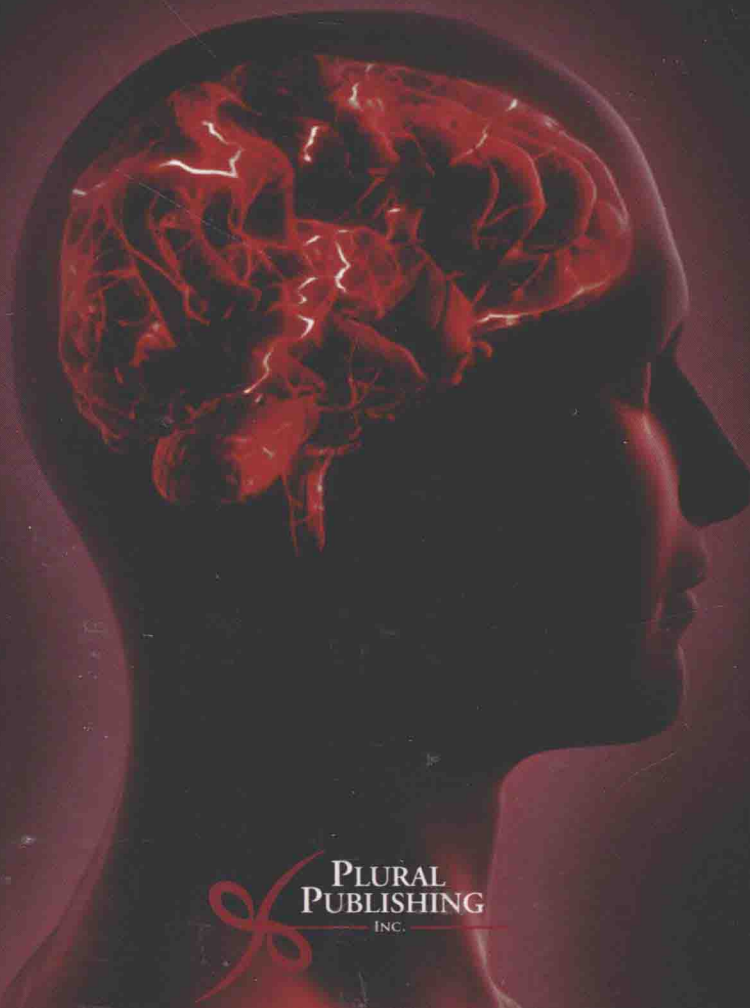


ACQUIRED LANGUAGE DISORDERS

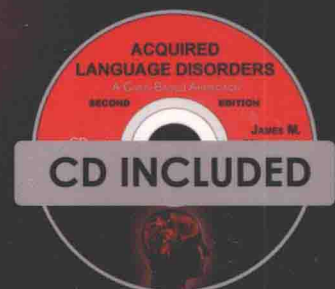
A CASE-BASED APPROACH

SECOND EDITION

JAMES M. MANCINELLI
EVELYN R. KLEIN



 **PLURAL
PUBLISHING**
INC.

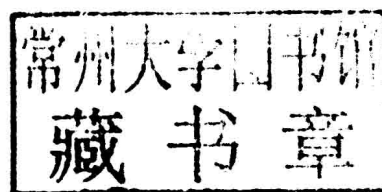


Acquired Language Disorders

A CASE-BASED APPROACH

Second Edition

James M. Mancinelli, MS, CCC-SLP
Evelyn R. Klein, PhD, CCC-SLP, BCS-CL





5521 Ruffin Road
San Diego, CA 92123

e-mail: info@pluralpublishing.com
Website: <http://www.pluralpublishing.com>



Copyright © by Plural Publishing, Inc. 2014

Typeset in 10½/13 Garamond Book by Flanagan's Publishing Services, Inc.
Printed in the United States of America by McNaughton & Gunn, Inc.

All rights, including that of translation, reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, recording, or otherwise, including photocopying, recording, taping, Web distribution, or information storage and retrieval systems without the prior written consent of the publisher.

For permission to use material from this text, contact us by
Telephone: (866) 758-7251
Fax: (888) 758-7255
e-mail: permissions@pluralpublishing.com

Every attempt has been made to contact the copyright holders for material originally printed in another source. If any have been inadvertently overlooked, the publishers will gladly make the necessary arrangements at the first opportunity.

Library of Congress Cataloging-in-Publication Data

Klein, Evelyn R., author.

Acquired language disorders : a case-based approach / James M. Mancinelli, Evelyn R. Klein.—Second edition.

p. ; cm.

Author's names reversed on the first edition.

Includes bibliographical references and index.

ISBN-13: 978-1-59756-571-4 (alk. paper)

ISBN-10: 1-59756-571-7 (alk. paper)

I. Mancinelli, James M., author. II. Title.

[DNLM: 1. Language Disorders—diagnosis—Problems and Exercises. 2. Aphasia—diagnosis—Problems and Exercises. 3. Aphasia—therapy—Problems and Exercises. 4. Language Disorders—therapy—Problems and Exercises. 5. Language Therapy—Problems and Exercises. WL 18.2]

RC423

616.85'5—dc23

2013035349

Acquired Language Disorders
A CASE-BASED APPROACH

Second Edition

Preface

Introduction

New and experienced clinicians may find it challenging when attempting to integrate theoretical knowledge and research into clinical practice. As professors teaching the graduate courses in acquired language disorders and clinical practicum, we realize that it isn't until the clinician actually encounters a person with a specific disorder that academic knowledge and practice coincide. Given our years of experience as both teachers and practitioners, it is our intention to bridge the gap between theory and practice by providing the reader with a case-based approach to understanding acquired language disorders (ALD). To further our goal in making ALD come to life for the reader, we have developed a model that depicts the individual's language and cognition following a cerebrovascular accident or other neurologic event. We refer to this as the Acquired Language Disorders Target Model, and each of the 14 cases that we discuss has a corresponding diagram within the chapter.

In our experience as professors at the graduate level, the student benefits from the graphic features of the ALD Target Model because it facilitates a concrete understanding of the linguistic and cognitive characteristics of each case. This model combined with features of the various disorders, case analyses, and treatment considerations connects theoretical knowledge with practical application. In our opinion, this case-based approach matches the needs of speech-language pathologists practicing in health care today.

How the Book Is Organized

Each chapter includes a fictional person based upon an actual case that was treated in a health care setting, private practice, or home health environment

to exemplify a specific acquired language disorder. These case scenarios were developed based on actual patients who the authors or their colleagues have evaluated and treated. This brings to life each communication impairment for the learner, who can better conceptualize the specific characteristics of the disorder in the context of a real person. For purposes of anonymity and confidentiality, the patients' names and identifying information have been changed.

As practicing speech-language pathologists, we believe it is essential to understand not only the basic pathophysiology of a disease process associated with an acquired language disorder, but also the functional effects it may have on a person's life. The fundamentals presented here allow the reader to participate in discussions with other professionals and family members. The student or practitioner can then use this information to build a foundation for assessment and therapeutic approaches, which are found in Appendix D.

Special Features

The 14 cases in this book provide a comprehensive overview of the assessment process, major aphasic syndromes, right hemisphere disorder, traumatic brain injury, dementia, encephalopathy, and other etiologies affecting the ability to communicate. The final chapter provides detailed information about past, present, and future considerations in treating individuals with ALD. We discuss therapeutic approaches currently in use and include new trends in treatment.

Each chapter is based on a case study and includes eight sections:

- **Characteristics** of the disorder including neurologic correlates.
 - **Case Scenario** providing a brief overview of the case history.
-

- **Diagnostic Profile** including language expression, speech production, auditory comprehension, reading, written expression, cognition, and behavioral symptoms of the case.
- The **ALD Target Model** presents a visual representation that captures the type and degree of language impairment as well as any areas of cognition that may be affected.
- **Functional Analysis** consists of a narrative that succinctly summarizes the case and helps the clinician understand the impact of the disability on daily life.
- **Critical Thinking/Learning Activity** poses questions designed to help the student or clinician develop problem-solving and practical skills necessary to maximize the patient's progress.
- **Treatment Considerations** provide areas to consider for rehabilitation based on the patient's strengths and weaknesses, individualized to his/her psychosocial context. General therapeutic objectives are also provided.
- **Therapeutic Options** include possible treatment considerations pertinent to the case, most of which are further described in Appendix D.

The Acquired Language Disorders Target Model

We developed the Acquired Language Disorders Target Model™ (ALD Target Model™) from an *embedded language framework*. This model is shown in Figure 1 and reflects the influence that cognition plays in normal communication and, by extension, in the rehabilitation of people with acquired language disorders. The physical appearance of the model depicts a schematic relationship between language and cognition as well as the relationship among functional language modalities.

There are five primary domains of the ALD Target Model: Language, Attention, Memory, Executive Functions, and Visual Spatial skills. The Language domain includes four areas: expression, comprehension, reading, and writing. Expression (E) and com-

Normal Communication Embedded within Normal Cognitive Functions

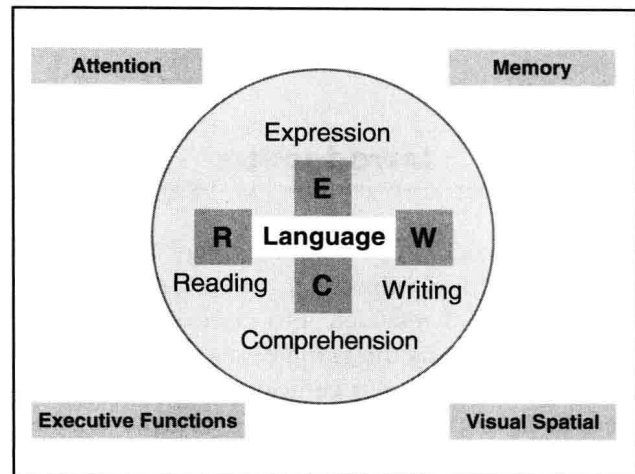


Figure 1. The Acquired Language Disorders Target Model.

prehension (C) involve the verbal modality; whereas reading (R) and writing (W) involve the visual modality. Although as speech-language pathologists we are clinically oriented to the Language domain, we must not neglect the other four cognitive areas of functioning because they are integral to functional communication.

For an individual who has normal communicative functions, the lettered squares (E, C, R, and W) remain attached to the rectangle containing the word *Language*. For an individual with an acquired language disorder, the lettered squares move further away from the Language rectangle to reflect greater impairment. For each type of acquired language disorder, the pattern is different. For example, in a person with an expressive nonfluent aphasia (Broca's), the E square and the W square are placed outside the circular border to indicate a severe degree of impairment. Depending on the acquired language disorder, any or all of these language modalities may be impaired at varying degrees. This ranges from normal, to mild-moderate, to moderate-severe, to severe-profound. Impairment level is depicted in Figure 2.

The ALD Target Model reflects our agreement with Helm-Estabrooks and Albert (2004): assessing the cognitive domains of attention, memory, visuo-

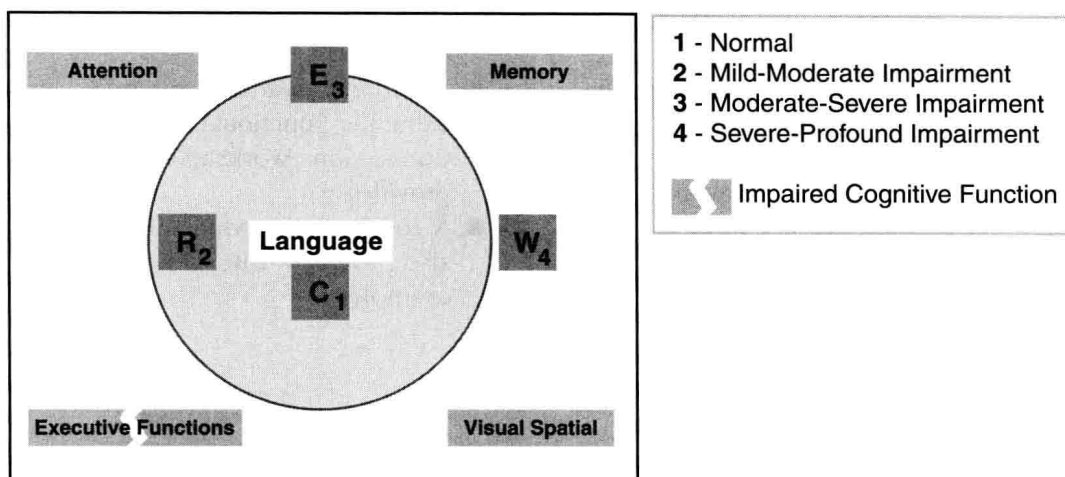


Figure 2. The key to understanding the Acquired Language Disorders Target Model.

spatial skills, and executive functions in aphasia should be a component of the standard evaluation for treatment planning. The reader will notice a fractured line through any of the four cognitive domains that are impaired in each specific case presented. For example, in an individual with a severely impaired memory, the box labeled *Memory* has a fractured line going through the word.

How to Use This Book

For the Student and the Practitioner

- A graphic image of the ALD Target Model representing each disorder enhances the student's or practitioner's understanding of cognitive-linguistic changes pertinent to that specific case.
- The value of the case-based approach to ALD is that it facilitates comparisons among types of patients. This optimizes more accurate decision-making for planning treatment. As a learning tool, this approach helps the student or practitioner attach clinical information to a case that is represented with a physical image.
- The ALD Target Model combined with the Functional Analysis can be very useful for

clinical practice in a health care setting. This permits the student or practitioner to integrate the neurologic, cognitive, linguistic, and functional aspects of each patient to formulate a holistic picture for treatment.

- PowerPoint slides supporting lectures are provided for the topical chapters in the book.
- Critical thinking questions are provided for each case to facilitate clinical decision-making skills, and Appendix G provides a case-based exam to "test your knowledge."
- Many current treatment approaches (23) are provided to assist the practitioner in planning a program for each patient.
- Each case has a one-page diagnostic profile that describes each patient's language expression, speech, auditory comprehension, reading, written expression, cognition, and behavioral symptoms.

For the Instructor

- An overview of basic neuroanatomy for acquired language disorders is provided.
- This book offers a detailed summary of many formal and informal assessments

and treatment programs for those with ALD.

- There are 14 case-based acquired language disorders, each with assessment and treatment considerations, to facilitate class discussion and clinical problem solving.
- There is a section on past, present, and future considerations with a historical overview of efficacy and evidence in treating those with ALD.
- PowerPoint slides correspond to the text and offer important lecture material, diagrams, illustrations, and online links for teaching.
- Charts, tables, and figures including the ALD Target Model help categorize and

concretize the various acquired language disorders.

- Functional treatment can be easily planned using the Functional Communication Connections Worksheet with samples provided.
- A Test Your Knowledge examination is also provided using seven case-based examples.

Reference

Helm-Estabrooks, N., & Albert, M. L. (2004). *Manual of aphasia and aphasia therapy* (2nd ed.). Austin, TX: Pro-Ed.

Acknowledgments

We were delighted when Plural Publishing asked us to prepare the second edition of *Acquired Language Disorders: A Case-Based Approach*. As a professor and a director of clinical education, we have many responsibilities, but writing a book for students and clinicians to benefit their patients is a high priority. We couldn't have completed this task without the support of our Speech-Language-Hearing Science Program Director, Barbara Amster, PhD, CCC-SLP, and our Dean of the School of Nursing and Health Sciences, Brian Goldstein, PhD, CCC-SLP. They provided steadfast support and are remarkable colleagues. We are also grateful for the guidance and input we received at Plural Publishing from our Executive Editor, Valerie Johns, our Project Editor, Milgem Rabanera, and our Production Editor, Megan Carter, with whom we consulted on a regular basis. We are honored they saw the repeated value in this text to produce a second edition.

Jim Mancinelli would like to thank his colleague and coauthor, Evelyn Klein for participating in this second edition. She is a generous individual with a calming spirit and fine intellect. It was an honor and a pleasure to work with her on this book. Of course, my love and gratitude goes out to SB, who listens and comforts at just the right times.

Evelyn Klein would like to thank her colleague and coauthor, James Mancinelli, for taking the lead on the second edition of this text. His ideas in the formation of this text continue to make it valuable to the profession. Working with Jim on this edition was a pleasure, and I am very grateful that he signed on for the second edition. A special thank you also goes to DF for always being there and providing daily support.

*Jim Mancinelli dedicates this book to his partner
Dave—for all the things you are.*

*Evelyn Klein dedicates this book to her husband
Dietrich—for his constant support and gentle spirit.*

Contents

<i>Preface</i>	<i>xiii</i>
<i>Acknowledgments</i>	<i>xvii</i>
Chapter 1. An Overview of Neuroanatomy and Neurophysiology Related to Acquired Language Disorders (ALD)	1
The Neuron	1
Neurotransmitters	2
The Brain: A Brief Review of Structure and Function	3
The Coverings of the Brain, Ventricles, and Cerebrospinal Fluid	4
Cerebral Cortex	6
The Brainstem	10
Subcortical Structures	11
The Cerebellum	12
Neural Pathways	13
Cerebral Blood Flow	15
Cerebrovascular Accidents	16
Brain Imaging and Selected Medical Tests for Acquired Language Disorders	19
CAT Scan or CT Scan	19
MRI	19
fMRI	20
PET Scan	20
SPECT Scan	20
ASL	20
Examination of the Carotids: Doppler Ultrasound or Auscultation of the Carotids	20
Endocardiography	20
Angiography	21
References	21
Chapter 2. Elements of Assessment in Acquired Language Disorders	23
Assessment	23
Areas of Language Function	24
Characteristics of Major Aphasic Syndromes	25
Definitions of the Clinical Characteristics of the Major Aphasic Syndromes	26
Extralinguistic and Paralinguistic Considerations in Assessment	28
Types of Assessment	28
Functional Assessment	28
Bedside Assessment	30
Cognition, Aphasia, and the ALD Target Model™	30
The Target Model and Cognitive Assessment in Acquired Language Disorders	32

Modifications to Standard Approaches to Assessment	35
Conversational Analysis as a Component to the Evaluation of People with Aphasia	36
Use of Standardized Tests for Individuals with Cognitive-Communication Disorders	37
Commonly Used Assessments for Acquired Language Disorders:	37
Arizona Battery for Communication Disorders of Dementia	38
Addenbrooke's Cognitive Examination	38
Assessment of Language-Related Functional Activities	39
Mini Mental State Exam	39
Global Deterioration Scale	39
Boston Diagnostic Aphasia Examination-3	40
Burns Brief Inventory of Communication and Cognition	40
Cognitive Linguistic Evaluation	41
Cognitive Linguistic Quick Test	42
Coma Recovery Scale-Revised	42
Comprehensive Aphasia Test	43
Communication Activities of Daily Living, Second Edition	43
The Kentucky Aphasia Test	44
Psycholinguistic Assessments of Language Processing in Aphasia	44
Reading Comprehension Battery for Aphasia	45
Ross Information Processing Assessment-2	45
The Scales of Cognitive and Communicative Ability for Neurorehabilitation	45
Scales of Cognitive Ability for Traumatic Brain Injury	46
Western Aphasia Battery-Revised	47
Selected Assessments for Aphasia by Category	47
Comprehensive Language Batteries	47
Functional Tests of Communication	47
Tests Based on a Cognitive Neuropsychological Model	47
Tests Examining Specific Areas of Language Performance	48
Screening Tests of Aphasia	48
Treatment and Goal Setting	48
Documentation of Progress	48
Service Delivery to People with Acquired Language Disorders	49
The Acute Care Setting	50
The Rehabilitation Setting	50
The Home Care Setting	51
The Outpatient Setting	53
The Long-Term Care Setting	54
Summary	56
References	56
Appendix 2-A. Quick Reference Diagnostic Chart for Acquired Language Disorders	59
Appendix 2-B. Functional Communication Connections	68

Chapter 3. The Major Nonfluent Aphasias	69
Introduction	69

Broca's Type Aphasia	71
Characteristics	71
A Functional Analysis of Maurice	73
Critical Thinking/Learning Activity	76
Treatment Considerations	76
Some Therapeutic Options	76
Transcortical Motor Aphasia	77
Characteristics	77
A Functional Analysis of Vincent	79
Critical Thinking/Learning Activity	79
Treatment Considerations	81
Some Therapeutic Options	82
Global Aphasia	82
Characteristics	82
A Functional Case Analysis for Elizabeth	84
Critical Thinking/Learning Activity	86
Treatment Considerations	87
Some Therapeutic Options	87
References	88
Chapter 4. The Fluent Aphasias	91
Introduction	91
Wernicke's Type Aphasia	93
Characteristics	93
A Functional Analysis of Mildred's Wernicke's Aphasia	95
Critical Thinking/Learning Activity	95
Treatment Considerations	97
Some Therapeutic Options	98
Transcortical Sensory Aphasia	98
Characteristics	98
A Functional Analysis of John's TSA	100
Critical Thinking/Learning Activity	100
Treatment Considerations	102
Some Therapeutic Options	102
Conduction Aphasia	103
Characteristics	103
A Functional Analysis of Miriam's Aphasia	104
Critical Thinking/Learning Activity	104
Treatment Considerations	106
Some Therapeutic Options	107
Anomic Aphasia	107
Characteristics	107
A Functional Analysis of Sophie's Aphasia	108
Critical Thinking/Learning Activity	110

Treatment Considerations	111
Some Therapeutic Options	111
References	112
Chapter 5. Other Aphasic Syndromes	115
Subcortical Aphasia	115
Introduction	115
Characteristics of the Subcortical Aphasias	116
A Functional Analysis of Winnie's Subcortical Aphasia	121
Critical Thinking/Learning Activity	123
Treatment Considerations	123
Some Therapeutic Options	124
Primary Progressive Aphasia	125
Introduction	125
Characteristics	125
A Functional Analysis of Luis's Primary Progressive Aphasia	126
Critical Thinking/Learning Activity	128
Treatment Considerations	129
Some Therapeutic Options	129
Acquired Alexia and Agraphia	130
Characteristics	130
Alexia	130
Agraphia	131
A Functional Analysis of Sue's Alexia	134
Critical Thinking/Learning Activity	136
Treatment Considerations	136
Some Therapeutic Options	137
References	137
Chapter 6. Right Hemisphere Disorder	142
Introduction	142
Characteristics	142
Communication Deficits	142
RHD and Pragmatic Impairment	142
Visual-Perceptual Deficits	143
Visuomotor Deficits	143
Auditory Perceptual Deficits	144
Cognitive Deficits	144
A Functional Analysis of Debra	145
Critical Thinking/Learning Activity	148
Treatment Considerations	148
Some Therapeutic Options	149
References	149
