

# EATS: Efficiency of Assistive Technology and Services

Newsletter 3, December 1999

---

## EATS Consortium:

- Jan Persson, Birgitta Öberg, Kersti Samuelsson, Gunn Hellblom  
Center for Medical Technology Assessment  
Linköping University  
S-58183 Linköping, Sweden

- Taeke van Beekum, Wija Oortwijn, Håkan Brodin  
TNO Prevention and Health  
Division Public Health  
P.O. Box 2215  
2301 CE Leiden, The Netherlands

- Øivind Lorentsen, Alf Reiar Berge  
Rehab-Nor AS,  
Ovre Jahren  
1825 Tomter, Norway

- Renzo Andrich, Massimo Ferrario  
SIVA, Fondazione Pro Juventute  
Don C. Gnocchi I.R.C.C.S.  
Via Capecelatro 66  
20148 Milano, Italy

- Luc de Witte, Roelof Wessels  
IRV  
P.O.Box 192  
6430 AD Hoensbroek, The Netherlands

---

### Editor:

W.J. Oortwijn  
TNO Prevention and Health  
Division Public Health  
P.O. Box 2215  
2301 CE Leiden, The Netherlands  
Tel: +31-71/5181776  
Fax: +31-71/5181920  
Email: [WJ.Oortwijn@pg.tno.nl](mailto:WJ.Oortwijn@pg.tno.nl)

---

### EATS website:

<http://www.siva.it/research/eats/index.htm>

## Inside this issue:

Introduction  
Day 1: Assessing Assistive Technology  
Day 2: Basics in AT and Rehabilitation  
Service Delivery  
Conclusion

## Introduction

With this third newsletter, we want to give you an impression of the **International Conference on outcome assessment in assistive technology, which was held on 24 –26 November 1999 in Oslo, Norway**. On this conference, the EATS Consortium presented the results of EATS, a European project on the effectiveness of assistive technology and services. The European Commission funds the EATS project (Fourth Framework Programme: TIDE programme), ending January 1st 2000.

The aims of the EATS project are:

- ◆ To develop a methodology for comprehensive assessments of assistive technology and services (AT&S), including effectiveness.
- ◆ To support decisions on group levels about AT&S by conducting field studies in specific areas, and providing information on effectiveness.
- ◆ To provide recommendations for implementing the use of the instruments.

## Day 1: Assessing Assistive Technology

The Conference started with two nice Norwegian violists, who gave a touch of culture. For quite some people in the audience this cultural influence immediately improved their quality of life.

After the starting tune the EATS-project and the aims of the conference were introduced by the co-ordinator of the EATS project, Jan Persson (CMT, Sweden). Then, the Deputy Minister of Social Affairs of Norway, Mr. Steinulf Tungesvik, gave an opening lecture. The

Deputy Minister stated that so far rehabilitation was not a priority in Europe, but that there had been some change lately. The Norwegian parliament, as an example, recently debated a White Paper concerning rehabilitation. In this Paper rehabilitation is defined as a time-limited, planned process with definite goals and interventions, where several professionals work together in providing necessary assistance to the users' own efforts to attain the best possible functioning and skills, independence and participation in society at large.

The Norwegian model of service delivery of AT&S consists of:

- a bottom up procedure;
- holistic measures provided on the users terms;
- clearly defined lines of responsibility;
- close co-operation and decentralised services.

The Deputy Minister pointed out that this model might serve as one example from which also other European countries could learn. He further stressed the importance of quality assurance in service delivery, and the need for data to measure outcomes and costs of interventions.

According to Dr. Bedirhan Üstün of the World Health Organisation this White Paper fits well into the thinking behind the ICIDH-2, beta-version. As an introduction, he presented the "Paradigm Shift" of the ICIDH-2: the fusion of the medical and social model of understanding disability. As a consequence of this fusion the concept of "Contexts" has been introduced. He then presented the use of ICIDH-2 in rehabilitation research and in clinical practice. The overall aim of the ICIDH-2 classification is to provide a unified and standard language and framework for the description of human functioning and disability as an important component besides data on health. The classification covers any disturbance in terms of "functional states" associated with

health conditions at body, individual and society levels: "Functioning" and "disability" are umbrella terms covering three dimensions: (1) body functions and structure; (2) activities at the individual level; and (3) participation in societal activities.

ICIDH-2 organises information according to three dimensions. These dimensions contain various domains of body functions and structure, performances of activities, and involvement in life situations. Briefly these dimensions cover the following areas:

The Body dimension comprises two classifications, one for functions of body systems, and one for the body structure.

The chapters of both classifications are organised according to the body systems.

The Activities dimension covers the complete range of activities performed by an individual. The chapters are organised from simple to complex activities.

The Participation dimension classifies areas of life in which an individual is involved, has access to, and has societal opportunities or barriers. The domains are organised from simple to complex areas.

AT&S can help on all three levels, e.g. to support the body functions, improve activity performance and/or facilitate participation or remove barriers.

More about ICIDH2 can be found on the web: <http://www.who.ch/icidh>

After some principles on rehabilitation Mr. J. Bierhoff from the Dutch Ministry of Health highlighted principles for priority setting while dealing with scarce resources. Due to growing needs (for example, more elderly, improved life expectancy) and limited resources more emphasis is put on improving the cost-effectiveness of services, including provision of AT&S. The basic question Bierhoff, as a policy maker, has to deal with is 'how to cope with growing demands and budget problems'? His approach was to focus on

lowering prices and limitation of demands, using cost-effectiveness research based on the principles of ICIDH-2. When trying to put something on the political agenda it is necessary not to focus on foreseeable situations emerging over 20 years, but on events to be expected within 3 or 4 years from now. In the discussion Jan Persson emphasised the importance of ethical principles concerning distribution of scarce resources.

After the view of a policy maker on improving cost-effectiveness (efficiency) of AT&S, Dr. E. Winterberg of the Danish Centre gave a presentation focusing on the quality of AT&S. Winterberg presented three questions related to the different levels of policy making to improve efficiency:

1. Do we need methods to map efficiency of rehabilitation efforts on AT service delivery (policy level)?
2. Do we need methods and tools to ensure quality of the whole service delivery process (professional level)?
3. Do we need methods and tools to ensure that the users get benefit of technical aids (individual level)?

All three questions need to be positively answered according to Winterberg and he presented examples of necessary research on all three levels. Some of these examples are:

- economic analysis of AT&S;
- health technology assessment of new technology;
- use of common terminology (e.g. ICIDH2);
- evaluation of different organisation models; and
- development of instruments for user satisfaction.

The need mentioned last was discussed in the afternoon session about strategies on assessing outcomes. Before starting that session Dr. M. Monteiro from the EU office (DG IST B2) presented the 5th Framework Work Programme 2000 on

‘Persons with special needs, including disabled and elderly’. More information on the EU programme can be found at: <http://www.cordis.lu/ist>, or send your questions by email: [ist@cec.eu.int](mailto:ist@cec.eu.int) or fax: +32 2 296 83 88.

In the afternoon session three strategies on assessing outcomes were presented. First, Dr. M. Fuhrer, former Director of National Center for Medical Rehabilitation Research, NIH (USA), gave his impressions on assistive technology outcomes research “from the point of view of an interested newcomer”. Dr. Fuhrer tackled the following questions in his presentation:

- in view of the obvious advantages that most technical aids confer on users, why fuss with outcomes research?
- through what discernible stages does outcomes research pass in rehabilitation-related fields?
- at what developmental stage does assistive technology outcomes research appear to be?
- what is the state of the art of measuring assistive technology outcomes?
- why should rehabilitation outcomes research be particularly concerned with the unmet challenges of considering multiple stakeholders, formulating adequate treatment theories, and creating share databases?
- what does the future appear to hold for assistive technology and for outcome research pertinent to it?

Dr. Fuhrer concluded that the rapidly accelerating engine of innovation is sure to propel the development of an ever-increasing array of new assistive devices for fostering users’ personal independence, productivity, and psychological well being. Also, the gap between new technologies for enriching peoples lives and resources to afford them will be larger in the future. The result will be a need for knowledge about the technologies that are more cost-effective than others will. According to Dr.

Fuhrer we will have the concepts, research techniques and trained researchers to providing that knowledge.

Consequently, the EATS project was presented. The fundamentals behind the EATS approach and the major components of the EATS instrument was presented by Mr. R. Andrich, SIVA, Italy; Dr. L. de Witte, iRv, the Netherlands presented the results and the experiences and Dr. T. van Beekum, from TNO, the Netherlands, presented the intentions regarding the exploitation of the results. These aspects were described extensively in the previous two EATS newsletters.

Then, Dr. L. Demers from de Centre de Recherche de l'institute de Geriatrie de Montreal, Canada presented the QUEST. QUEST is a critical tool to document real individual life benefits and justify the needs for technology, it is a research tool to compare satisfaction data with other data and it can be used for quality assurance purposes.

The first day of the conference also ended with a taste of culture: a Norwegian dinner hosted by the Norwegian Deputy Minister of Social Affairs.

## **Day 2: Basics in AT and Rehabilitation Service Delivery**

The second day of the conference focused on more basics in AT&S research and discussions about the outcome measures.

The first speaker, Mr. O. Lorentsen from Rehab Nor, who organised the conference on behalf of the EATS consortium in close collaboration with the Ministry of Social Affairs, talked about assessing individual values and priorities as a basis for working out goals for interventions within rehabilitation and AT Services. This will ensure that all interventions work in the

same direction focusing on common goals, the goals of the user, and as such constitute an individual rehabilitation plan (IRP). Main components of rehabilitation interventions deal with body, functions and skills, and the environment, all focusing on users' priorities towards participation in society. The concept of "participation" in this context refers to individual priorities with regard to activities in different life arenas, as well as inner as outer relations. Also, for quality assurance purposes it is important to identify the goals of the individual, identify the relevant services and measures, implement these and evaluate them, and perform follow-up activities. According to Lorentsen the main challenges are: a) roles and power of the service providers and the individual user during the different phases of rehabilitation, and b) communication and proper methods to identify individual goals.

The second speaker, Professor J. Spencer from School of Occupational Therapy, Texas, USA, presented the Community Adaptive Planning Assessment (CAPA) approach. The purposes are to:

- organise a collaborative planning process between service providers and clients at times of major life change due to onset of disability function loss.
- provide an efficient format for documenting goals and plan;
- provide a format for documenting outcomes of interventions aimed at the identified goals and plans.

The CAPA can be used as a screening tool in which broad occupational domains of work, leisure, household management and self care are examined to identify whether specific occupations are expected to change and therefore should be targeted for more detailed evaluation and future planning. The focus is on overall constellation of occupations in the client's daily life and involves both potential losses and potential gains to the individual.

After the presentation of the CAPA by Professor Spencer, Dr. P. Boldrini from the Rehabilitation Medicine Unit in Ferrara, Italy gave some practical examples of the use of assessment instruments in clinical practice at the level of impairment, disability and handicap. All outcome measurements on the different levels have advantages and disadvantages. However, lessons from practice learned that an outcome measure in rehabilitation should be multidimensional, including also 'soft' (subjective) measures.

These presentations were followed by a view of Dr. H. Brodin, TNO, the Netherlands, on interventions and societal costs. Dr. Brodin reflected on costing as the 'flipside' of outcome assessment. The purposes of costing are threefold:

- policy analysis;
- checking results of interventions;
- planning future activities.

Before starting a costing exercise the purpose needs to be defined, since the purpose determines the evaluation technique. Costing exercises consist mainly of three phases:

- identification phase (what?);
- quantification phase (how much?);
- valuation (to what prices?).

After showing a real costing exercise, Dr. Brodin concluded by saying that there is a need for:

- a bridge between theoretical economists and professionals in practice,
- training and help for professionals regarding costing techniques;
- computerised techniques to perform the costing exercise easier.

After the theoretical presentation participants were given the opportunity to discuss the different outcome measures (EATS, QUEST, CAPA and IRP). After fruitful discussions on the instruments, which will certainly be taken into account,

in further developments, the conference was closed.

## **Conclusion**

The results from the EATS study, as well as the results from this conference show that we are on the right track in developing outcome measures for AT&S. The EATS Consortium wants to thank all speakers and other participants for their contributions to the conference. Again, many thanks to Rehab Nor and the Ministry of Social Affairs to host the meeting and to give all participants the opportunity to taste (some of) the Norwegian culture!