Essentials of Clinical Geriatrics

FOURTH EDITION

Robert L. Kane Joseph G. Ouslander Itamar B. Abrass

Essentials of Clinical Geriatrics

Fourth Edition

Robert L. Kane, M.D.

Professor and Minnesota Endowed Chair in Long-Term Care and Aging School of Public Health University of Minnesota Minneapolis, Minnesota

Joseph G. Ouslander, M.D.

Professor of Medicine
Director, Division of Geriatric Medicine
and Gerontology
Vice President for Professional Affairs
Wesley Woods Center of Emory University
Director, Atlanta VA Rehabilitation
Research & Development Center
Atlanta, Georgia

Itamar B. Abrass, M.D.

Professor and Head, Division of Gerontology and Geriatric Medicine University of Washington Seattle, Washington

McGraw-Hill

HEALTH PROFESSIONS DIVISION

New York St. Louis San Francisco Auckland Bogotá Caracas Lisbon London Mexico City Milan Montreal New Delhi Paris San Juan Singapore Sydney Tokyo Toronto

McGraw-Hill

A Division of The McGraw-Hill Companies

ESSENTIALS OF CLINICAL GERIATRICS

Fourth Edition

Copyright © 1999, 1994, 1989, 1984 by *The McGraw-Hill Companies, Inc.* All rights reserved. Printed in the United States of America. Except as permitted under the United States Copyright Act of 1976, no part of this publication may be reproduced or distributed in any form or by any means, or stored in a data base or retrieval system, without the prior written permission of the publisher.

1234567890 DOCDOC 99

ISBN 0-07-034458-2

This book was set in Times Roman by The PRD Group The editors were Stephen Zollo and Muza Navrozov. The production supervisor was Richard Ruzycka. The cover was designed by José Fonfrias. The index was prepared by Tony Greenberg, M.D. R. R. Donnelley & Sons was printer and binder.

This book is printed on recycled, acid-free paper.

Library of Congress Cataloging-in-Publication Data

Kane, Robert L., date

Essentials of clinical geriatrics / Robert L. Kane, Joseph G. Ouslander, Itamar B. Abrass.—4th ed.

p. cm.

Includes bibliographical references and index.

ISBN 0-07-034458-2

1. Geriatrics. 2. Aging. 3. Aged—Health and hygiene.

I. Ouslander, Joseph G. II. Abrass, Itamar B. III. Title.

[DNLM: 1. Geriatrics. 2. Aging. WT 100 K16e 1999]

RC952.K36 1999

618.97—dc21

DNLM/DLC

for Library of Congress

Essentials of Clinical Geriatrics

NOTICE

Medicine is an ever-changing science. As new research and clinical experience broaden our knowledge, changes in treatment and drug therapy are required. The authors and the publisher of this work have checked with sources believed to be reliable in their efforts to provide information that is complete and generally in accord with the standards accepted at the time of publication. However, in view of the possibility of human error or changes in medical sciences, neither the authors nor the publisher nor any other party who has been involved in the preparation or publication of this work warrants that the information contained herein is in every respect accurate or complete, and they are not responsible for any errors or omissions or for the results obtained from use of such information. Readers are encouraged to confirm the information contained herein with other sources. For example and in particular, readers are advised to check the product information sheet included in the package of each drug they plan to administer to be certain that the information contained in this book is accurate and that changes have not been made in the recommended dose or in the contraindications for administration. This recommendation is of particular importance in connection with new or infrequently used drugs.

PREFACE

The world of geriatrics has changed substantially since we wrote the first edition of this book, but the same goals still pertain. This book is intended to provide an overview and an introduction to the elements of the care of older persons. It is not intended to supplant a textbook in medicine. Rather, it emphasizes those aspects of care that are not usually well addressed in such books. This book is designed to be useful to practitioners at various levels of training. We continue to rely heavily on tables and figures to summarize information. We are proud that many educators have told us that they use these illustrations for their own presentations.

We have reorganized this edition of the book to reflect the changes in emphasis. The material on iatrogenesis has been combined with the expanded and substantially revised work on clinical expectations. Long-term care has been expanded to become health services. The chapter on temperature regulation has been combined with vitality. The chapter on ethical issues has been restored and expanded.

We have updated almost all areas. While there have been notable clinical advances in areas such as osteoporosis, the treatment of dementia and cardiac care, the greatest changes continue to occur in the way services are organized. Managed care has become a significant force on the aging scene. It is not yet clear whether it will achieve

xxvi PREFACE

anything close to its potential to support the establishment of a chronic care approach. Long-term care has diversified. We are beginning to recognize the need for a more fundamental revolution in the way we practice medicine. The dominant model, which has been based on an acute care paradigm, must yield to a new model that responds to the overwhelming prevalence of chronic disease. This transition implies a need to develop models of care that address extended episodes rather than discrete events. We need to think in terms of investments in care that will prevent or delay exacerbations. Management and function gain take precedence over eliminating disease or avoiding death. The medical and social aspects of care must be synergized.

Essentials of Clinical Geriatrics

CONTENTS

List of Tables and Figures Preface		xi xxv
PART ONE	THE AGING PATIENT AND GERIATRIC ASSESSMENT	
1. Clinical Im	plications of the Aging Process	3
Changes A	associated with "Normal" Aging	4
Biological	Aging	7
Clinical Im	•	11
	Geriatric Problems	14
0	versus Functional Status	16
References		17
Suggested	Readings	18
2. The Geria	tric Patient: Demography and Epidemiology	19
Growth in	Numbers	20
Disability		28
Social Sup	port	30

хi

vi CONTENTS

Use of Services Nursing Home Use References	32 36 41
2 Evaluating the Covictuic Potions	43
3. Evaluating the Geriatric Patient	
The History	47
The Physical Examination	52
Laboratory Assessment	57
Functional Assessment Environmental Assessment	59 64
Geriatric Consultation	65
Preoperative Evaluation	69
References	71
Suggested Readings	73
Suggested Readings	13
4. Developing Clinical Expectations	74
Clinical Glidepaths	75
Disease Management	78
Benchmarks	79
Minimum Data Set for Nursing Homes	83
Role of Outcomes in Assuring Quality	
of Long-Term Care	85
Technology for Quality Improvement	90
Prevention	93
Iatrogenesis	107
Terminal Care	116
Summary	117
References	117
Suggested Readings	122
PART TWO DIFFERENTIAL DIAGNOSIS	
AND MANAGEMENT	
5. Confusion	125
Defining Confusion	126

viii CONTENTS

	Complications	258
	Assessing Immobile Patients	260
	Management of Immobility	262
	Exercise	283
	Rehabilitation	283
	References	286
	Suggested Readings	289
10.	Cardiovascular Disorders	292
	Physiologic Changes	292
	Hypertension	294
	Stroke and Transient Ischemic Attacks	301
	Coronary Artery Disease	307
	Valvular Heart Disease	309
	Arrhythmias	312
	Congestive Heart Failure	313
	References	314
	Suggested Readings	317
11.	Decreased Vitality	318
	Endocrine Disease	318
		310
	Anemia	330
	Anemia Nutrition	330 334
	Anemia Nutrition Nutritional Assessment	334
	Nutrition	334 337
	Nutrition Nutritional Assessment	334 337 339
	Nutrition Nutritional Assessment Infections	334 337
	Nutrition Nutritional Assessment Infections Disorders of Temperature Regulation	334 337 339 343
12	Nutrition Nutritional Assessment Infections Disorders of Temperature Regulation References Suggested Readings	334 337 339 343 351 353
12.	Nutrition Nutritional Assessment Infections Disorders of Temperature Regulation References Suggested Readings Sensory Impairment	334 337 339 343 351 353
12.	Nutrition Nutritional Assessment Infections Disorders of Temperature Regulation References Suggested Readings Sensory Impairment Vision	334 337 339 343 351 353 356
12.	Nutrition Nutritional Assessment Infections Disorders of Temperature Regulation References Suggested Readings Sensory Impairment Vision Hearing	334 337 339 343 351 353 356 356 366
12.	Nutrition Nutritional Assessment Infections Disorders of Temperature Regulation References Suggested Readings Sensory Impairment Vision Hearing Taste	334 337 339 343 351 353 356 356 366 373
12.	Nutrition Nutritional Assessment Infections Disorders of Temperature Regulation References Suggested Readings Sensory Impairment Vision Hearing	334 337 339 343 351 353 356 356 366

PART THREE GENERAL MANAGEMENT STRATEGIES

13.	Drug Therapy	37 9
	Nonpharmacologic Factors Influencing Drug Therapy	380
	Adverse Drug Reactions and Interactions	384
	Aging and Pharmacology	390
	Geriatric Prescribing	401
	Geriatric Psychopharmacology	402
	References	409
	Suggested Readings	410
14.	Health Services	412
	Long-Term Care	414
	Public Programs	419
	The Nursing Home	427
	Assisted Living	439
	Home Care	440
	Other Services	445
	Case Management	447
	References	449
	Suggested Readings	451
15.	Nursing Home Care	452
	The Goals of Nursing Home Care	453
	Clinical Aspects of Care for Nursing Home Residents	455
	Process of Care in the Nursing Home	459
	Strategies to Improve Medical Care in Nursing Homes Subacute Care and the Nursing Home–Acute Care	467
	Hospital Interface	478
	Ethical Issues in Nursing Home Care	479
	References	481
	Suggested Readings	482
16.	Ethical Issues in the Care of Older Persons	484
	Autonomy and Beneficence	485

X CONTENTS

Competence and Informed Consent Advance Directives The Physician's Role Special Problems with Nursing Home Residents Special Case of Dementia Policy Issues Summary	486 488 493 494 497 498 500
References	501
Suggested Readings	503
APPENDIX SUGGESTED GERIATRIC MEDICAL FORMS	
Katz Index of Independence in Activities of Daily Living (ADL)	507
Main Components of the Tinetti Fall Risk Scale	509
Reuben's Physical Performance Test	510
Folstein Mini-Mental State Examination: The Geriatric	
Depression Scale	512
Comprehensive Medical History	
and Physical Assessment	513
Dementia Assessment	523
Incontinence	529
Minimum Data Set (MDS)	536
Index	579

LIST OF TABLES AND FIGURES

CHAPTER ONE

Table 1-1 Table 1-2	Changes associated with aging Major theories on aging	6 8
CHAPTER T	WO	
Table 2-1	The elderly population of the United States: Trends 1900–2050	22
Table 2-2	Changes in the commonest causes of death, 1900–1995, all ages and for those over 65	25
Table 2-3	Health services utilization by various age groups	32
Table 2-4	Most common hospital discharges for patients over age 65, 1995	35
Table 2-5	Percent of office visits by selected medical conditions, 1996	37
Table 2-6	Factors affecting the need for nursing home admission	39

6

Figure 2-1	Growth in the U.S. population, age 65 and over	21
Figure 2-2	Changes in the young and elderly support ratio, 1900–2050	24
Figure 2-3	Life expectancy at age 65, 1900–1988	26
Figure 2-4	Life expectancy of older persons, 1984	26
Figure 2-5	Active versus dependent life expectancy,	
	Massachusetts elderly population, 1974	27
Figure 2-6	Top-10 chronic conditions for people 65+,	28
Figure 2-7	Prevalence of ADL and IADL difficulties	
8	among community living older persons, 1985	29
Figure 2-8	Percent of older persons living alone in the	
8	community, 1989	30
Figure 2-9	Caregivers for older persons	31
Figure 2-10	Medicare hospital discharges per 1000	
0	beneficiaries, 1972–1995	33
Figure 2-11	Medicare hospital length of stay, 1972-1995	34
Figure 2-12	Nursing home use by older persons, 1985	38
Figure 2-13	Natural history of patients discharged from	
	nursing homes transfer patterns of nursing	
	home patients	41
CHAPTER T	THREE	
Table 3-1	Examples of randomized controlled trials of	
	geriatric assessment	45
Table 3-2	Potential difficulties in taking	
	geriatric histories	48
Table 3-3	Important aspects of the geriatric history	49
Table 3-4	Common physical findings and their potential	
	significance in geriatrics	52
Table 3-5	Laboratory assessment of geriatric patients	57
Table 3-6	Important concepts for geriatric	
	functional assessment	61
Table 3-7	Purposes and objectives of functional	
	status measures	62.

Table 3-8	Examples of measures of physical functioning	63
Table 3-9	Example of a screening tool to identify	
	potentially remediable geriatric problems	66
Table 3-10	Questions on the Pra instrument for identifying	
	geriatric patients at risk for health service	
	utilization	68
Table 3-11	Suggested format for summarizing the results	
	of a comprehensive geriatric consultation	69
Table 3-12	Key factors in the preoperative evaluation	
	of the geriatric patient	70
Figure 3-1	Components of assessment of older patients	44
CHAPTER I	FOUR	
Table 4-1	Example of benchmark instructions:	
	Hip fracture	81
Table 4-2	Outcomes measurement issues	88
Table 4-3	Preventive strategies for older persons	94
Table 4-4	Summary of preventive recommendations	
	for older adults	97
Table 4-5	Geriatric health maintenance items	
	worth including in a routine	
	screening program	99
Table 4-6	Types of exercise	102
Table 4-7	Common iatrogenic problems	
	of older persons	109
Table 4-8	The hazards of hospitalization	110
Table 4-9	Risk factors for iatrogenic hospital events	113
Table 4-10	Risk factors for functional decline	
	in elderly hospitalized patients	112
Table 4-11	Potential complications of bed rest	
	in older persons	113
Figure 4-1	Clinical glidepath models	7
Figure 4-2	Hypothetical example of benchmark chart	82
Figure 4-3	Personal health habits of people aged 65	
	and over, 1995	10
Figure 4-4	Narrowing of the therapeutic window	10