

## Making Obstetrics Safer FETAL PILLOW

www.fetalpillow.com

Designed to make second stage Caesarean Sections easier, safer and less traumatic

Fetal Pillow use in a prospective randomised study of 240<sub>pts</sub> shows significant improvements in maternal outcomes when used in a Caesarean Section at full dilation.



- **Reduced Uterine Extensions**
- Reduction in Total Operating Time
- Reduction in Incision to Delivery Time
- Reduced Blood Loss
- Reduction in need for Blood Transfusion

#### SAFE OBSTETRIC SYSTEMS LTD

© COPYRIGHT 2012

1. EP1.414 Reducing complications in a caesarean section at full dilation using fetal pillow: a prospective randomised trial Seal, S; Barman, SC; Tibriwal, R; De, A; Kanrar, P; Mukherjii, J. BJOG. Volume 120. Issue Supplement s1. 21 June 2013.

### Adam, Rouilly



We are delighted to introduce our latest product innovation, **Desperate Debra®** - a revolutionary new simulator for training of impaction of a fetal head at caesarean section.

Developed in collaboration with expert consultants, professors and midwives at Guy's and St Thomas' NHS and NHS Fife, the **Desperate Debra®** simulator aims to both introduce fetal head impaction and improve confidence to new trainees as well as increase awareness and enhance practice for current professionals.

For further information and to view the simulator in action please contact us or see our website.



ANATOMICAL MODELS, SIMULATORS AND CHARTS FOR CLINICAL SKILLS AND TRAINING

sales@adam-rouilly.co.uk

www.adam-rouilly.co.uk

+44 (0) 1795 471378

Limbs & Things

St Philips, Bristol, BS2 ORA, UK T: +44 (0)117 311 0500

Limbs & Things, Sussex Street

F: +44 (0)117 311 0501

E: sales@limbsandthings.com

# SimMom

birthing simulator The new full body interactive

developed in collaboration with Laerdal. complications multiple birthing training scenarios with pelvic modules, and software for running Includes: Mother and baby, interchangeable An advanced full body birthing simulator

www.limbsandthings.com

Visit our website for more information



#### Kiwi™ Vacuum Assisted Delivery

For reliable and safe delivery . . . when you need it most

- Clinically effective suitable for all fetal malpositions to maximise successful vaginal delivery
- Improved patient outcomes less invasive than forceps, decreased likelihood of perineal tear, less psychologically threatening to the mother-to-be
- Cost effective reduced Caesarean Section numbers, decreased length of hospital stay

The market leading Kiwi™ Omnicup with Traction Force Indicator is exclusively available from Pelican Feminine Healthcare Ltd or one of our authorised distributors.

To book a free hands-on training session please call our **Freephone Helpline 0800 013 1220** or email **contactus@pelicanfh.co.uk** 







## RCOG Operative Birth Simulation Training



ROBuST

# RCOG Operative Birth Simulation Training

#### **Course Manual**

Edited by

George Attilakos, Tim Draycott, Alison Gale, Dimitrios Siassakos and Cathy Winter



#### **CAMBRIDGE**UNIVERSITY PRESS

University Printing House, Cambridge CB2 8BS, United Kingdom

Published in the United States of America by Cambridge University Press, New York

Cambridge University Press is part of the University of Cambridge.

It furthers the University's mission by disseminating knowledge in the pursuit of education, learning and research at the highest international levels of excellence.

www.cambridge.org

Information on this title: www.cambridge.org/9781107680302

© Cambridge University Press 2014

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.

First published 2014

Printed in the United Kingdom by Bell and Bain Ltd

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

Library of Congress Cataloging-in-Publication Data

ROBuST: RCOG operative birth simulation training / edited by George Attilakos, Tim Draycott, Alison Gale, Dimitrios Siassakos, Cathy Winter.

p. ; cm.

RCOG operative birth simulation training

Operative birth simulation training

Includes bibliographical references and index.

ISBN 978-1-107-68030-2 (Paperback : alk. paper)

I. Attilakos, George, editor of compilation. II. Gale, Alison (Obstetrician), editor of compilation. III. Siassakos, Dimitrios, editor of compilation. IV. Draycott, Timothy J., editor of compilation. V. Winter, Cathy (Midwife), editor of compilation. VI. Royal College of Obstetricians and Gynaecologists (Great Britain), issuing body. VII. Title: RCOG operative birth simulation training.

[DNLM: 1. Extraction, Obstetrical–methods. 2. Extraction, Obstetrical–adverse effects. WQ 415] RG725

618.8-dc23 2013035743

ISBN 978-1-107-68030-2 Paperback

Cambridge University Press 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 which 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**

Contributors

Acknowledgements		viii
Abbreviations		
Preface		Х
Chapter 1	Operative vaginal birth in the 21st century: a global perspective <i>Glen Mola</i>	1
Chapter 2	Indications and assessment for operative vaginal birth Deirdre Murphy and Meenakshi Ramphul	12
Chapter 3	Nontechnical skills Bryony Strachan and Rachna Bahl	31
Chapter 4	Vacuum-assisted birth Aldo Vacca	44
Chapter 5	Nonrotational forceps and manual rotation Kim Hinshaw and Shilpa Mahadasu	59
Chapter 6	Rotational forceps Karl SJ Oláh	83
Chapter 7	Caesarean section at full dilatation Patrick O'Brien and Sadia Bhatti	95
Chapter 8	Medico-legal matters Fraser McLeod and Tim Draycott	110
Chapter 9	Analgesia and anaesthesia for operative vaginal birth Rowena Pykett, George Bugg and David Levy	126
Index		138

V

νi



#### **Contributors**

Mr George Attilakos Consultant Obstetrician, London

Dr Rachna Bahl Consultant Obstetrician, Bristol

Dr Sadia Bhatti Consultant Obstetrician, Twickenham

Dr Jennifer Browne Specialty Trainee in Obstetrics and Gynaecology

Dr George Bugg Consultant Obstetrician, Nottingham

Dr Katie Cornthwaite Specialty Trainee in Obstetrics and Gynaecology

Dr Fiona Day Specialty Trainee in Obstetrics and Gynaecology

Prof Timothy Draycott Consultant Obstetrician, Bristol

Dr Alison Gale Consultant Obstetrician and Gynaecologist,

Preston

Simulation Advisor to RCOG

Mr Kim Hinshaw Consultant Obstetrician and Gynaecologist,

Sunderland

Dr Tamara Kubba Specialty Trainee in Obstetrics and Gynaecology

Dr David Levy Consultant Anaesthetist, Nottingham

Dr Shilpa Mahadasu Specialty Trainee in Obstetrics and Gynaecology

Dr Fraser McLeod Consultant Obstetrician and Gynaecologist,

Bristol

Dr Rasha Mohammed Specialty Trainee in Obstetrics and Gynaecology

Professor Glen Mola Professor of Obstetrics and Gynecology, School

of Medicine and Health Sciences, University of

Papua New Guinea

Professor Deirdre Murphy Head of Obstetrics and Gynaecology, Trinity

College, University of Dublin

Dr Sarah Newell Specialty Trainee in Obstetrics and Gynaecology

vi



#### Contributors

Mr Patrick O'Brien Consultant Obstetrician and Gynaecologist,

London

Mr Karl Oláh Consultant Obstetrician and Gynaecologist,

Warwick

Dr Matthew Prior Specialty Trainee in Obstetrics and Gynaecology

RCOG Trainees' Committee Representative

Dr Rowena Pykett Specialty Trainee in Obstetrics and Gynaecology

Dr Meenakshi Ramphul Consultant Obstetrician and Gynaecologist,

Dublin

Dr Dimitrios Siassakos Clinical Lecturer, University of Bristol

Dr Priya Sokhal Specialty Trainee in Obstetrics and Gynaecology

Dr Bryony Strachan Consultant Obstetrician and Gynaecologist,

Bristol

Dr Aldo Vacca Consultant Obstetrician, Brisbane

Dr Helen van der Nelson Specialty Trainee in Obstetrics and Gynaecology

Ms Cathy Winter PRactical Obstetric Multi-Professional Training

(PROMPT) Maternity Foundation Research

Midwife



#### 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 acknowledge the work of Claire Dunn, RCOG Publishing, without whom this project would not have been possible.

We would also like to show our gratitude to the trainees who contributed to the development of the course:

- Matthew Prior RCOG trainee representative
- Rasha Mohammed
- Jennifer Browne
- Sarah Newell
- Helen van der Nelson
- Fiona Day
- Katie Cornthwaite
- Tamara Kubba
- Priya Sokhal

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

George Attilakos, Tim Draycott, Alison Gale, Dimitrios Siassakos and Cathy Winter

viii



#### **Abbreviations**

ACOG	American College of Obstetricians and Gynecologists
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
OVB	operative vaginal birth
RCOG	Royal College of Obstetricians and Gynaecologists
VTE	venous thromboembolism
WHO	World Health Organization

#### **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 Operative Birth Simulation Training (ROBuST) course. However I anticipate that all obstetricians and obstetric trainees will find it useful and informative. To get the most out of the ROBuST course I recommend reading this book prior to attending but many of the chapters will also be useful for future reference. While this book covers the fundamentals of operative vaginal birth (OVB) it has been written to comprehensively cover the subject.

The individual chapters have been commissioned from nationally and internationally recognised experts, who have provided accounts of their own experiences and techniques. These techniques and alternatives will be taught on the hands-on ROBuST course.

This text and course have been developed to improve training in OVB worldwide, with the ultimate aim of improving safety for mothers and babies. Simulation training in obstetrics has the benefit of facilitating learning in technical and nontechnical skills in a safe environment, without any risk of patient harm.

The course is delivered in 1 day. It includes short lectures, demonstrations of technique (nonrotational and rotational OVB and caesarean section at full dilatation) and hands-on practice. Important generic skills including teamwork, communication and documentation are also covered.

I hope that you find this book useful and enjoy the course.

Alison Gale Lead Editor and Simulation Advisor to RCOG

X