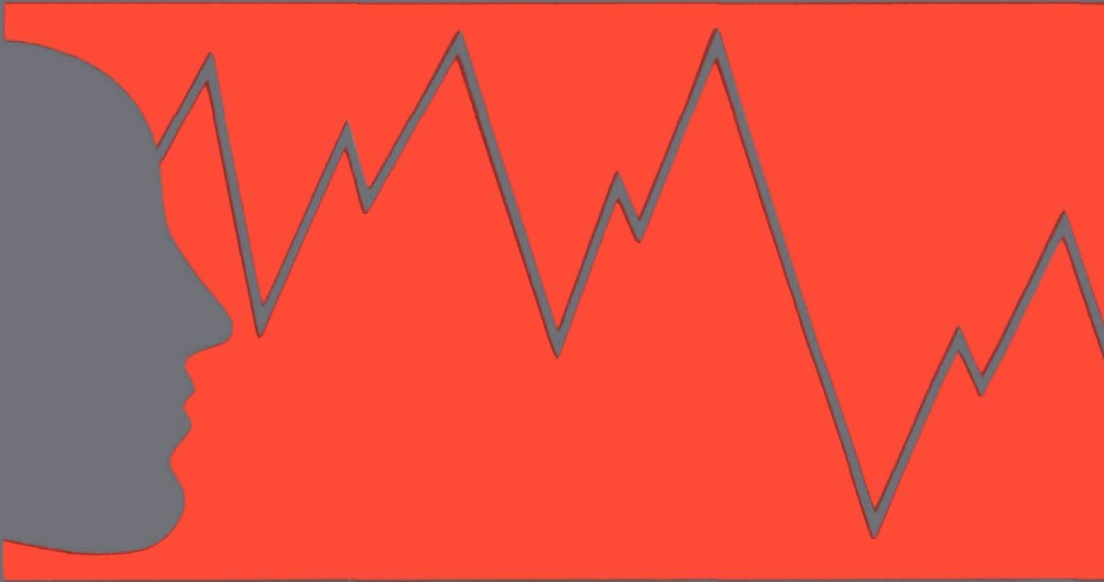


Vol. 6

1990

No. 1

International Journal of  
**TECHNOLOGY  
ASSESSMENT  
IN HEALTH CARE**



**Cambridge University Press**

# International Journal of Technology Assessment in Health Care

Official Journal of the International Society for Technology Assessment in Health Care

---

## Editors

**Egon Jonsson, Ph.D.**

Professor  
The Karolinska Institute and the  
Swedish Council on Technology  
Assessment in Health Care  
P.O. Box 16158  
103 24 Stockholm, Sweden  
(tel.) 46 8 240565

**Stanley J. Reiser, M.D., Ph.D.**

Professor, Program on Humanities  
and Technology in Health Care  
The University of Texas Health  
Science Center at Houston  
P.O. Box 20708  
Houston, Texas 77225, U.S.A.  
(tel.) 713 792 5140

**Aims and Scope:** *The International Journal of Technology Assessment in Health Care* has as its specific scope of interest the generation, evaluation, diffusion, and use of health care technology. It addresses the diverse audience of health care providers within medicine, nursing, and the allied health professions; decision makers in government, industry, and health care organizations; and the scholarly disciplines such as ethics, economics, law, history, sociology, psychology, and engineering. The journal aims to fill the needs of those interested in the complexities of interaction between people and technology; technology as a force in social and organizational change; and technology as it is created, produced, applied, and paid for. It examines descriptively and analytically the effects of technology as perceived from the vantage point of different academic disciplines and policy-making organizations and examines methods necessary to conduct studies and evaluations of technology.

The focus of the journal will be the international health care community. The experience of different countries in their encounter with health care technology, viewed comparatively, is invaluable to understanding its effects. Further, it is important to establish ties with the scholars, governments, and private institutions concerned with health care technology so that the experiences and learning of the international community in its parts can benefit the whole. The use of technology in health care has created some of the major dilemmas in society today. The journal will serve as a forum for the wide range of professionals interested in the assessment of medical technology, its consequences for patients, and its impact on society.

### Membership in the International Society for Technology Assessment in Health Care:

Members receive the journal at individual rates and can participate in the Society's activities, including the annual meeting. Individual dues for 1990, including the journal, are US \$70 for regular membership and US \$50 for student membership, payable to Cambridge.

### Publishing, Production, and Advertising

**Offices:** Cambridge University Press, 40 West 20th Street, New York, N.Y. 10011, U.S.A.

**Subscription Offices:** Cambridge University Press, 110 Midland Avenue, Port Chester, N.Y. 10573, U.S.A. (for U.S.A. and Canada); or Cambridge University Press, The Edinburgh Building, Shaftesbury Road, Cambridge CB2 2RU, England (for U.K. and elsewhere).

**1990 Subscription Information:** *International Journal of Technology Assessment in Health Care* (ISSN 0266-4623) is published quarterly. Annual institutional subscription rates for Volume 6 (1990): US \$95.00 in the U.S.A. and Canada; UK £53.00 in the U.K. and Eire; UK £57.00 elsewhere. Individual rates: US \$75.00 in the U.S.A. and Canada; UK £36.00 elsewhere. Prices include postage and insurance; air mail or registered mail is extra. Back volume prices are available upon request.

### Copyright © 1990 Cambridge University Press

All rights reserved. No part of this publication may be reproduced, in any form or by any means, electronic, photocopying, or otherwise, without permission in writing from Cambridge University Press.

**Photocopying Information** (for users in the U.S.A.): The Item-Fee Code for this publication (0266-4623/90 \$5.00 + .00) indicates that copying for internal or personal use beyond that permitted by Sec. 107 or 108 of the U.S. Copyright Law is authorized for users duly registered with the Copyright Clearance Center (CCC) Transactional Reporting Service, provided that the appropriate remittance of \$5.00 per article is paid directly to: CCC, 27 Congress Street, Salem, MA 01970. Specific written permission must be obtained for all other copying; contact the nearest Cambridge University Press office.

Second-class postage paid at New York, N.Y., and additional mailing offices.

Postmaster: Send address changes in the U.S.A. and Canada to: *International Journal of Technology Assessment in Health Care*, Journals Department, Cambridge University Press, 110 Midland Avenue, Port Chester, N.Y. 10573, U.S.A.

# International Journal of Technology Assessment in Health Care

Volume 6

1990

Number 1

---

## CONTENTS

### **SPECIAL SECTION: ALTERNATIVE METHODS FOR ASSESSING TECHNOLOGY, PART II**

**Guest Editor: *David M. Eddy***

- Introduction 3  
*David M. Eddy*
- Some Statistical Methods for Combining Experimental Results 5  
*Nan M. Laird*  
*Frederick Mosteller*
- A Bayesian Method for Synthesizing Evidence: The Confidence  
Profile Method 31  
*David M. Eddy*  
*Vic Hasselblad*  
*Ross Shachter*
- Estimating Costs in the Economic Evaluation of Medical Technologies 57  
*Bryan R. Luce*  
*Anne Elixhauser*
- Allocating Resources 77  
*Michael F. Drummond*
- Principles of Cost-Effective Resource Allocation in Health Care  
Organizations 93  
*Milton C. Weinstein*
- ### **GENERAL ESSAYS**
- Cost-Effectiveness Analysis of the Treatment of End-Stage Renal Disease  
in Brazil 107  
*Ricardo Sesso* *Sergio Draibe*  
*John M. Eisenberg* *Horacio Ajzen*  
*Carlos Stabile* *Oswaldo Ramos*
- The Political Dimension in Health Care Technology Assessment Programs 115  
*H. David Banta*  
*Per Buch Andreasen*
- Direct Costs of Stroke for a Swedish Population 125  
*Ulf Persson* *Gun Jadbäck*  
*Raymunda Silverberg* *Barbro Johansson*  
*Björn Lindgren* *Britt-Inger Puranen*  
*Bo Norrving*
- Dealing with Discounting: An Application to the Cost-Effectiveness of  
Intracoronary Thrombolysis with Streptokinase 139  
*Léon Martens*  
*Eddy van Doorslaer*

A Desktop Expert System for the Differential Diagnosis of Dementia: An Evaluation Study	147
<i>Leonard A. Plugge</i>	
<i>Frans R. J. Verhey</i>	
<i>Jellemer Jolles</i>	

## **TECHNOLOGY ASSESSMENT REPORTS**

Health Care Technology Assessment in the Netherlands	157
<i>Annetine C. Gelijns</i>	
<i>Henk Rigter</i>	

A Consensus Development Conference on the Practice of Platelet Transfusion in the Netherlands	163
<i>W. G. van Aken</i>	
<i>J. A. van der Does</i>	
<i>C. Dudok de Wit</i>	
<i>J. J. E. van Everdingen</i>	

<b>MEETINGS AND ANNOUNCEMENTS</b>	<b>175</b>
-----------------------------------	------------

<b>CONTRIBUTORS</b>	<b>177</b>
---------------------	------------

# International Journal of Technology Assessment in Health Care

---

## Editors

**Egon Jonsson, Ph.D.**  
Professor  
The Karolinska Institute and the  
Swedish Council on Technology  
Assessment in Health Care  
P.O. Box 16158  
103 24 Stockholm, Sweden

**Stanley J. Reiser, M.D., Ph.D.**  
Professor, Program on Humanities  
and Technology in Health Care  
The University of Texas Health  
Science Center at Houston  
P.O. Box 20708  
Houston, Texas 77225, U.S.A.

## Associate Editors

**Bernard S. Bloom, Ph.D.**  
Research Associate Professor  
University of Pennsylvania  
Medical School  
Philadelphia, Pennsylvania,  
U.S.A.

**Murray Eden, Ph.D.**  
Chief of Biomedical  
Engineering and  
Instrumentation Branch  
Division of Research Service  
N.I.H.  
Bethesda, Maryland, U.S.A.

**Paul F. Gross**  
Director  
Institute of Health Economics  
and Technology Assessment  
North Sydney, Australia

**Ruth S. Hanft**  
Research Professor of Health  
Services  
The George Washington  
University  
Washington, D.C., U.S.A.

**Assistant Editor:**  
**Elizabeth Heltman, Ph.D.**

**Samuel Korper, Ph.D.**  
Associate Director for Planning,  
Analysis, and Communication  
National Institute of Aging  
Bethesda, Maryland, U.S.A.

**Frederick Mosteller, Ph.D.**  
Director  
Technology Assessment Group  
Department of Health Policy  
and Management  
Harvard School of Public Policy  
Boston, Massachusetts, U.S.A.

**Jorge Peña-Mohr, Ph.D.**  
Pan American Health  
Organization  
Pan American Sanitary Bureau  
World Health Organization  
Washington, D.C., U.S.A.

**Seymour Perry, M.D.**  
Deputy Director  
Institute for Health Policy  
Analysis  
Georgetown University Medical  
Center  
Washington, D.C., U.S.A.

**Tore Scherstén, M.D.**  
Professor  
Dean, Faculty of Medicine  
University of Göteborg  
Department of Surgery  
Göteborg, Sweden

**Jane Sisk, Ph.D.**  
Office of Technology  
Assessment  
Congress of the United States  
Washington, D.C., U.S.A.

**Stephan Tanneberger, Dr.  
med.**  
Professor, Director  
Des Zentralinstituts für  
Krebsforschung  
Der Akademie der  
Wissenschaftern der D.D.R.  
Berlin-Buch, D.D.R.

**Norman Weissman, Ph.D.**  
Director  
Division of Extramural  
Research  
National Center for Health  
Services  
Research and Health Care  
Technology Assessment  
Rockville, Maryland, U.S.A.

## Editorial Board

**Faye G. Abdellah, R.N.,  
Ed.D., Sc.D.**  
Deputy Surgeon General  
Chief Nurse Officer  
U.S. Public Health Service  
Rockville, Maryland, U.S.A.

**Michael Anbar, Ph.D.**  
Professor  
Department of Biophysical  
Sciences  
State University of New York,  
Buffalo  
Buffalo, New York, U.S.A.

**Per Buch Andreasen, M.D.,  
Ph.D.**  
Department of  
Gastroenterology and  
Clinical Pharmacology  
Gentofte University Hospital  
Hellerup, Denmark

**John R. Ball, M.D., J.D.**  
Executive Vice President  
American College of  
Physicians  
Philadelphia, Pennsylvania, U.S.A.

**H. David Banta, M.D., M.P.H.**  
Consultant  
World Health Organization  
The Hague, Netherlands

**Jeremiah A. Barondess, M.D.**  
Professor  
Cornell University Medical  
College  
New York, New York, U.S.A.

## Editorial Board (continued)

**Clyde Behney**  
Health Program Manager  
Office of Technology  
Assessment  
Congress of the United States  
Washington, D.C., U.S.A.

**Aldo Bujevic**  
Professor  
Zagreb Institute of Public  
Health  
Zagreb, *Yugoslavia*

**John P. Bunker, M.D.**  
Professor  
School of Medicine  
Stanford University  
Stanford, California, U.S.A.

**Carlos Canitrot, M.D.**  
Sub-Secretario de Regulación  
y Control  
Ministerio de Salud Pública y  
Medio Ambiente de  
Argentina  
Buenos Aires, *Argentina*

**Hesio Cordeira, M.D.**  
Professor  
Universidade Federal do Rio  
de Janeiro  
Rio de Janeiro, *Brazil*

**Henry Danielsson, M.D.**  
Professor, Secretary General  
The Swedish Medical  
Research Council  
Stockholm, *Sweden*

**Luigi Donato, M.D.**  
Professor  
Istituto de Fisiologia Clinica  
CNR  
Pisa, *Italy*

**Robert Evans, Ph.D.**  
Professor  
Department of Economics  
University of British Columbia  
Vancouver, British Columbia,  
*Canada*

**José Laguna García, M.D.**  
Secretaria de Salubridad y  
Asistencia de México  
Mexico City, *Mexico*

**John C. Greene, D.M.D.,  
M.P.H.**  
Dean, School of Dentistry  
University of California  
San Francisco, California  
U.S.A.

**David Gunnarsson**  
Managing Director  
Ríkisspítalar  
Reykjavik, *Iceland*

**Peter F. Hjort, M.D.**  
Professor  
National Institute of Public  
Health  
Oslo, *Norway*

**Bruno Horisberger, Dr. med.**  
Director  
Center for Public Health  
St. Gallen, *Switzerland*

**John Hutton**  
Senior Research Fellow  
University of York  
York, *England*

**Bryan Jennett, M.D.**  
Professor  
Dean, Faculty of Medicine  
University of Glasgow  
Glasgow, *Scotland*

**Kirsten Staehr Johansen,  
M.D., D.D.S.**  
Program Manager  
Appropriate Health Care  
Technology  
World Health Organization  
Copenhagen, *Denmark*

**Lechaim Naggan, M.D.,  
Dr.P.H.**  
School of Public Health and  
Hygiene  
Johns Hopkins University  
Baltimore, Maryland, U.S.A.

**Duncan Neuhauser, Ph.D.**  
Professor  
Department of Community  
Health  
School of Medicine  
Case Western Reserve  
University  
Cleveland, Ohio, U.S.A.

**Miriam Orleans, Ph.D.**  
Professor  
Department of Preventive  
Medicine and Biometrics  
University of Colorado  
Health Sciences Center  
Denver, Colorado, U.S.A.

**Masamitsu Oshima, M.D.**  
President  
The Medical Information  
System Development Center  
Tokyo, *Japan*

**Emile Papiernik**  
Professor  
Hospital Antoine Beclere  
Clamart, *France*

**Frederick C. Robbins, M.D.**  
University Professor  
Case Western Reserve  
University  
Cleveland, Ohio, U.S.A.

**Steven Schroeder, M.D.**  
Professor  
Division of General Internal  
Medicine  
University of California  
School of Medicine  
San Francisco, California,  
U.S.A.

**Barbara Stocking**  
Fellow  
King's Fund College  
London, *England*

**Henry Troupp, M.D.**  
Professor  
University of Helsinki  
Department of Neurosurgery  
Helsinki, *Finland*

**Johannes Vang, M.D., Ph.D.**  
Professor  
Manager, European Program  
for Hospitals and Health  
Institutions  
World Health Organization  
Copenhagen, *Denmark*

**A. H. Wilfried Wahba, Ph.D.**  
World Health Organization  
Copenhagen, *Denmark*

---

**Pamela Payne**  
Editorial Assistant  
The University of Texas  
Health Science Center  
at Houston  
Houston, Texas, U.S.A.