

Maximize Your Rotations

**ASHP's Student
Guide to
IPPEs, APPEs,
and
Beyond**

Mate M. Soric

American Society of Health-System Pharmacists®
Bethesda, Maryland

Any correspondence regarding this publication should be sent to the publisher, American Society of Health-System Pharmacists, 7272 Wisconsin Avenue, Bethesda, MD 20814, attention: Special Publishing.

The information presented herein reflects the opinions of the contributors and advisors. It should not be interpreted as an official policy of ASHP or as an endorsement of any product.

Because of ongoing research and improvements in technology, the information and its applications contained in this text are constantly evolving and are subject to the professional judgment and interpretation of the practitioner due to the uniqueness of a clinical situation. The editors, contributors, and ASHP have made reasonable efforts to ensure the accuracy and appropriateness of the information presented in this document. However, any user of this information is advised that the editors, contributors, advisors, and ASHP are not responsible for the continued currency of the information, for any errors or omissions, and/or for any consequences arising from the use of the information in the document in any and all practice settings. Any reader of this document is cautioned that ASHP makes no representation, guarantee, or warranty, express or implied, as to the accuracy and appropriateness of the information contained in this document and specifically disclaims any liability to any party for the accuracy and/or completeness of the material or for any damages arising out of the use or non-use of any of the information contained in this document.

Director, Special Publishing: Jack Bruggeman

Acquisitions Editor: Robin Coleman

Editorial Project Manager: Ruth Bloom

Production Editor: Johnna Hershey

Design: David Wade

Library of Congress Cataloging-in-Publication Data

Maximize your rotations : ASHP's guide to IPPEs, APPEs, and beyond / editor, Mate M. Soric.
p.; cm.

ASHP's guide to IPPEs, APPEs, and beyond
Includes bibliographical references and index.

ISBN 978-1-58528-354-5

I. Soric, Mate M. II. American Society of Health-System Pharmacists. III. Title: ASHP's guide to IPPEs, APPEs, and beyond.

[DNLM: 1. Education, Pharmacy. 2. Pharmacists. 3. Professional Competence. QV 18]

615.1071--dc23

2012046173

©2013, American Society of Health-System Pharmacists, Inc. All rights reserved.

No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, microfilming, and recording, or by any information storage and retrieval system, without written permission from the American Society of Health-System Pharmacists.

ASHP is a service mark of the American Society of Health-System Pharmacists, Inc.; registered in the U.S. Patent and Trademark Office.

ISBN 978-1-58528-354-5

DEDICATION

First, to my wife and family for supporting me through the many nights and weekends of writing and editing.

Second, to my students for keeping me on my toes.

Lastly, to all of my preceptors for putting up with me when I was a student.

TABLE OF CONTENTS

PREFACE	VI
---------------	----

CONTRIBUTORS.....	VII
-------------------	-----

PART I: THE ESSENTIALS

<i>Chapter 1: Professionalism</i>	<i>3</i>
<i>S. Scott Wisneski, PharmD, MBA, and Mate M. Soric, PharmD, BCPS</i>	

<i>Chapter 2: Medical Terminology and Abbreviations.....</i>	<i>19</i>
<i>Katherine M. Cochran, PharmD, and Brandon Mottice, PharmD</i>	

<i>Chapter 3: Biostatistics.....</i>	<i>43</i>
<i>Lawrence A. Frazee, PharmD, BCPS, and Mate M. Soric, PharmD, BCPS</i>	

<i>Chapter 4: Evaluation of Medical Literature and Journal Clubs</i>	<i>59</i>
<i>Lindsay Davison, PharmD, and Jean Cunningham, PharmD, BCPS</i>	

<i>Chapter 5: Drug Information Questions.....</i>	<i>75</i>
<i>Robert D. Beckett, PharmD, BCPS</i>	

<i>Chapter 6: Formal and Informal Case Presentations</i>	<i>97</i>
<i>Laura A. Perry, PharmD, BCPS</i>	

PART II: THE PARTICULARS

<i>Chapter 7: Introductory Pharmacy Practice Experiences</i>	<i>111</i>
<i>Lori Ernsthause, PharmD, BCPS</i>	

<i>Chapter 8: Internal Medicine and Other Clinical Rotations.....</i>	<i>117</i>
<i>Mate M. Soric, PharmD, BCPS</i>	

<i>Chapter 9: Hospital or Health-System Pharmacy.....</i>	<i>143</i>
<i>Dale E. English II, PharmD, FASHP, and John E. Murphy, PharmD, FCCP, FASHP</i>	

<i>Chapter 10: Community Pharmacy</i>	<i>159</i>
<i>Daniel Krinsky, MS, RPh, and Stacey Schneider, PharmD</i>	

<i>Chapter 11: Management and Leadership Rotations</i>	179
<i>Jason Glowczewski, PharmD, MBA</i>	
<i>Chapter 12: Academia</i>	191
<i>Susan P. Bruce, PharmD, BCPS; Dale E. English II, PharmD, FASHP;</i> <i>Janis J. MacKichan, PharmD, FAPhA; and Timothy R. Ulbrich, PharmD</i>	
<i>Chapter 13: Ambulatory Care</i>	209
<i>Megan Kaun, PharmD, BCPS, BCACP, and Michelle Serres, PharmD, BC-ADM, BCACP</i>	
<i>Chapter 14: Geriatrics</i>	223
<i>Carla Bouwmeester, MS, PharmD, BCPS, and Michael R. Brodeur, PharmD, CGP, FASCP</i>	
 PART III: LIFE AFTER ROTATIONS	
<i>Chapter 15: Starting Your Career</i>	245
<i>Timothy R. Ulbrich, PharmD</i>	
<i>Chapter 16: Staying Informed</i>	259
<i>Steven R. Smith, MS, RPh, BCACP</i>	
<i>Chapter 17: Giving Back: Becoming a Preceptor</i>	267
<i>Mate M. Soric, PharmD, BCPS</i>	
 INDEX	 277

PREFACE

After countless hours dedicated to lectures, study sessions, and exams, it is finally time to put your skills to the test in the real world. Regardless of the number of simulated patient experiences or multiple-choice questions you have successfully completed, no classroom activity can be a substitute for the hands-on training that the introductory and advanced pharmacy practice experiences (IPPEs and APPEs) can provide. Your rotations will likely be one of the first times you can use what you have learned in pharmacy school to make a significant impact on your patient's health. Often, this transition comes with some degree of difficulty. You will be required to make the leap from hypothetical situations and abstract concepts to addressing real drug-related problems in situations much more complex than anything you can find in a textbook.

Although rotations are vital to the development of the skills needed to practice pharmacy, there is little guidance available to pharmacy students to describe the best way to prepare, let alone how to make the most of these crucial experiences. The purpose of this text is to give pharmacy students a place to turn for all things experiential. It provides you with a glimpse of the general expectations and typical activities of your rotations before they begin, allowing for better preparation and performance. Part I, *The Essentials*, covers the broad skills needed to succeed on any type of rotation such as professionalism, literature evaluation, and case presentation skills. Part II, *The Particulars*, delves into the unique skills required to excel in each major type of rotation and is organized by rotation type. Part III, *Life After Rotations*, deals with the transition from student to pharmacist, with a focus on lifelong learning, getting your first job, and becoming a preceptor yourself.

To ensure that you are getting the best resource possible, an incredible team of pharmacy preceptors from across the country has come together to lend their expertise to the creation of this book. They have included cases that illustrate the common pitfalls that pharmacy students encounter, quotes from students and preceptors that provide first-hand perspectives, and the essential information that will get you the best results from your rotations.

In addition to all of these excellent pharmacy role models, I would like to thank Robin Coleman, Ruth Bloom, Johnna Hershey, and all of the other members of the American Society of Health-System Pharmacists publishing team that provided invaluable guidance as we created this resource for pharmacy students. We all hope that you use the material we have provided to maximize your rotations and start your career off on the right foot.

CONTRIBUTORS

ROBERT D. BECKETT, PHARM D, BCPS

Clinical Assistant Professor
Drug Information Specialist
Manchester University
Fort Wayne, Indiana

CARLA BOUWMEESTER, MS, PHARM D, BCPS

Assistant Clinical Professor
Bouvé College of Health Sciences
and
Geriatric Clinical Pharmacist
Northeastern University
Boston, Massachusetts

MICHAEL R. BRODEUR, PHARM D, CGP, FASCP

Associate Professor
Albany College of Pharmacy and Health Sciences
Albany, New York

SUSAN P. BRUCE, PHARM D, BCPS

Chair and Associate Professor
Northeast Ohio Medical University
Rootstown, Ohio

KATHERINE M. COCHRAN, PHARM D

Assistant Director of Experiential Education
University of Findlay
Findlay, Ohio

JEAN CUNNINGHAM, PHARM D, BCPS

Clinical Content Specialist
Truven Health Analytics
Findlay, Ohio

LINDSAY DAVISON, PHARM D

Consumer Safety Officer
Division of Drug Information
Center for Drug Evaluation and Research
Food and Drug Administration
Silver Spring, Maryland

DALE E. ENGLISH II, PHARM D, FASHP

Director, Instructional Labs and Professional
Relations
Associate Professor of Pharmacy Practice
Associate Professor of Pharmaceutical Sciences
Northeast Ohio Medical University
Rootstown, Ohio

LORI ERNSTHAUSEN, PHARM D, BCPS

Assistant Professor
University of Findlay
Findlay, Ohio

LAWRENCE A. FRAZEE, PHARM D, BCPS

Pharmacotherapy Specialist
Akron General Medical Center
Akron, Ohio

JASON GLOWCZEWSKI, PHARM D, MBA

Manager, Pharmacy and Oncology Services
University Hospitals Geauga Medical Center
Chardon, Ohio

MEGAN KAUN, PHARM D, BCPS, BCACP

Director of Experiential Education
University of Toledo
Toledo, Ohio

DANIEL KRINSKY, MS, RPH

Associate Professor of Pharmacy Practice
Northeast Ohio Medical University
Rootstown, Ohio

JANIS J. MACKICHAN, PHARM D, FAPHA

Vice Chair and Professor
Northeast Ohio Medical University
Rootstown, Ohio

BRANDON MOTTICE, PHARM D

Clinical Specialist and PGY₁ Residency Coordinator
Medina Hospital
Medina, Ohio

JOHN E. MURPHY, PHARM.D, FCCP, FASHP
Professor and Associate Dean
University of Arizona College of Pharmacy
Tucson, Arizona

LAURA A. PERRY, PHARM.D, BCPS
Assistant Professor of Pharmacy Practice
University of Findlay
Findlay, Ohio

STACEY SCHNEIDER, PHARM.D
Assistant Professor
Northeast Ohio Medical University
Rootstown, Ohio

**MICHELLE SERRES, PHARM.D, BC-ADM,
BCACP**
Clinical Assistant Professor
University of Toledo
Toledo, Ohio

STEVEN R. SMITH, MS, RPH, BCACP
Clinical Pharmacist, Family Medicine
Toledo Hospital Family Medicine Residency
Toledo, Ohio

MATE M. SORIC, PHARM.D, BCPS
Clinical Pharmacist
University Hospitals Geauga Medical Center
Chardon, Ohio
and
Assistant Professor
Northeast Ohio Medical University
Rootstown, Ohio

TIMOTHY R. ULBRICH, PHARM.D
Director of Pharmacy Resident Education
Assistant Professor of Pharmacy Practice
Northeast Ohio Medical University
Rootstown, Ohio

S. SCOTT WISNESKI, PHARM.D, MBA
Director of Experiential Education
Northeast Ohio Medical University
Rootstown, Ohio