Edited by
Christine K. Cassel
Donald E. Riesenberg
Leif B. Sorensen
John R. Walsh

Geriatric Medicine

Second Edition

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With a Foreword by Robert N. Butler

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CHRISTINE K. CASSEL, M.D.
Chief, Section of General Internal Medicine
The University of Chicago Medical Center
Chicago, Illinois 60637, U.S.A.

DONALD E. RIESENBERG, M.D.
Senior Editor, Journal of the American
Medical Association
Chicago, Illinois 60610, U.S.A.
and
Clinical Associate Professor of Medicine
Pritzker School of Medicine
University of Chicago
Chicago, Illinois 60637, U.S.A.

LEIF B. SORENSEN, M.D., PH.D.
Associate Chief, Department of Medicine
Pritzker School of Medicine
University of Chicago
Chicago, Illinois 60637, U.S.A.

JOHN R. WALSH, M.D.
Chief, Geriatric Medicine
Portland V.A. Medical Center
Portland, Oregon 97207, U.S.A.

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Foreword to Second Edition

The Second Edition of this outstanding textbook is further evidence that the field of geriatrics has made great strides; indeed, has come of age. The broad scope of this volume shapes a substantial answer to the question, "What is geriatrics and why should we be interested in it?" As I see it, there are at least five reasons.

First, the scientific or intellectual reason: gerontology is the study of aging from the biologic, psychological, and social perspectives. There is increasing interest in the fascinating insights into the biologic mechanisms of aging, free radical damage, failed cellular disposal, DNA repair mechanisms, alterations of the neuroendocrine system, changes in the immune system, genetic controls, and somatic mutations.

Second, the demographic reason: this is the century of old age. There has been a 26 year gain in the average life expectancy. This gain compares with that acquired from 3,000 years B.C. (the Bronze Age) to the year 1900, which was about 29 years. Therefore, in one century there has been a gain in the average life expectancy almost equal to 5,000 previous years of human history.

In 1830, one of three newborn infants survived beyond 60 years of age. Today 8 of 10 newborn babies are expected to live a full life. In 1870, only 44 of 100 women who did not die of scarlet fever, diphtheria, chicken pox, or other diseases, and who survived to 15 years of age, enjoyed what we take for granted as the natural course of human life today. In 1920, a 10-year-old child had about a 40 percent chance of having two of his or her four grandparents alive. At present, that probability is over 80 percent. From birth, women today will outlive men by nearly 8 years. This is a mixed blessing, because many of the problems of age are the special problems of women.

Third, the epidemiologic reason: the high incidence and prevalence of disease and disabilities with age is striking. There are "diseases of affluence," the consequence of life long exposure to unhealthy life styles, such as high fat diets and sedentary living. Certain diseases pose "silent epidemics," which rise with the aging population. One, senile dementia of the Alzheimer's type probably is the fourth leading cause of death; yet, it has received significant attention only recently. Another, osteoporosis, is unknown to 80 percent of the public according to one survey, but it is one of the main causes of disability. Along with senile dementia of the Alzheimer's type, osteoporosis is one of the true scourges of old age. These are only two examples of the kinds of medical disorders that affect great numbers of people advanced in age and that, nonetheless, have, until recently, attracted little

research attention. These are frontiers of scientific knowledge that are now responding to inquiry and experimentation.

Fourth, the health costs: In 1988, about 11.2 percent of the gross national product, or some $500 billion, was spent on health care; some $90 billion on Medicare and Medicaid, largely but not exclusively for elderly persons. Of all health costs, 30 percent are associated with persons over 65 years of age; 40 percent of all Medicaid funds go to nursing homes. There are about 20,000 nursing homes in the United States, in which about 1.5 million people reside; 1.4 million are over 65 years of age. On any given day, there are more patients in nursing homes than there are in hospitals. Attempts to contain costs thus often focus on the elderly population. Considerations of health care policy are a critical part of effective, prudent, and humane geriatric practice.

Fifth, attitude: negativism toward old age. In my medical school days, I was offended by the use of the word "crock" and other insensitive epithets. These attitudes are deep, widespread, and undoubtedly part of the evident resistance to the development of geriatrics in our institutions of health care. Changing these negative attitudes requires more than exhortation. It requires developing a sense of competence in handling the clinical problems of elderly persons, a working knowledge of the social, economic, and institutional barriers to respectful treatment and how to change them, and the intellectual background to meet ethical issues with both analytic and humanistic skills.

Geriatrics clearly is a topic of great complexity and breadth. Some 40 to 50 percent of the time of most internists, family practitioners, and surgeons already is devoted to the diagnosis, treatment, and care of older persons. The field of geriatrics demands more than attention to biology. It requires a greater appreciation of the social and psychological forces that operate within us. In medical education, we emphasize the search for a single explanation in the diagnostic evaluation of a patient. We refer to a medieval philosopher, William Occam, and his "razor." He is said to have propounded the principle of searching for a single explanation to any complex group of symptoms. This has been a cardinal principle of differential diagnosis. Yet, the multiplicity of illnesses, their complexity, associated polypharmacy, the disguise of one disease by another, and the effect of the age of the host in altering the presentation and the course of diseases all must change our reasoning. Multiple interacting disorders are more likely than a single diagnosis to explain the problems of elderly persons. The same factors also may change the character of treatment response.

The future of medicine is coupled with the "graying of America" and "the triumph of survivorship." We will have 55 million people over 65 years of age in the range of the years 2020–2030. We see government and business engaged in increasing efforts at cost containment and regulation, as well as the growth of corporate medicine. It is possible that physicians will take a distant third place to business and government in the conduct of health delivery. Thus, understanding the social, political, and economic realities of health care systems is essential to a geriatrician as well as the physician in general.

In geriatrics, we stress the team, the collaboration of physicians, nurses, social workers, and other professionals. We stress the importance of assessing function and, even more importantly, maintaining and improving function. We can no longer depend on brief, mechanistic, overly economical, and, therefore, superficial forms of assessment. Older patients in contemporary hospitals deteriorate because they often are neglected after their acute episode has been treated. There frequently are no efforts toward continuing function, even ambulation. There should be signals that herald discharge planning at the very moment of admission. Hospitals and physicians should be prepared to respond on an urgent basis with rehabilitative and other restorative efforts when a high-risk older person is in a medical crisis. They should also be prepared to respond with common sense and compassion when there is nothing more that can be done realistically and death is at hand.

Charcot, the great French physician, one century ago said, "The importance of a special study of the diseases of old age would not be contested at the present time." However, it has taken time. An American physician, Ignatz Nascher, introduced the term "geriatrics" just after the turn of the century. In Great Britain in the late 1930s, a unique physician,

Marjorie Warren, took leadership in the development of geriatrics. In 1976, the National Institute of Aging inaugurated a Geriatric Medicine Academic Award. It also sponsored the Institute of Medicine, National Academy of Sciences, special task force under the leadership of Paul B. Beeson to study "aging and medical education." This report concurs with most leaders in geriatrics in not promoting a primary care practice specialty to which patients would be referred at some arbitrary age. However, most leaders in geriatrics do favor the creation of an academic specialty to ensure that there will be new ideas and innovations in diagnosis and treatment, as well as critical leadership in research and education. This specialty must represent a broad range of knowledge rather than a focused one, which is characteristic of other kinds of specialties. Both the American Board of Internal Medicine and the American Academy of Family Practice, fortunately, have established examinations for added qualification in geriatrics.

Not long ago, there were those who objected that geriatrics did not possess a distinct body of knowledge. This book demonstrates the falseness of that statement, containing work concerning the fundamentals of geriatric care, biomedicine, and psychiatry. It highlights the fact that geriatrics is distinct in the breadth of its concern rather than being a more narrow definition of a specialty. The goal of this unique book is to integrate biomedical and psychosocial information with the perspectives of ethics and social policy. This volume provides the basic information that most medical textbooks do not have, for example, on such topics as law and the role of rehabilitation medicine. All of these perspectives and data bases are necessary to achieve excellence in clinical practice and to foster the further evolution of this expanding field.

ROBERT N. BUTLER, M.D.

Preface to Second Edition

"The body immures the mind within a fortress; presently on all sides the fortress is besieged and in the end, inevitably, the mind has to surrender."*

Proust's poetic lament characterizes most people's attitudes towards aging—The "inevitable surrender of the mind." We now understand that not all the declines of aging are so inevitable, and just as importantly, we have better skills in caring for those declines we cannot prevent. Indeed, the siege of the body and surrender of the mind rank among modern medicine's greatest concerns. Because of the unprecedented growth, in developed countries, of the number and proportion of elderly persons, geriatrics now has taken its place among the distinct medical disciplines. Its purview goes even beyond mind and body, to include also society and to examine questions of values and meaning. We offer this second edition of *Geriatric Medicine* in response to continuing refinement of the art and science of medical care for older persons.

The years since publication of the first edition have seen unparalleled advances in geriatric medicine. Examples include the development of sophisticated diagnostic categories of urinary incontinence, resulting in better understanding of a condition that afflicts half of all people in nursing homes; clarification of the epidemiologic patterns of osteoporosis and falls, which, together, account for the excess burden (both morbidity and mortality) of fractures borne by elderly persons; the elucidation of discrete genetic patterns and neuropathological changes as they relate to certain forms of dementia; increasing visibility and importance of home care and of rehabilitation; and court decisions and institutional policies about end of life decisions that are prompting important and intense public discussion. Such progress foretells therapeutic and policy advances, some of which are nearing the horizon already.

Equally dramatic has been the academic maturation of geriatric medicine. Over three-fourths of all U.S. medical schools are now affiliated with long-term care institutions. One hundred twenty-five geriatrics fellowship programs were active as of 1987. Program directors can take pride in the fact that over 90 percent of their graduates who took the 1988 examination for certification of Added Qualifications in Geriatric Medicine passed, while other examinees did distinctly less well.

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*Marcel Proust, *Remembrance of Things Past*.

That examination, itself a benchmark for the field of geriatric medicine, was administered jointly by The American Board of Internal Medicine and the American Board of Family Practice, bespeaking the primary-care nature of the field and codifying its distinct body of knowledge.

All of these events seemed to demand a second edition of this textbook, which we have focused into a single volume from the original two, a task that required doubling the number of editors. We have not eliminated topics by moving to one volume, but have focused better the rich tapestry of different disciplines that comprise the theoretical and clinical basis of geriatrics. This text combines traditional medical topics with the psychological, social, and ethical issues that are no less a part of the geriatrician's domain. In weaving this tapestry, it was inevitable that there be overlappings of one discipline into another. We believe that such duplication, rather than being redundant, is appropriate in a comprehensive resource. The areas of overlap provide differing perspectives on the same topic and will enrich the reader's understanding in the process. Extensive indexing and cross-referencing guide those seeking these different perspectives.

Medicine finds itself enmeshed in fierce debate about its very fabric. The cost and logic of ever increasing technological capabilities demand difficult choices. Nowhere are those choices confronted more frequently or more poignantly than in geriatrics, where a thorough understanding of technologies must go hand in hand with a discerning sense of judgement. The geriatrician is called upon to take seriously the role of patient advocate in all its meanings, no small act of courage. So the geriatric imperative is just that: growing numbers of older patients require competence, compassion, and judgement of their physicians.

For a project such as this, it is impossible to acknowledge adequately all those who helped. As with the first edition, the effort has resulted in a spirit of communal scholarship. During the three years of work, innumerable persons have contributed unqualified support. At Springer-Verlag, Shelley Reinhardt and Robin Brown ensured the soundness of the final product by their professionalism and encouragement. Juliann Lundell Tarsney and Kathleen Heller lent their considerable scholarship to the copyediting process. And Lois Danker and Joyce Eberhardt successfully managed the trafficking of manuscripts between busy universities throughout the country.

The contributors to this volume, who represent the very best that our discipline has to offer, have given freely of their time and expertise. We the editors thank them especially and proudly offer the second edition of *Geriatric Medicine* as a testimony to their excellence.

CHRISTINE K. CASSEL, M.D.
DONALD E. RIESENBERG, M.D.
LEIF B. SORENSEN, M.D., PH.D.
JOHN R. WALSH, M.D.

Preface to First Edition

*"Old age ain't for sissies"**

In the last decade, two developments have changed the practice of medicine: the aging of the population and the dominance of medical technology. Both medical education and medical practice have responded to these events. Aging, chronic illness, and long-term care now are frequently written about in medical journals. Advances in diagnostic and therapeutic technologies have out-stripped our ability to evaluate or to pay for the new services. The field of geriatric medicine is a response to the first development and a reaction to the second.

The medical response to the demographic imperative of aging has been to codify a field of medical specialization that is relevant and useful to the increasing numbers of elderly persons. The reaction is to emphasize a broadly comprehensive, humane, and personal approach to patient care. There no longer is any doubt that there exists a body of scientific knowledge, which characterizes the field of geriatrics. In addition to a distinct body of knowledge, most geriatricians also will describe a special approach and philosophy that characterizes the practice of geriatrics. There is a growing awareness in academic medicine that special knowledge, skills, and attitudes are needed to deal effectively with elderly patients, particularly very old or frail patients. However, many physicians in primary care specialties such as internal medicine, family practice, and general surgery claim (and accurately so) that they function as geriatricians because many of their patients are elderly. In fact, in many instances, clinical practices of these generalists predominantly consist of elderly patients. Even with the advent of full-time geriatricians, the proportion of elderly persons in general practice populations will increase within the next 2 decades.

Both viewpoints are correct. Geriatrics is a specialty and also an essential component of almost any clinical practice. It is true that many physicians, especially those in primary care settings, will have a large proportion of elderly patients in their practice and (to a certain extent) will be practicing geriatrics. Until recently, most graduate training programs in medicine, family practice, or psychiatry did not include special consideration of geriatrics. Many physicians have learned some of the practical information on their own; however, the body of knowledge referred to in the recent Institute of Medicine report

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*Moore, H: Sayings, in Alvarez J, Oldham P (eds): *Old Age Ain't For Sissies*.

and the theoretic and scientific progress in this field has not been generally accessible.† It also is true that we have, in the last 5 years in the United States, codified a specialty of geriatrics that includes training programs in geriatric medicine at the fellowship level. Many of the graduates of these programs will assume academic roles and bring the content of geriatrics to all relevant areas of health care education.

In these volumes, we have tried to assemble the material in a way that is useful for both practicing clinicians and physicians-in-training, especially those who have selected training in geriatrics. In addition, this text is meant to be a comprehensive resource for a practitioner who needs information for the clinical demands of the moment. For a research scientist or physician in advanced training, there is an introduction to the theoretical basis of each subject and a substantial bibliography. We hope that, in this way, these volumes also will provide access to the new areas of research and the new understandings that are now emerging.

Because we attempt to bring together in one place the full content of geriatric medicine, this work is deliberately compendious. Geriatrics has a broad basis; it includes clinical medicine, humanities, and the social sciences. Also, *Geriatric Medicine* accordingly has several sections organized into two volumes. The division into two volumes is primarily in the interest of the reader's convenience and, thus, inevitably somewhat arbitrary. Nonetheless, our underlying concept is that the biological, the psychosocial, and the philosophical are essential parts of a single whole. We have called on a large number of contributors, in many different fields, to assure that the subject matter is treated authoritatively.

Aging is an important and exciting area of biomedical research, which is represented largely in Volume I. The diseases that are the greatest scourges of old age are principally the chronic and degenerative disorders such as osteoporosis, parkinsonism, stroke, Alzheimer's disease, osteoarthritis, and peripheral vascular disease. Until recently, the level of research activity into the causes and treatments of these disorders has been markedly inadequate when measured against the numbers of people who are afflicted and the costs—both financial and humanitarian—to our society. However, there are areas of knowledge and research outside of biomedicine that also are critical to progress in geriatrics. These include disciplines that are based in social sciences and humanities, rather than in biology and medicine. Health services research and bioethics are especially important to geriatrics. A geriatrician may need to emulate the Renaissance scholar. The body of knowledge is broad and its relevance is undeniable.

Geriatrics is unique as a medical specialty, because it is broader, rather than narrower, than the parent disciplines. An effective clinician must have some grasp of social gerontology, architectural design, law, psychology and psychiatry, spiritual counseling, health policy and health care economics, interprofessional sociology, epidemiology, and philosophical ethics to claim a firm competence in the care of elderly persons. For this reason, much of Volume II is devoted to chapters that are written by experts in these fields. These authors provide information that is both practical and relevant to clinicians, and that also may encourage a deeper exploration of this field.

The breadth of subjects covered in these two volumes is a demonstration of the need for interdisciplinary practice in geriatrics and gerontology. No one person can be an expert in each of these areas. Yet, each subject will be relevant to the needs of an elderly patient at one time or another. It is important for a geriatrician to be able to work effectively with other health care providers as well as with social scientists and policymakers, and to know where his or her own limits have been surpassed and where consultation is necessary. For appropriate and effective consultation, one must have a basic understanding of the sphere of knowledge of consultants.

The theoretical and clinical basis of geriatrics is a rich tapestry of different disciplines. In weaving this tapestry, it was inevitable that there would be overlappings and crossings of one discipline into another. The reader occasionally may find material that is appar-

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†Institute of Medicine: *Aging and Medical Education*. National Academy of Sciences, Washington, DC, 1978.

ently redundant from one chapter to another. We feel that such duplication is appropriate in a comprehensive resource text such as this. In most cases, the areas of overlap will provide a different perspective on the same topic and will enrich the understanding of the reader in the process. We hope that the indexing and cross-referencing will provide guidance to those who are specifically seeking these different perspectives.

For a project of this magnitude, it is impossible to adequately acknowledge all those who helped. It has been a project of many rewards, both in the content and meaning of the work itself and in the expanding community of scholarship and advocacy. From inception to completion, this project has taken 3 years. During this time, innumerable persons have contributed significant support. The staff of Springer-Verlag has given us stimulating concepts and good ideas, in addition to steadfast sensible guidance. The details of organizing, phone-calling, letter-writing, library research, and manuscript preparation cannot be overemphasized in a work of this size and complexity. Special acknowledgment in these areas is due to Pamela Beere Briggs and Carol Saatzer. We also acknowledge the generous support of the Henry J. Kaiser Family Foundation.

We are aware that we have joined the beginning of a very important process. The profession of medicine is at a turning point; it is caught between the successes of scientific and technologic progress and concerns about the rising costs of care and the depersonalization of its delivery. Patients—disaffected, frustrated, and often in real need—are caught in between these unresolved issues. The moral center of the profession is at risk in the policy debates. An understanding of geriatrics requires competent familiarity with the capabilities of the latest in medical technology, a discerning sense of judgment about when and when not to use such interventions, and the courage and energy to take seriously the social role of advocate for a patient. The complexity, richness, and mystery of aging cannot be described better than it has been by T.S. Eliot in *East Coker:*

> Home is where one starts from. As we grow older
> The world becomes stranger, the pattern more complicated
> Of dead and living. Not the intense moment
> Isolated, with no before and after,
> But a lifetime burning in every moment
> And not the lifetime of one man only
> But of old stones that cannot be deciphered.

We choose to view the challenge posed by the geriatric imperative not as a burden, but as an opportunity for medicine to restructure its priorities and to respond to the real needs of modern society. Geriatrics can be a vehicle for returning the values of compassion, moderation, and moral judgment to both medicine and scientific progress. These volumes, in themselves, will not create the complete clinician, but they can provide the groundwork for the excellence that is possible in geriatrics. That excellence not only is possible, but it is a duty we owe to our patients, our profession, our society, and—in the final analysis—to ourselves.

CHRISTINE K. CASSEL, M.D.
JOHN R. WALSH, M.D.

Contributors

Marilyn S. Albert, Ph.D.
Professor of Psychiatry and Neurology, Massachusetts General Hospital, Harvard Medical School, Boston, Massachusetts 02114, U.S.A.

Sharon Anderson, M.D.
Assistant Professor of Medicine, Department of Medicine, Harvard Medical School, Boston, Massachusetts 02114; Associate Physician, Renal Division, Brigham and Women's Hospital, Boston, Massachusetts 02115, U.S.A.

Jerry Avorn, M.D.
Associate Professor of Social Medicine, Harvard Medical School, Boston, Massachusetts 02114; Attending Physician, Gerontology Division, Beth Israel Hospital, Boston, Massachusetts 02115, U.S.A.

Dan G. Blazer II, M.D., Ph.D.
Professor of Psychiatry, Director, Affective Disorders Program, Duke University Medical Center, Durham, North Carolina 27706, U.S.A.

Jacob A. Brody, M.D.
Dean, School of Public Health, University of Illinois at Chicago, Chicago, Illinois 60680, U.S.A.

Robert A. Bruce, M.D.
Professor Emeritus, Department of Medicine, University of Washington; University Hospital, Seattle, Washington 98195, U.S.A.

Kenneth Brummel-Smith, M.D.
Associate Professor of Family Medicine, University of Southern California School of Medicine, Los Angeles, California 90007; Co-Chief, Clinical Gerontology Service, Rehabilitation Research and Training Center on Aging, Ranchos Los Amigos Medical Center, Downey, California 90242, U.S.A.

Edith A. Burns, M.D.
Assistant Professor, Department of Geriatrics, University of Wisconsin, School of Medicine, Milwaukee Clinical Campus, Milwaukee, Wisconsin 53211; Attending Physician, Sinai-Samaritan Geriatrics Institute, Milwaukee, Wisconsin 53233, U.S.A.

Robert N. Butler, M.D.
Chair, Department of Geriatrics and Adult Development, Mount Sinai Medical Center, New York, New York 10029, U.S.A.

Louis Caplan, M.D.
Professor and Chairman, Department of Neurology, Tufts University School of Medicine, Boston, Massachusetts, Neurologist-in-Chief, New England Medical Center, Boston, Massachusetts 02111, U.S.A.

Michael Carvell, M.D.
Assistant Professor, Division of Geriatric Psychiatry, Department of Psychiatry, Pennsylvania State University College of Medicine, Hershey, Pennsylvania, U.S.A.

Christine K. Cassel, M.D.
Chief, Section of General Internal Medicine, University of Chicago Medical Center, Chicago, Illinois 60637, U.S.A.

Donald O. Castell, M.D.
Professor of Medicine and Chief of Gastroenterology, Bowman Gray School of Medicine; North Carolina Baptist Hospital, Winston-Salem, North Carolina 27103, U.S.A.

Gerald W. Chodak, M.D.
Associate Professor of Urology, Department of Surgery, University of Chicago; Division of Urologic-Oncology, University of Chicago Medical Center, Chicago, Illinois 60637, U.S.A.

Thomas G. Cooney, M.D.
Professor of Medicine and Residency Program Director, Oregon Health Sciences University, Portland, Oregon 97201; Staff Physician, Section of General Medicine, Department of Veterans Affairs Medical Center, Portland, Oregon 97207, U.S.A.

David S. Cooper, M.D.
Associate Professor of Medicine, The Johns Hopkins University School of Medicine, Baltimore, Maryland 21218; Division of Endocrinology, Sinai Hospital of Baltimore, Baltimore, Maryland 21215, U.S.A.

Jeffrey L. Cummings, M.D.
Associate Professor of Neurology and Psychiatry and Biobehavioral Sciences, and Director, Dementia Research Program, University of California at Los Angeles School of Medicine, Los Angeles, California 90024, U.S.A.

Charles N. Ellis, M.D.
Associate Professor of Dermatology, Director, Dermatopharmacology Unit, University of Michigan Medical Center, Ann Arbor, Michigan 48109, U.S.A.

Robert S. Felder, D.D.S., M.P.H.
Assistant Professor, Public Health Dentistry, Oregon Health Sciences University, Portland, Oregon 97201; Director, Geriatric Dental Services, Department of Veterans Affairs Medical Center, Portland, Oregon 97207, U.S.A.

John R. Feussner, M.D.
Associate Professor and Chief, Division of General Internal Medicine, Department of Medicine, Durham, North Carolina 27706; Health Services Research and Development, Field Program, Department of Veterans Affairs Medical Center, Durham, North Carolina 27705, U.S.A.

Edward D. Frohlich, M.D.
Vice President, Academic Affairs, Alton Ochsner Distinguished Scientist, Alton Ochsner Medical Foundation, New Orleans, Louisiana 70121, U.S.A.

Michael T. Goldfarb M.D.
Lecturer, Department of Dermatology, University of Michigan Medical Center; University of Michigan Hospital, Ann Arbor, Michigan 48109, U.S.A.

James S. Goodwin, M.D.
Professor and Head of Geriatrics, Department of Medicine, University of Wisconsin, School of Medicine, Milwaukee Clinical Campus, Milwaukee, Wisconsin 53211; Sinai-Samaritan Geriatrics Institute, Milwaukee, Wisconsin 53213, U.S.A.

Jerry Gurwitz, M.D.
Merck Fellow in Geriatric Clinical Pharmacology, Instructor in Medicine, Harvard Medical School, Boston, Massachusetts 02114; Department of Medicine, Gerontology Division, Beth Israel Hospital, Boston, Massachusetts 02115, U.S.A.

Cynthia T. Henderson, M.D., M.P.H.
Associate Chairperson, Consultant in Gastroenterology and Clinical Nutrition, Department of Geriatric Medicine and Chronic Diseases, Oak Forest Hospital, Oak Forest, Illinois; Department of Medicine, Geriatrics Program, University of Chicago Medical Center, Chicago, Illinois 60637, U.S.A.

Patrick W. Irvine, M.D.
Assistant Professor, Department of Medicine, University of Minnesota, Minneapolis, Minnesota 55455; Director, Geriatric Medicine and Extended Care, Hennepin County Medical Center, Minneapolis, Minnesota 55415, U.S.A.

Lissy F. Jarvik, M.D., Ph.D.
Distinguished Physician, Department of Veterans Affairs Medical Center, Los Angeles, California; Professor, Department of Psychiatry and Biobehavioral Sciences, University of California at Los Angeles School of Medicine, Los Angeles 90024; Neuropsychiatric Hospital, Los Angeles, California, U.S.A.

L. E. Johnson, M.D., Ph.D.
Geriatric Fellow, University of California at Los Angeles Multicampus Division of Geriatric Medicine, San Fernando Valley Program, Department of Veterans Affairs Medical Center, Sepulveda, California 91343, U.S.A.

Fran E. Kaiser, M.D.
Assistant Professor of Medicine, University of California School of Medicine, Los Angeles, California 90024; Chief, Division of Geriatrics, Olive View Medical Center, Sylmar, California; Hospital-Based Home Care, Department of Veterans Affairs Medical Center, Sepulveda, California 91343, U.S.A.

Anthony Kales, M.D.
Professor and Chairman, Department of Psychiatry, Pennsylvania State University College of Medicine, Hershey, Pennsylvania, U.S.A.

Joyce D. Kales, M.D.
Professor and Director, Division of Community Psychiatry, Department of Psychiatry, Central Pennsylvania Psychiatric Institute, Pennsylvania State University College of Medicine, Hershey, Pennsylvania, U.S.A.

Rosalie A. Kane, D.S.W.
Professor, School of Social Work and School of Public Health, University of Minnesota, Minneapolis, Minnesota 55455, U.S.A.

Robert L. Kane, M.D.
Dean, School of Public Health, University of Minnesota, Minneapolis 55455, U.S.A.

Marshall B. Kapp, J.D., M.P.H.
Professor, Department of Medicine in Society, Wright State University School of Medicine, Dayton, Ohio 45435, U.S.A.

Harold G. Koenig, M.D.
Geriatric Medicine Fellow, Center for the Study of Aging and Human Development, Duke University Medical Center, Durham, North Carolina 27705, U.S.A.

Diana Koin, M.D.
Assistant Clinical Professor, Department of Medicine, Stanford University, Palo Alto, California 94305; Director, Hospital Based Home Care Program, Department of Veterans Affairs Medical Center, Palo Alto, California, U.S.A.

Eric B. Larson, M.D., M.P.H.
Professor of Medicine, University of Washington, Attending Physician, University Hospital, Seattle, Washington 98122, U.S.A.

Melinda A. Lee, M.D.
Assistant Professor of Medicine, Oregon Health Sciences University, Portland, Oregon 97201; Staff Physician, Geriatric Medicine Section, Department of Veteran Affairs Medical Center, Portland, Oregon 97207, U.S.A.

Joanne Lynn, M.D.
Associate Professor and Acting Director, Center for Aging Studies and Services, Department of Health Care Sciences, George Washington University, Washington, D.C. 20052; Medical Director, The Washington Home and Hospice of Washington, Washington, D.C., U.S.A.

Diane Meier, M.D.
Assistant Professor, Geriatrics and Adult Development, Chief, Geriatric Clinic, Co-Director, Osteoporosis and Metabolic Bone Disease Program, Mount Sinai Medical Center, New York, New York 10029, U.S.A.

Lane J. Mercer, M.D.
Associate Professor, Department of Ob/Gyn, Out-Patient Clinics, Director, Out-Patient Clinics, Obstetrics and Gynecology, University of Chicago Medical Center, Chicago, Illinois 60637, U.S.A.

Ernest Mhoon, M.D.
Associate Professor, Department of Surgery/Otolaryngology–Head and Neck Surgery, University of Chicago Pritzker School of Medicine; Director, Medical Student Education in Otolaryngology–Head and Neck Surgery, University of Chicago Medical Center, Chicago, Illinois 60637, U.S.A.

John E. Morley, M.B., B.Ch.
Professor of Medicine, Director, Division of Geriatrics, St. Louis University Medical School, St. Louis, Missouri; Department of Veterans Affairs Medical Center, St. Louis, Missouri 91343, U.S.A.

James F. Morris, M.D.
Professor of Medicine, Oregon Health Sciences University, Portland, Oregon 97201; Pulmonary Disease Section, Department of Veterans Affairs Medical Center, Portland, Oregon 97207, U.S.A.

Donald J. Murphy, M.D.
Assistant Professor, Department of Health Care Sciences, George Washington University, Washington, D.C. 20052; Thomas House, Washington, D.C., U.S.A.

James B. Nelson, M.D.
Senior Fellow, Gastroenterology Section, Bowman Gray School of Medicine, Winston-Salem, North Carolina 27103, U.S.A.

Bernice L. Neugarten, Ph.D., D.Sc.
Rothschild Distinguished Scholar, Center on Aging, Health and Society, Department of Medicine, University of Chicago, Chicago, Illinois 60637, U.S.A.

Thomas H. Norwood, M.D.
Professor of Pathology, Co-Director, Cytogenetics Laboratory, University of Washington, School of Medicine, Seattle, Washington 98195, U.S.A.

John G. Nutt, M.D.
Professor of Neurology, Oregon Health Sciences University, Portland, Oregon 97201, U.S.A.

Eugene Z. Oddone, M.D.
Associate in Medicine, Department of Medicine, Division of General Internal Medicine, Duke University Medical Center, Durham, North Carolina 27706; Research Associate, Health Services Research and Development Field Program, Ambulatory Care Service, Department of Veterans Affairs Medical Center, Durham, North Carolina 27705, U.S.A.

Gavril W. Pasternak, M.D., Ph.D.
Member, Department of Neurology, Memorial Sloan-Kettering Cancer Center, New York; Attending Neurologist, Memorial Hospital, New York, New York, 10021, U.S.A.

Richard Payne, M.D.
Associate Professor of Neurology, Attending Physician, University of Cincinnati Medical Center, Cincinnati, Ohio 45221, U.S.A.

Peter Pompei, M.D.
Assistant Professor, Department of Medicine, University of Chicago; Director, Windermere Senior Health Center, University of Chicago Medical Center, Chicago, Illinois 60637, U.S.A.

Lawrence A. Pottenger, M.D., Ph.D.
Associate Professor, Orthopaedic Surgery, Department of Surgery, University of Chicago; Director, Surgical Arthritis Clinic, University of Chicago Medical Center, Chicago, Illinois 60637, U.S.A.

Ruth B. Purtilo, Ph.D., P.T.
Professor and Program Director, Ethicist-in-Residence, Program in Ethics, Massachusetts General Hospital Institute of Health Professions, Boston, Massachusetts 02114; Lecturer, Orthopaedic Service, Harvard Medical School, Boston, Massachusetts 02115, U.S.A.

Neil M. Resnick, M.D.
Professor of Medicine, Harvard Medical School; Chief, Geriatrics and Director of the Continence Center, Brigham and Women's Hospital, Boston, Massachusetts 02115, U.S.A.

James B. Reuler, M.D.
Professor of Medicine, Oregon Health Sciences University, Portland, Oregon 97201; Chief, Section of General Medicine, Department of Veterans Affairs Medical Center, Portland, Oregon 97207, U.S.A.

L. F. Rich, M.S., M.D.
Associate Professor Ophthamology, Cornea and External Disease Service, Director, Adult Eye Clinic, Department of Ophthamology, Oregon Health Sciences University, Portland, Oregon 97201, U.S.A.

Don Riesenberg, M.D.
Senior Editor, *Journal of the American Medical Association*, Chicago, Illinois 60610; Department of Medicine, University of Chicago Pritzker School of Medicine, Chicago, Illinois 60637, U.S.A.

Greg A. Sachs, M.D.
Fellow in Geriatrics, Department of Medicine, University of Chicago Hospitals, Chicago, Illinois 60637, U.S.A.

Mary Shepard, M.D.
Assistant Professor of Medicine, Oregon Health Sciences University, Portland, Oregon 97201; Active Staff, Good Samaritan Hospital and Medical Center, Portland, Oregon, U.S.A.

Leif B. Sorensen, M.D., Ph.D.
Associate Chief, Department of Medicine, University of Chicago Pritzker School of Medicine, Chicago, Illinois 60637, U.S.A.

David O. Staats, M.D.
Assistant Professor, Department of Medicine, University of Illinois at Chicago, Chicago, Illinois 60637; Chief, Section of Geriatric Medicine, Assistant Chief, Medical Services, West Side Department of Veterans Affairs Medical Center, Chicago, Illinois, U.S.A.

Mary E. Tinetti, M.D.
Assistant Professor, Medicine, Yale University School of Medicine 06520; Associate Director, Continuing Care Unit, Yale-New Haven Hospital, New Haven, Connecticut, U.S.A.

Ruth Ann Tsukuda, M.P.H.
Director, Interdisciplinary Team Training in Geriatrics Program, Department of Veterans Affairs Medical Center, Portland, Oregon 97207, U.S.A.

Richard C. U'Ren, M.D.
Associate Professor of Psychiatry, Oregon Health Sciences University, Portland, Oregon 97201, U.S.A.