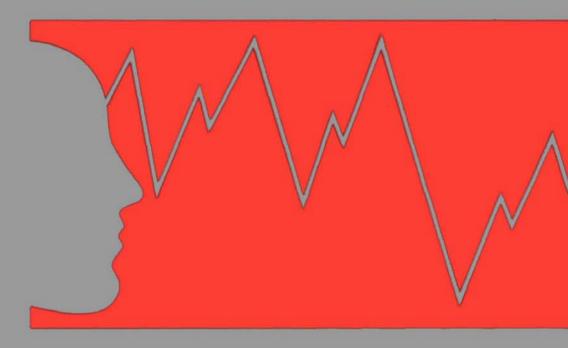
**International Journal of** 

# 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 1991, including the journal, are US \$75 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).

1991 Subscription Information: International Journal of Technology Assessment in Health Care (ISSN 0266-4623) is published quarterly. Annual institutional subscription rates for Volume 7 (1991): US \$105.00 in the U.S.A. and Canada; UK £61.00 in the U.K. and Eire; UK £63.00 elsewhere. Individual rates: US \$80.00 in the U.S.A. and Canada; UK £39.00 elsewhere. Prices include postage and insurance; air mail or registered mail is extra. Back volume prices are available upon request.

#### Copyright © 1991 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 (0266-4623/91 \$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 7 1991 Number 4

# **CONTENTS**

| SPECIAL SECTION: OBSTETRIC TECHNOLOGY: A FUTURE PERSPECT<br>Guest Editors: Miriam Orleans<br>Elina Hemminki  | rive |
|--|------|
| Introduction  Miriam Orleans  Elina Hemminki   | 427  |
| The Work of the National Perinatal Epidemiology Unit: One Example of Technology Assessment in Perinatal Care  Iain Chalmers  | 430  |
| Preventing and Managing Prematurity  Judith Lumley   | 460  |
| Support in Pregnancy Robert L. Bryce   | 478  |
| Assisted Conception: Health Services and Evaluation  Paul A. L. Lancaster  | 485  |
| Assessment of Midwifery Routines: Toward a North/South Collaborative  Effort  Göran Sterky  Anna-Berit Ransjö-Arvidson   | 500  |
| Prenatal Diagnosis, Prenatal Screening, and the Rise of the Tentative Pregnancy  Tieerd Tymstra  | 509  |
| Maternity Patients' Advocates in the 1990s: Changing Debates and New Debaters  Madeleine H. Shearer  | 517  |
| GENERAL ESSAYS   |      |
| Do Doctors and Patients Agree? Views of the Outcome of Transurethral Resection of the Prostate  Nick Black Grant Williams  Mark Petticrew Jane Davies  Maria Ginzler Helen Doll  Ann Flood Klim McPherson  Joe Smith | 533  |
| Health Care and Medical Technology in Nigeria: An Appraisal Olayiwola A. Erinosho  | 545  |
| Medical Technology Transfer in Major Chinese Medical Schools  Teh-wei Hu  Ying-Ying Meng   | 553  |
| Economic Analysis Alongside Clinical Trials: Revisiting the Methodological Issues  Michael F. Drummond  Linda Davies   | 561  |

| Diffusion of In-Vitro Fertilization in the Netherlands and England:  An Exploratory Study  Ardine de Wit  David Banta                     | 57  |
|---|-----|
| Effects and Costs of In-Vitro Fertilization: Again, Let's Be Honest Ger Haan  | 58  |
| Economic Evaluation of Trends in Cancer Therapy: Marginal or Average Costs?  Maria Goddard  John Hutton                                   | 594 |
| Costs of Breast Cancer and the Cost-Effectiveness of Breast Cancer<br>Screening  Anne Elixhauser  | 604 |
| Informing the Mammography Coverage Debate: Results of Meta-analysis, Computer Modeling, and Issue Analysis  Kit N. Simpson Lyle B. Snyder | 61  |
| EDITORIAL   |     |
| The Cost-Effectiveness of Breast Cancer Screening  Petr Skrabanek   | 63  |
| TECHNOLOGY ASSESSMENT REPORTS   |     |
| Report from the U.S. Agency for Health Care Policy and Research (AHCPR)   | 63  |
| Report from the Canadian Coordinating Office for Health<br>Technology Assessment (CCOHTA)   | 63  |
| Reports from the Conseil d'Évaluation des Technologies de la Santé du Québec  | 63  |
| Report from the Health Council of the Netherlands   | 64  |
| Consensus Statement from the U.S. National Institutes of Health (NIH)   | 64  |
| Report from the U.S. Office of Technology Assessment (OTA)  | 64  |
| Report from the Swedish Council on Technology Assessment in Health Care (SBU)   | 64  |
| Report of a Joint Working Conference on Medical Informatics   | 64  |
| LETTERS TO THE EDITORS  |     |
| Branched-Chain Amino Acids in Hepatic Encephalopathy:<br>Continuing Controversy   | 64  |
| Cost-Effectiveness of Extracorporeal Shock Wave Lithotripsy   | 65  |
| Comment on "Dealing with Discounting"   | 65  |
| On the Discounting of Gains in Life Expectancy: Reply to Johannesson and Levin  | 65  |
| MEETINGS AND ANNOUNCEMENTS  | 65  |
| CONTRIBUTORS  | 65  |
| VOLUME 7 (1991) INDEX   | 66  |
|   |     |

# 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.

Samuel Korper, Ph.D.

Associate Director for Planning, Analysis, and Communication National Institute of Aging Bethesda, Maryland U.S.A.

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

Richard Chrzanowski, M.D.

Institut Suisse de la Sante Publique Aarau, Switzerland

Frederick Mosteller, Ph.D.

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

Stephan Tanneberger, M.D., Ph.D. Professor

Division of Oncology Saint Orsola Malpighi Policlinic Hospital Bologna, Italy

Jane E. Sisk, Ph.D.

Murray Eden, Ph.D.

Chief of Biomedical Engineering and Instrumentation Branch Division of Research Service Bethesda, Maryland, U.S.A.

Jorge Peña-Mohr, Ph.D.

Seymour Perry, M.D.

Family Medicine

Professor

Pan American Health Organization Pan American Sanitary Bureau World Health Organization Washington, D.C., U.S.A.

Department of Community and

Georgetown University School

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.

Paul F. Gross

Director Institute of Health Economics and Technology Assessment North Sydney, Australia

Washington, D.C., U.S.A.

of Medicine

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

Elizabeth Heitman, Ph.D. Assistant Editor Program on Humanities and

Technology in Health Care University of Texas Health Science Center Houston, U.S.A.

Ruth S. Hanft, Ph.D.

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

# **Editorial Board**

Per Buch Andreasen, M.D., Jeremiah A. Barondess, M.D. Ph.D. Professor Department of

Cornell University Medical College

New York, New York, U.S.A.

Clyde Behney

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

Robert Brook, M.D., Sc.D. The Rand Corporation **UCLA Schools of Medicine** and Public Health

Santa Monica, CA, U.S.A.

Roger Bulger, M.D.

President Association of Academic **Health Centers** Washington, D.C., U.S.A.

University of Limburg Maastricht, Netherlands

Professor

H. David Banta, M.D., M.P.H.

Gastroenterology and

Clinical Pharmacology

Gentofte University Hospital Hellerup, Denmark

### Editorial Board (continued)

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

E. N. Chigan, M.D.
Director
Division of Noncommunicable
Diseases and Health Technology

World Health Organization Geneva. Switzerland

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

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

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

**David Feeney, Ph.D.**Professor
McMaster University
Hamilton, Ontario, *Canada* 

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

Naoki Ikegami, M.D. Professor Keio University School of Medicine Tokyo, Japan

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

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.

Emile Papiernik, M.D. 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.
President
Robert Wood Johnson Foundation
Princeton, New Jersey, U.S.A.

Mordechai Shani, M.D. Director The Chaim Sheba Medical Center Tel-Hashomer, *Israel* 

Barbara Stocking, M.Sc. Director King's Fund Centre for Health Sciences Development London, England

Jacabo A. Tieffenberg, M.D. President ACINDES Buenos Aires, *Argentina* 

Ted Tyson
President
Tyson Consulting Group
Buffalo Grove, Illinois, U.S.A.

Judith L. Wagner, Ph.D.
Office of Technology Assessment
Congress of the United States
Washington, D.C., U.S.A.

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

Kara K. McArthur
Editorial Assistant
The University of Texas
Health Science Center
at Houston
Houston, Texas, U.S.A.