

Cambridge University Press & Assessment

978-1-009-01126-6 — ROBuST: RCOG Assisted Birth Simulation Training

2nd Edition

Edited by George Attilakos , Sharon Jordan , Michele Mohajer , Glen Mola , Stephen O'Brien , Dimitrios Siassakos

Frontmatter

[More Information](#)



**ROBuST**  
**RCOG Assisted Birth Simulation Training**

'A solution to the challenge of reducing maternal and neonatal morbidity and mortality during childbirth is to perfect the art of assisted birth by simulation training. ROBuST addresses this much-needed knowledge in this arena. This well-written book with clear illustrations, tables and clinical pathways is by a team of globally recognised experts who perform, train and research in assisted births and have done so for decades. This is an excellent contribution and must be read and used to provide safe and respectful maternity care.'

Sir Sabaratnam Arulkumaran, PhD DSc FRCS FRCOG  
Professor Emeritus of O&G, St George's University of London  
Past President RCOG, BMA and FIGO

# ROBuST

---

## RCOG Assisted Birth Simulation Training

### Course Manual

**Second Edition**

Edited by

George Attilakos

*University College London Hospitals NHS Foundation Trust*

Sharon Jordan

*Southmead Hospital, North Bristol NHS Trust*

Michele Mohajer

*Shropshire Women & Children's Centre and the Royal Shrewsbury Hospital,  
Shrewsbury and Telford Hospital NHS Trust*

Glen Mola

*School of Medicine and Health Sciences, University of Papua New Guinea*

Stephen O'Brien

*Southmead Hospital, North Bristol NHS Trust*

Dimitrios Siassakos

*University College London Hospitals NHS Foundation Trust*



CAMBRIDGE  
UNIVERSITY PRESS

Cambridge University Press & Assessment

978-1-009-01126-6 — ROBUST: RCOG Assisted Birth Simulation Training

2nd Edition

Edited by George Attilakos , Sharon Jordan , Michele Mohajer , Glen Mola , Stephen O'Brien , Dimitrios Siassakos

Frontmatter

[More Information](#)



Shaftesbury Road, Cambridge CB2 8EA, United Kingdom

One Liberty Plaza, 20th Floor, New York, NY 10006, USA

477 Williamstown Road, Port Melbourne, VIC 3207, Australia

314–321, 3rd Floor, Plot 3, Splendor Forum, Jasola District Centre,  
New Delhi – 110025, India

103 Penang Road, #05–06/07, Visioncrest Commercial, Singapore 238467

Cambridge University Press is part of Cambridge University Press & Assessment,  
a department of the University of Cambridge.

We share the University's mission to contribute to society through the pursuit of  
education, learning and research at the highest international levels of excellence.

[www.cambridge.org](http://www.cambridge.org)

Information on this title: [www.cambridge.org/9781009011266](http://www.cambridge.org/9781009011266)

DOI: 10.1017/9781009019446

© Cambridge University Press & Assessment 2014, 2024

This publication is in copyright. Subject to statutory exception and to the provisions  
of relevant collective licensing agreements, no reproduction of any part may take  
place without the written permission of Cambridge University Press & Assessment.

First published 2014

Second edition 2024

Printed in the United Kingdom by CPI Group Ltd, Croydon CR0 4YY

*A catalogue record for this publication is available from the British Library*

*A Cataloging-in-Publication data record for this book is available from the Library of Congress*

ISBN 978-1-009-01126-6 Paperback

Cambridge University Press & Assessment has no responsibility for the persistence  
or accuracy of URLs for external or third-party internet websites referred to in this  
publication and does not guarantee that any content on such websites is, or will remain,  
accurate or appropriate.

.....  
Every effort has been made in preparing this book to provide accurate and up-to-date information that is in accord with  
accepted standards and practice at the time of publication. Although case histories are drawn from actual cases, every  
effort has been made to disguise the identities of the individuals involved. Nevertheless, the authors, editors, and  
publishers can make no warranties that the information contained herein is totally free from error, not least because  
clinical standards are constantly changing through research and regulation. The authors, editors, and publishers  
therefore disclaim all liability for direct or consequential damages resulting from the use of material contained in this  
book. Readers are strongly advised to pay careful attention to information provided by the manufacturer of any drugs or  
equipment that they plan to use.

# Contents

---

List of Contributors	vi
Preface	ix
Acknowledgements	x
List of Abbreviations	xi
1 Trends in Assisted Vaginal Birth and Future Practice <i>Stephen O'Brien, George Attilakos, Kim Hinshaw and Dimitrios Siassakos</i>	1
2 Indications and Assessment for Assisted Vaginal Birth <i>Deirdre Murphy and Meenakshi Ramphul</i>	10
3 Non-technical Skills <i>Rachna Bahl and Bryony Strachan</i>	24
4 Vacuum-Assisted Birth <i>Glen L Mola, Stephen O'Brien and Aldo Vacca</i>	39
5 Non-Rotational forceps and Manual Rotation <i>Kim Hinshaw and Shilpa Mahadasu</i>	58
6 Rotational Forceps <i>Karl SJ Oláh</i>	84
7 Caesarean Section at Full Cervical Dilatation <i>Patrick O'Brien and Sadia Bhatti</i>	98
8 Medico-Legal Aspects of Assisted Vaginal Birth (AVB) <i>Milena Petrovic, Dimitrios Siassakos and Derek Tuffnell</i>	114
9 Analgesia and Anaesthesia for Assisted Vaginal Birth <i>Rowena Pykett, George Bugg and David Levy</i>	130
Index	142

# Contributors

---

George Attilakos, Department of Obstetrics & Gynaecology, University College London, United Kingdom

Rachna Bahl, Department of Obstetrics & Gynaecology, St Michael's Hospital, University Hospitals Bristol NHS Foundation Trust, United Kingdom

Sadia Bhatti, Department of Obstetrics & Gynaecology, King's College Hospital London, United Kingdom

George Bugg, Department of Obstetrics & Gynaecology, Nottingham University Hospitals NHS Trust, United Kingdom

Kim Hinshaw, Department of Obstetrics and Gynaecology, City Hospitals Sunderland NHS Foundation Trust, United Kingdom

David M Levy, Department of Anaesthesia, Nottingham University Hospitals NHS Trust, United Kingdom

Shilpa Mahadasu, Department of Obstetrics and Gynaecology, South Tees Hospitals NHS Foundation Trust, United Kingdom

Glen L Mola, Department of Obstetrics and Gynaecology, School of Medicine and Health Sciences, University of Papua New Guinea, Papua New Guinea

Deirdre J Murphy, Academic Department of Obstetrics & Gynaecology, Trinity College, University of Dublin; Coombe Women & Infants University Hospital, Republic of Ireland

Patrick O'Brien, Department of Obstetrics & Gynaecology, University College Hospital London, United Kingdom

Stephen O'Brien, Department of Obstetrics & Gynaecology, Southmead Hospital, North Bristol NHS Trust, United Kingdom

Karl SJ Oláh, Department of Obstetrics & Gynaecology, South Warwickshire NHS Trust, United Kingdom

Milena Petrovic, Department of Obstetrics & Gynaecology, University College Hospital London, United Kingdom

Rowena Pykett, Department of Obstetrics & Gynaecology, Nottingham University Hospitals, United Kingdom

---

## List of Contributors

Meenakshi Ramphul, Department of Obstetrics & Gynaecology, Rotunda Hospital, Republic of Ireland

Dimitrios Siassakos, Department of Obstetrics & Gynaecology, University College Hospital London, United Kingdom

Bryony Strachan, Department of Obstetrics & Gynaecology, St Michael's Hospital, University Hospitals Bristol NHS Foundation Trust, United Kingdom

Derek Tuffnell, Department of Obstetrics & Gynaecology, Bradford Hospitals, United Kingdom (not practising)

Aldo Vacca, Department of Obstetrics & Gynaecology, Mater Hospital, Brisbane, Australia (not practising)

# Preface

---

In order to ensure we provide the highest quality of care to women, RCOG sets high standards in training. The emphasis is to ensure that the future specialists acquire both technical and non-technical skills, which together are essential to correctly manage patients within a well-functioning team of professionals. Providing training with these aims is at the forefront of RCOG educational objectives. This book provides those who are learning new skills to gain from experts' knowledge and experience. The associated course allows those in training to gain technical and non-technical skills, using simulation, in a safe environment and will ultimately improve the care offered to women.

Dr Clare McKenzie  
RCOG Vice President (Education)

This book is intended for trainees attending the RCOG Assisted Birth Simulation Training (ROBuST) course. The individual chapters have been commissioned from nationally and internationally recognised experts, and adheres to and reflects current RCOG guidance around techniques in assisted vaginal birth.

Whilst we are very proud of this book, and the contents of the lectures within the course, assisted vaginal birth can only be learned with repeated, high-quality simulation sessions where the learner is at the centre of the experience and has the time and space to completely familiarise themselves with the technique. Following this, they need to be supported with facilitative hands-on teaching in real cases, allowing them to cement the practical procedure and slowly gain the confidence they need to perform the task independently.

As trainers and obstetricians we sincerely hope that you find this book and the course useful, and use it as a base from which to build your scope of practice and become one of the next generation of accoucheurs, utilising your skills to enable women and babies to have the best outcomes possible.

Dr Stephen O'Brien  
Lead Editor and RCOG National Lead for Assisted Vaginal Birth Training



# Acknowledgements

---

The editors would like to thank the Product Development and Marketing Executive of the Royal College of Obstetricians and Gynaecologists (RCOG) who accepted the proposal for this educational text and course.

We are grateful to the individual chapter authors for sharing their expert knowledge and skills in the production of the core text and training course.

We would also like to show our gratitude to the obstetricians and gynaecologists who contributed to the development of the course and this manual, from the first iteration to this edition:

- Matthew Prior
- Rasha Mohammed
- Jennifer Browne
- Sarah Newell
- Helen van der Nelson
- Fiona Day
- Katie Cornthwaite
- Tamara Kubba
- Priya Sokhal
- Tim Draycott
- Cathy Winter

Finally, we would like to thank all the trainers who will deliver this training course on behalf of RCOG in the future.

George Attilakos, Sharon Jordan, Michelle Mojaher, Glen Mola, Stephen O'Brien and Dimitrios Siassakos

# Abbreviations

---

ACOG .....	American College of Obstetricians and Gynecologists
AVB .....	assisted vaginal birth
BMI .....	body mass index
BPD .....	biparietal diameter
CEFM .....	continuous electronic fetal monitoring
CPD .....	cephalopelvic disproportion
CS .....	caesarean section
CSF.....	cerebrospinal fluid
CTG.....	cardiotocography
DDI.....	decision to delivery interval
DOA.....	direct occipito-anterior
DOP.....	direct occipito-posterior
EFM.....	electronic fetal monitoring
FBS .....	fetal blood samples
GA .....	general anaesthesia
HIE .....	hypoxic-ischaemic encephalopathy
ICU.....	intensive care unit
ITU .....	infrapubic translabial ultrasound
LA .....	local anaesthetic
NHSLA.....	National Health Service Litigation Authority
NICE.....	National Institute for Health and Care Excellence
OA .....	occipito-anterior
OP .....	occipito-posterior
OT.....	occipito-transverse
RCOG.....	Royal College of Obstetricians and Gynaecologists
VTE.....	venous thromboembolism
WHO .....	World Health Organization