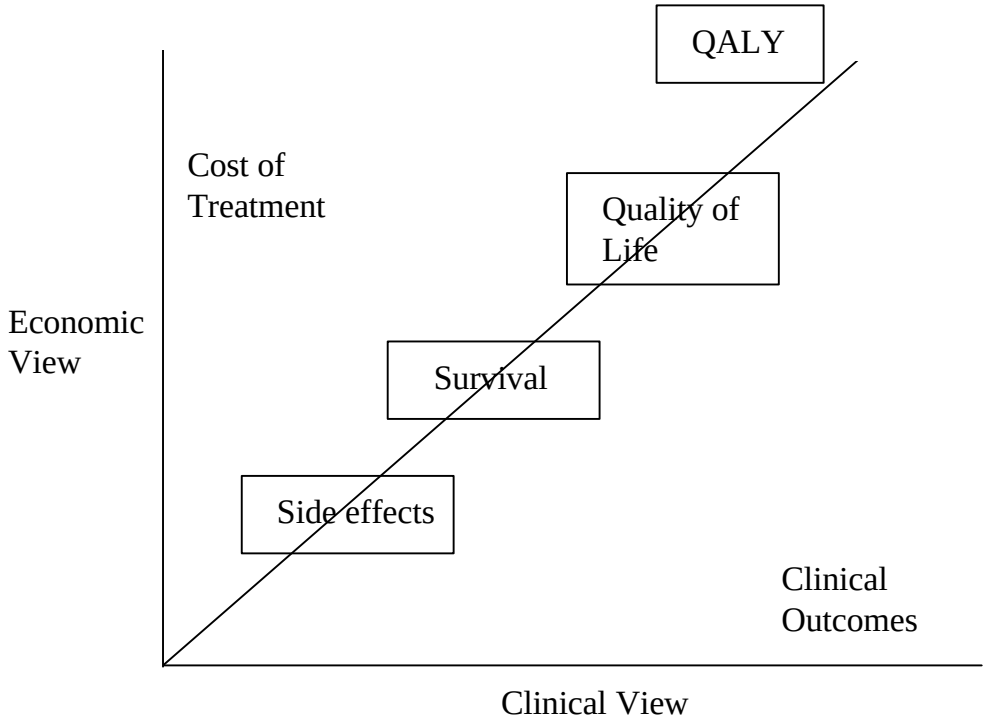
There is a tension between basing economic evaluations on clinical trials, which have a high internal validity (i.e. freedom from bias) or on observational data, such as in claims databases, which have a high external validity (i.e. are most generalizable).

In principle, both approaches have their place and a balance needs to be struck. For example, an economic study could be performed by collecting additional data (e.g., on resource use and quality of life) alongside a clinical trial. In following this approach the economic analyst would need to be sure that the trial was being undertaken in a setting similar to regular practice, that relevant clinical alternatives are being compared and that the sample size is adequate to show differences in the economic estimates. Even so, it might still be necessary to use modelling approaches to extrapolate beyond the follow-up period in the trial.

An alternative approach would be to undertake a modelling study, where data from a number of sources are synthesized in the economic evaluation. These sources could include trials, but also

databases or free-standing costing studies. In this case the analyst needs to be careful that the approach used is transparent and that the assumptions made are reasonable.

FIGURE 1: DATA REQUIREMENTS FOR EVALUATIONS



Generalizing economic evaluation results

A number of factors, varying from place to place, can limit the transferability of economic data. This can apply not only when transferring data from one country to another, but also within a given country, or from a trial setting to regular practice. Since decision-makers may wish to interpret cost-effectiveness data gathered in one place for their own situation, it is important to understand such factors.

The relevant factors include the epidemiology of disease, the structure of the health care system, the methods of remunerating physicians or institutions such as hospitals, clinical practice patterns and patient preferences. For example, a hospital paid by a *per diem* (daily) amount might not discharge a patient as quickly as one paid a fixed amount per case (e.g., under a diagnosis-related group payment system). Regarding variations in clinical practice, hypotension is likely to be treated as a disease in Germany, whereas it is largely ignored in other countries.

Providing these factors are adequately understood, it may be possible to adjust cost-effectiveness data from one place to another via modelling approaches. It would be useful to involve decision-makers in this process, since the relevance of particular types of data (e.g., data on productivity losses) may vary from country to country.

Dissemination of studies
If the results of economic evaluation are to be adopted they need to be adequately disseminated. Therefore, dissemination of findings should be an identified and funded part of economic evaluation studies. This is the approach adopted in projects undertaken by ANDEM in France; a special unit holds a substantial share of the overall budget for disseminating research results nationally, regionally and to specific target groups. In general, dissemination is given too little consideration in economic evaluation and health technology assessment more generally. The issues to be considered include the *method* of dissemination (e.g., scientific papers or media coverage), the *format* of reports (i.e., level of jargon, length) and the *involvement of the potential audience* in planning dissemination activities.

Studies can not be considered to be effectively disseminated if the decision makers do not know how to interpret and use results in their decisions. An appreciation of health economic aspects, e.g. in choosing diagnostic and therapeutic strategies, should therefore be mandatory in the training and continuing education of health care professionals; training and research in this respect needs to be interdisciplinary and practice orientated

5. ASSESSING THE COST-EFFECTIVENESS OF SPECIFIC HEALTH CARE PROCEDURES AND TECHNOLOGIES

Although certain methodological issues are common to the evaluation of all health care procedures and technologies, individual technologies may also raise specific methodological challenges. This point was examined in the context of three quite different areas: health promotion and disease prevention, diagnosis and treatment, and extended care. These are discussed in turn.

Health promotion and disease prevention
It is still quite common to conceive of these activities in relation to the medical model (e.g. primary prevention, secondary prevention, tertiary prevention). Whilst the evaluation of activities such as immunization programmes and screening programmes are numerous, new health promotion activities aimed at influencing the social environment and lifestyle raise more analytic challenges.

For example, it is often difficult to identify the full range of outcomes of (say) a community support programme for disadvantaged groups in society. Some of these may be related to health, others possibly not. This suggests that cost-benefit analysis, rather than cost-effectiveness analysis, may be the preferred technique. Sometimes an economic study may be useful in clarifying the issues, even if full calculation of costs and consequences is impossible. For example, knowledge of the relative proportions of the cost components (say) between screening, follow-up of positive cases and treatment could be helpful to planners in an area with low incidence of the disease in question.

Another problem in evaluation of the broader community interventions is that controlled studies are more difficult to conduct. Therefore, the quality of the effectiveness evidence may be poor. Finally, it should be noted that all evaluations in the preventive field are likely to be sensitive to the discount rate chosen. (This applies relative weights to costs and outcomes occurring today, as opposed to those occurring in the future.) It was reported that the United States Public Health Service Panel recommended a discount rate of 3% per annum, whereas 5% was common in the

literature. There is no reason to suppose that the discount rate would be the same for all countries, however.

Diagnosis and treatment
One advantage here is that more data from randomized controlled trials are available. However, one difficulty is that studies often have multiple outcomes (e.g., efficacy, side effects) and it may sometimes be difficult to reconcile them. (Although two forms of economic evaluation, cost-utility and cost-benefit analysis, offer this possibility, by expressing outcomes in QALYs or dollars respectively.)

Also, in studies of diagnosis some outcomes may be intermediate, such as number of cases detected. Obviously the relevance of these to final outcomes, in improved health, needs to be discussed. In the extreme it may be of limited value to obtain an accurate diagnosis of a condition that cannot be treated. Nevertheless, diagnostic information may have a value in its own right, quite apart from any impact it may have on final outcome.

Extended care
This term is used in various ways in various settings. However, it is usually assumed to include both formal and informal care, the latter being provided by family members or friends.

There are very few economic evaluations of extended care, the largest group relating to the provision of home care for the elderly. A range of outcome measures have been used in these evaluations, including subjective measures of quality of life and objective measures of performance.

There are three important methodological challenges for evaluation in this area. First, it has to be decided whether a whole package of care should be evaluated, or various component activities (e.g., domiciliary physiotherapy). Second, it is often difficult to conduct randomized controlled trials in this area, with the consequent uncertainties over effectiveness. Third, the costing of informal care is problematic, both in terms of measuring the time spent on various activities, many of which are performed jointly, and in terms of assessing the opportunity cost of that time (e.g. foregone leisure activities).

6. WAYS OF ORGANIZING ECONOMIC EVALUATION ACTIVITIES

Presentations were made concerning the role, organization and impact of economic evaluation in several countries. Many of the details were country-specific so are not reported here. However, a few general messages emerged.

First, a range of models exists. Some countries (e.g. Canada, France, Spain, Netherlands, Sweden and the United Kingdom) have either national agencies with a responsibility for technology assessment, including economic evaluation, or national programmes (rather than specific institutions). Some countries are content to rely on the activities of academic centres.

Second, countries are in different stages of development. Certainly, in countries undergoing transition in their health care system, it may be premature to specify one particular structure for conducting economic evaluation.

Third, international cooperation, such as that exercised through meetings like this, is important to the overall success of the effort. The main reason for this is that no single country has the resources to undertake adequate assessments of all technologies. There is already considerable sharing of information among national health technology agencies, as well as between individual scientists and decision makers who are members of the International Society of Technology Assessment in Health Care (ISTAHC).

Apart from exchange of reports, consideration has been given to sharing the information in databases of reviews of effectiveness. This is a major activity of the Cochrane Collaboration. It was also noted that there are now two structured databases of economic evaluations, coordinated by the Office of Health Economics in London and the NHS Centre for Reviews and Dissemination at the University of York in the UK.

Fourth, whereas there was an impressive range of initiatives in some countries, there was rarely any overall coordination. For example, activities going under the label of 'technology assessment' may not necessarily be linked to those going under the label 'guidelines development' or 'quality assurance'. Also, it was clear that economic thinking had penetrated some of these activities rather better than others. The most important point is that a wide range of health care interventions are evaluated in terms of cost-effectiveness. It is less important whether this is done under the guise of health technology assessment or guidelines development.

Fifth, one important aspect of overall coordination would be to set priorities for health technology assessment and economic evaluation. It was clear that different approaches had been applied indifferent settings. Some countries had concentrated on high cost technologies, whereas others had concentrated on areas where there were great variations in practice. Yet others had responded to the development of new technologies, or proposals from researchers. One approach used in the Netherlands was to ask senior hospital doctors to identify currently used but questionable technologies and procedures; evaluation aims now at identifying procedures that could be eliminated or withdrawn from health insurance coverage without reduction in health outcomes.

Sixth, it is important to involve the various stakeholders at an early stage if the results of studies are to be adopted. These would include key policy makers and professional groups, whose interests may be affected. The way forward at clinical (micro) level was to embed technology assessment and economic evaluation in a continuous process of quality development.

Seventh, more generally it is important to consider what mechanisms would be available to bring about change, if this were suggested by the results of the economic study. Participants discussed a range of examples, such as the use of policy directives, peer pressure and financial incentives. The appropriateness of each of these is likely to depend on the particular situation in a given country, but consideration should be given to this issue in advance. If not we run the risk that potentially useful results will not be acted upon.

Finally, in most countries it was difficult to point to many examples of the impact of economic evaluation. This was mainly due to the problems in linking a particular decision to a given study result or data item. However, a few examples were given and a number of participants pointed to a major shift in the ethos of decision-making, towards consideration of costs and outcomes, and a growth in the importance of economics.

7. CONCLUSIONS

The main conclusions of the meeting are summarized below:

1. Economic evaluation is not just about cost cutting - it considers both costs and outcomes.

2. Economic evaluation needs to be integrated with decision-making procedures at different levels. Namely:
   - the macro (policy) level
   - the meso (management) level
   - the micro (clinical) level.

3. Economic evaluation results need to be presented to users in an accessible way (e.g. jargon free, brief as possible).

4. Economic evaluation needs to be seen as a part of broader efforts in health technology assessment, guidelines development, quality assurance and evidence-based medicine.

5. Economic evaluation needs to be methodologically sound, but is not always about undertaking the perfect study (e.g. due to constraints of resources, time, information availability).

6. We need to develop ways of setting priorities for economic evaluation. This means selecting:
   - relevant topics
   - researchable questions.

7. Economic evaluation needs to be locally relevant. This means taking account of variations by setting (within and between countries) and differences between trials and regular practice.

8. We need to consider the factors that either encourage or inhibit the adoption of study results. These include:
   - adequate dissemination
   - availability of policy instruments
   - professional support
   - financial incentives
   - political will.

9. We need to develop mechanisms to allow economic evaluation to flourish, in particular:
   - providing adequate funding
   - promoting multidisciplinary collaboration.

10. The role of economic evaluation in mixed systems (like Germany) needs to be clarified. For example:
    - who has a need for cost-effectiveness data?
    - what is their perspective?
    - how would they use it?
    - would this affect how we undertake studies?

11. We need to evaluate further the impact of economic evaluation on health care decision-making.

Ways of promoting technology assessment and cost-effectiveness evaluation in Germany

A special working group dealt with ways to implement the results of the meeting in Germany, in order to strengthen the role of technology assessment and economic evaluation in the German system. The participants reached the following, preliminary conclusions (which were reported to, but not discussed in, the plenary, except to point out that there must not be an artificial wall between quality development, technology assessment and health care practice):

1. In Germany there is a need to further develop technology assessment including economic evaluation. The initiatives of the Ministry of Health and WHO for a sustainable development of this area are welcome.

2. At least within ambulatory care, public health insurance provides a legal mandate (article 135 SGB V) for the assessment of new diagnostic and therapeutic methods. This mandate could in future be extended to cover existing methods and additional health care sectors (e.g. physiotherapy), as is envisaged in a draft revision of article 135 (second 'GKV-Neuordnungsgesetz').

3. The existing guidelines of the committee on new diagnostic and treatment methods ought to be amended in line with an extended legal mandate and international experience, and should be continuously adapted to the state of research on scientific evaluation. In a medium perspective, there is need for an interdisciplinary advisory body to support decisions on introducing new technologies and procedures and abolishing inappropriate established methods. This would require a sustainable scientific environment as well as the will and the preparedness of decision-makers at all levels to fund, demand and implement evidence based results from technology assessment.

4. Suitable persons and scientific institutions should cooperate (together with their international partners) in demonstrating scientific capability in this field in Germany. It would be valuable to illustrate to policymakers how, in other countries, results from technology assessment and economic evaluation are converted into practice. This could be done within the framework of the annual report of the council of experts for concerted action in health care, or by means of a specially commissioned expert paper devoted to this field.

5. Public health faculties in Germany were invited to include, in their core curricula, quality assurance, technology assessment and economic evaluation, so as to meet increasing requirements regarding knowledge and skills in this field.

6. It would be desirable that the Ministry of Health hosts and financially supports a meeting in 1998 as part of the executive meeting of ISTAHC in Germany. At this meeting a German Section of ISTAHC could be founded. The readiness of DIMDI, Cologne, and the Research Unit for Health Economics and Health Systems Research of the University of Hanover, to prepare the meeting was acknowledged.

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Programme

Sunday, 8 December 1996

18:00 - 20:00 Registration of participants

Monday, 9 December 1996

1. INTRODUCTORY SESSION

9:00 - 9:15 Welcome Addresses by Host Country, Cooperating Institutions and WHO Secretariat

9:15 - 9:25 Introduction and terms of reference (Herbert Zöllner, WHO)

9:25 - 9:30 Adoption of Agenda, Programme (Chairperson)

2. OVERVIEW OF COST-EFFECTIVENESS ISSUES IN EVALUATION OF HEALTH CARE PROCEDURES AND TECHNOLOGIES

09:30 - 10:00 Economic Evaluation in Health Care (introduced by Martin Buxton, discussed by Hans-Helmut Koenig)

10.00 - 10:30 Framework for Assessment of Health Care Procedures and Technologies (introduced by David Banta, discussed by Göran Karlsson)

11:00 - 11:30 Setting of Priorities for Evaluation (introduced by Chris Henshall, discussed by Alicia Granados)

3. DECISION-MAKING USE OF RESULTS OF COST-EFFECTIVENESS EVALUATION OF HEALTH CARE PROCEDURES AND TECHNOLOGIES

11:30 - 12:00 Coverage and Financing of Health Care (introduced by Chris Henshall, discussed by Eva Bondar)

12:00 - 12:30 Management of Health Care Institutions (introduced by Niels Rossing, discussed by Franco Sassi)

14:00 - 14:30 Health Care Delivery (introduced by Alicia Granados, discussed by Sabine Richard)

14:30 - 15:00 Health Training and Research (introduced by Steven Teutsch)

4. METHODS OF COST-EFFECTIVENESS EVALUATION OF HEALTH CARE PROCEDURES AND TECHNOLOGIES

15:00 - 15:30 Measurement of Efficacy (introduced by Gerd Antes,
16:00 - 16:30 discussed by Johannes Köbberling and Niels Rossing)

16:30 - 17:30 Measurement of Effectiveness (introduced by Kathleen Weis, discussed by Friedrich W. Schwartz and Jeremiah Hurley)

Tuesday, 10 December 1996

4. METHODS OF COST-EFFECTIVENESS EVALUATION OF HEALTH CARE PROCEDURES AND TECHNOLOGIES (CONTINUED)

09:00 - 10:00 Measurement of Cost-Effectiveness and Related Outcomes (introduced by Michael Drummond, discussed by J.-Matthias Graf v.d. Schulenburg)

10:00 - 10:30 Transferability of Results Across Health Care Systems (introduced by Reinhard Busse, discussed by Anna Korotkova and Hans-Helmut Koenig)

11:00 - 11:30 Interdisciplinary Cooperation in the Production and Dissemination of Information (introduced by Jeremiah Hurley, discussed by James Goldberg)

5. COST-EFFECTIVENESS EVALUATION OF SPECIFIC HEALTH CARE PROCEDURES AND TECHNOLOGIES

11:30 - 12:00 Health Promotion and Disease Prevention (introduced by Steven Teutsch, discussed by Johannes Köbberling)

12:00 - 12:30 Diagnosis and Treatment (introduced by Hans Heinrich Raspe, discussed by Göran Karlsson)

14:00 - 14:30 Rehabilitation and Extended Care (introduced by Sirkka Sinkkonen, discussed by Uwe Koch)

6. WAYS OF ORGANIZING COST-EFFECTIVENESS EVALUATION OF HEALTH CARE PROCEDURES AND TECHNOLOGIES

14:30 - 15:00 Organization of Evaluation Systems (introduced by Francis H. Roger France, discussed by David Banta)

15:00 - 15:30 Structuring Databases and Communication of Information (introduced by Harald G. Schweim and Christian Behles, discussed by Francis H. Roger-France)

16:00 - 18:00 Experiences in Countries, Summary of Emerging Issues (introduced by participants)

BEL:	Francis H. Roger-France
CAN:	Jeremiah Hurley
DEU:	J.-Matthias Graf v.d. Schulenburg
FIN:	Sirkka Sinkkonen
FRA:	James Goldberg
HUN:	Eva Bondar
NET:	David Banta
RUS:	Anna Korotkova
SPA:	Alicia Granados
SWE:	Göran Karlsson
UNK:	Michael Drummond and Franco Sassi
USA:	Steven Teutsch

Wednesday, 11 December 1996

7. PRACTICAL STEPS FORWARD

09:00 - 10:30 Working Group 1: Towards an Agenda for Germany
11:00 - 11:30 (Moderator: Friedrich Schwartz)

09:00 - 10:30 Working Group 2: Strengthening Economic Perspectives in Evaluation
11:00 - 11:30 (Moderator: Jeremiah Hurley)

11:30 - 12:00 Group Reports

8. CONCLUDING SESSION

12:00 - 12:30 The Ten Most Important Conclusions and Recommendations (presented by Michael Drummond and J.-Matthias Graf v.d. Schulenburg

12:30 - 13:00 Steps to Finalize the Products of the Meeting

13:00 -13.30 Participants' Evaluation of Meeting