

# 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

*Chapter 1: Professionalism* ..... 3  
*S. Scott Wisneski, PharmD, MBA, and Mate M. Soric, PharmD, BCPS*

*Chapter 2: Medical Terminology and Abbreviations*..... 19  
*Katherine M. Cochran, PharmD, and Brandon Mottice, PharmD*

*Chapter 3: Biostatistics*.....43  
*Lawrence A. Frazee, PharmD, BCPS, and Mate M. Soric, PharmD, BCPS*

*Chapter 4: Evaluation of Medical Literature and Journal Clubs* ..... 59  
*Lindsay Davison, PharmD, and Jean Cunningham, PharmD, BCPS*

*Chapter 5: Drug Information Questions*.....75  
*Robert D. Beckett, PharmD, BCPS*

*Chapter 6: Formal and Informal Case Presentations* .....97  
*Laura A. Perry, PharmD, BCPS*

## PART II: THE PARTICULARS

*Chapter 7: Introductory Pharmacy Practice Experiences* ..... 111  
*Lori Ernsthause, PharmD, BCPS*

*Chapter 8: Internal Medicine and Other Clinical Rotations*..... 117  
*Mate M. Soric, PharmD, BCPS*

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

*Chapter 10: Community Pharmacy* .....159  
*Daniel Krinsky, MS, RPh, and Stacey Schneider, PharmD*

|   |         |
|---|---------|
| <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><br><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>  |         |
| <br><b>PART III: LIFE AFTER ROTATIONS</b>   |         |
| <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>  |         |
| <br><b>INDEX</b> .....  | <br>277 |

## PREFACE

**A**fter 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 PGY<sub>1</sub> 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