

## Appendix B.—Description of Other Volumes of the Assessment

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The overall OTA assessment, *The Implications of Cost-Effectiveness Analysis of Medical Technology*, consists of a main, policy oriented report plus five background papers. The present volume, *Four Common X-Ray Procedures: Problems and Prospects for Economic Evaluation*, is one of the background papers. The main report and the other background efforts are briefly described below.

The main report examines three major issues: 1) the general usefulness of CEA/CBA in decisionmaking regarding medical technology, 2) the methodological strengths and shortcomings of the technique, and 3) the potential for initiating or expanding the use of CEA/CBA in six health care programs (reimbursement coverage, health planning, market approval for drugs and medical devices, Professional Standards Review Organizations, R&D activities, and health maintenance organizations), and most importantly, the implications of any expanded use.

The prime focus of the report is on the applications of CEA/CBA to medical technology (i.e., the drugs, devices, and medical and surgical procedures used in medical care, and the organizational and support systems within which such care is provided). With the exception of the present background paper on psychotherapy, the report does not address psychosocial medicine. Other aspects of health, such as the environment, are not directly covered either. The findings of the assessment, though, might very well apply to health care resource decisionmaking in general, and with modification, to other policy areas such as education, the environment, and occupational safety and health.

The main report contains chapters on methodology, general decisionmaking, each of the six health programs mentioned above, and the general usefulness of CEA/CBA. It contains appendixes covering a survey of current and past uses of CEA/CBA by agencies (primarily Federal), a survey of the resource costs involved in conducting CEAs/CBAs, a discussion of ethical issues and CEAs/CBAs, and a brief discussion of legal issues.

*Background Paper #1: Methodological Issues and Literature Review*, includes an in-depth examination of the decisionmaking context and methodology discussions presented in this report. A critique of the literature, a bibliography of over 600 items, and abstracts of over 70 studies and other articles are also included.

In order to help examine the applicability of techniques to assess the costs and benefits of medical

technology, 19 case studies were prepared. All 19 are available individually. In addition, 17 of the cases are available collectively in a volume entitled *Background Paper #1: Case Studies of Medical Technologies*. Some of the cases represent formal CEAs (e.g., the case on bone marrow transplants), and some represent net cost or "least cost" analysis (e.g., the case on certain respiratory therapies). Other cases illustrate various issues such as the difficulty of conducting CEA in the absence of adequate efficacy and safety information (e.g., the case on breast cancer surgery), or the role and impact of formal analysis on policymaking (e.g., the case on end-stage renal disease interventions). The 17 case studies in *Background Paper #2* and their authors are:

### Artificial Heart

Deborah P. Lubeck  
John P. Bunker

### Automated Multichannel Chemistry Analyzers

Milton C. Weinstein  
Laurie A. Pearlman

### Bone Marrow Transplants

Stuart O. Schweitzer  
C. C. Scalzi

### Breast Cancer Surgery

Karen Schachter  
Duncan Neuhauser

### Cardiac Radionuclide Imaging

William B. Stason  
Eric Fortess

### Cervical Cancer Screening

Bryan R. Luce

### Cimetidine and Peptic Ulcer Disease

Harvey V. Fineberg  
Laurie A. Pearlman

### Colon Cancer Screening

David M. Eddy

### CT Scanning

Judith L. Wagner

### Elective Hysterectomy

Carol Korenbrot  
Ann B. Flood  
Michael Higgins  
Noralou Roos  
John P. Bunker

### End-Stage Renal Disease Interventions

Richard A. Rettig

### Gastrointestinal Endoscopy

Jonathan A. Showstack  
Steven A. Schroeder

## Neonatal Intensive Care

Peter Budetti  
 Peggy McManus  
 Nancy Barrand  
 Lu Ann LeRoy

## Orthopedic Joint Prosthetic Implants

Judith D. Bentkover  
 Philip G. Drew

## Periodontal Disease Interventions

Richard M. Scheffler  
 Sheldon Rovin

## Respiratory Therapy

Richard M. Scheffler  
 Morgan Delaney

The 18th case study is Background Paper #3: *The Efficacy and Cost Effectiveness of Psychotherapy*.

The 19th case study is the present volume, *Background Paper #5: Four Common X-Ray Procedures: Problems and Prospects for Economic Evaluation*. It was prepared by Judith L. Wagner, and Martha J. Krieger.

Background Paper #4: *The Management of Health Care Technology in Ten Countries* is an analysis of the policies, programs, and methods, including cost-effectiveness and cost-benefit techniques, that nine industrialized nations other than the United States use to manage the effects of medical technology. The experience of these nine countries in managing medical technology is compared to that of the United States. The paper on the United States and the comparative analysis were prepared by OTA staff, as-

sisted by Louise Russell. The authors of the papers on the nine foreign countries are:

United Kingdom  
 Barbara Stocking

Canada  
 Jack Needleman

Australia  
 Sydney Sax

Japan  
 Joel Broida

France  
 Rebecca Fuhrer

Germany  
 Karin A. Dumbaugh

Netherlands  
 L. M. J. Groot

Iceland  
 David Gunnarson  
 Duncan vB. Neuhauser

Sweden  
 Erik H. G. Gaensler  
 Egon Jonsson

Duncan vB. Neuhauser

A related report prepared by OTA and reviewed by the Advisory Panel to the overall assessment is *A Review of Selected Federal Vaccine and Immunization Policies*. That study, published in September of 1979, examined vaccine research, development, and production; vaccine efficacy, safety, and cost effectiveness; liability issues; and factors affecting the use of vaccines. Pneumococcal vaccine was used as a case study, and a CEA/CBA was performed.