

International Maternal & Child Health Care

A practical manual for hospitals worldwide



MCAI Maternal & Childhealth
Advocacy International

**Maternal & Childhealth
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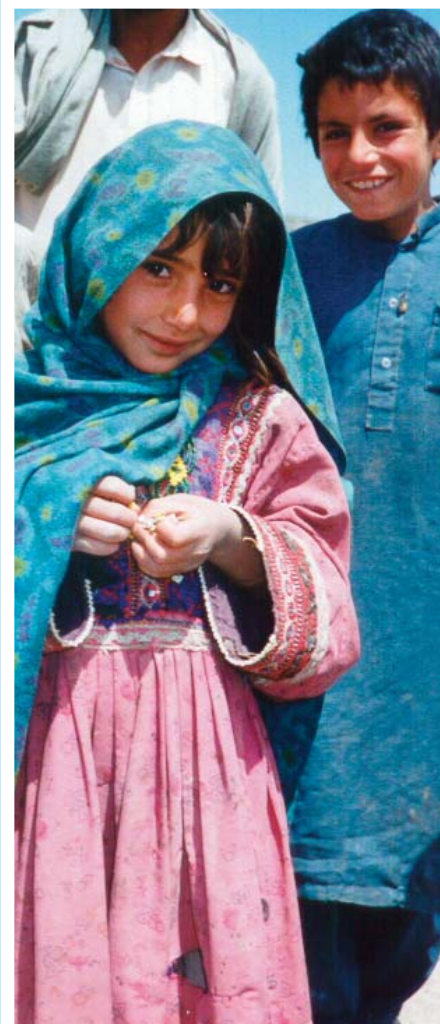


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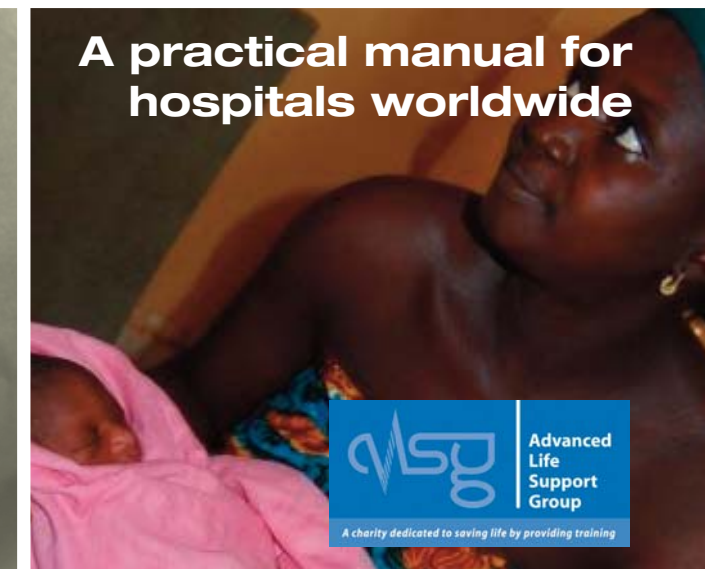


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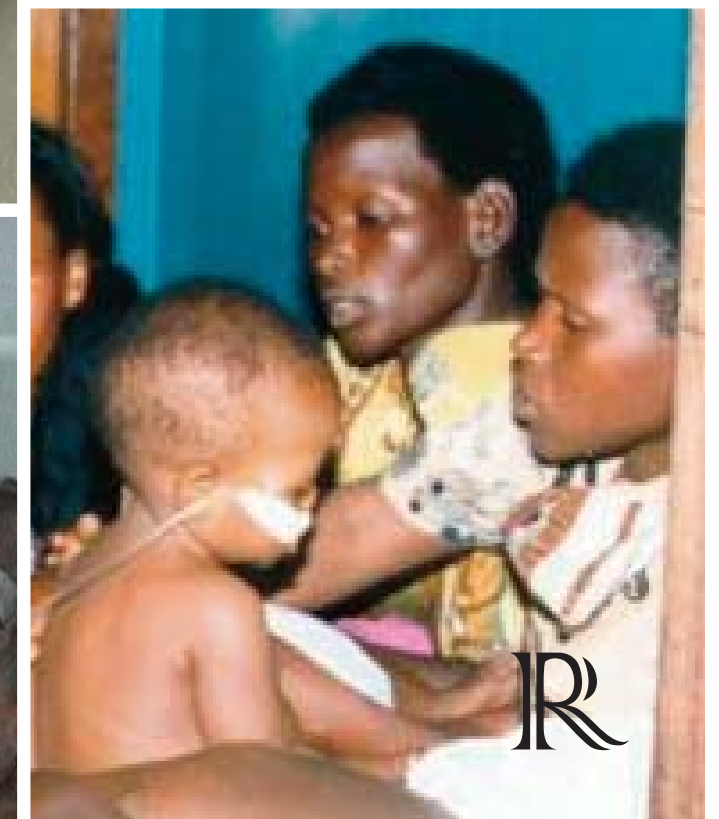
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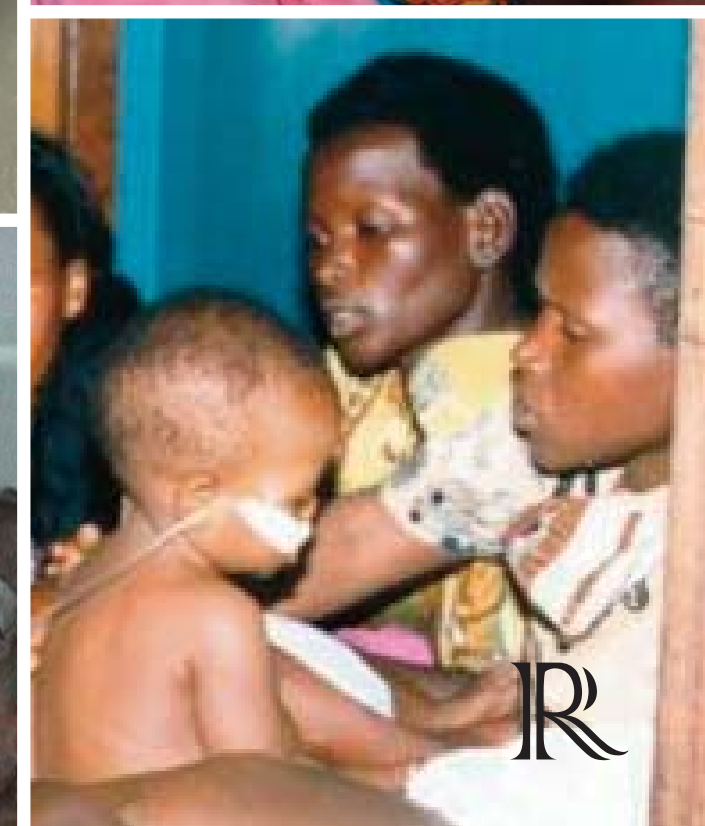
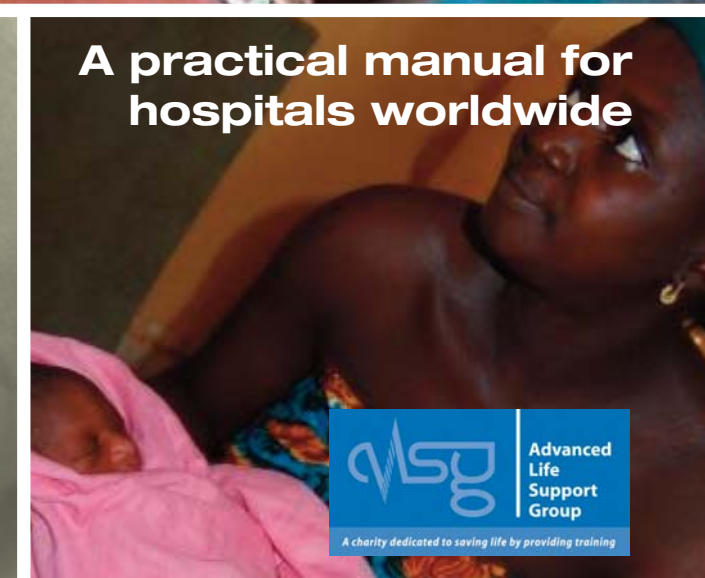
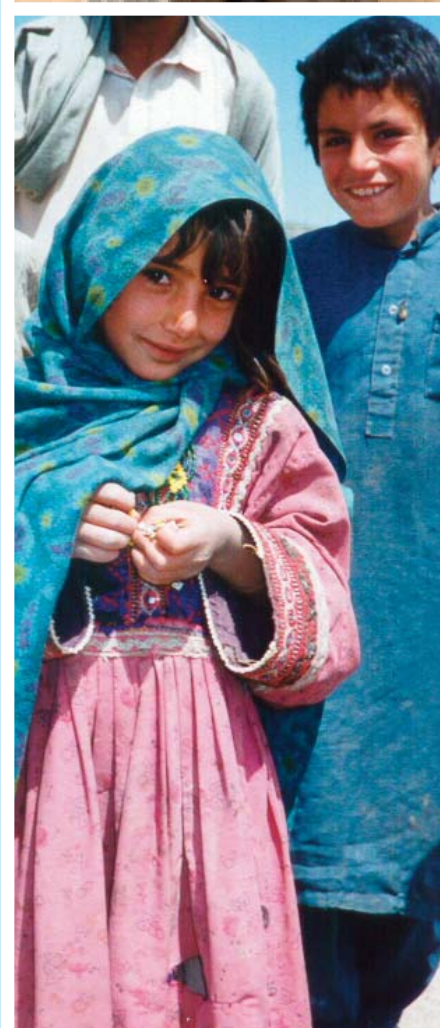
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Contents

Foreword	ix	Acknowledgements	xviii
Preface	x		
Contributors	xi	Those named after each section are authors or	
Introduction	xvi	reviewers with the latter given a (R) qualifier	

Section 1: General issues regarding hospital care

1.1	Hospital management: non-clinical support and facilities	2	1.14	High-dependency care in pregnancy and childhood	67
	Anita Smith, Wandifa Samateh, Ejaz Khan (R), Andrew Clarke (R)			David Southall, Barbara Phillips	
1.2	Prevention of hospital-acquired infection	7	1.15	Pain control in pregnancy and childhood	69
	Andrew Clarke			Anne Merriman, Mary Bunn, David Southall, Susan O'Halloran, Diane Watson	
1.3	Continuing medical education for healthcare professionals	10	1.16	Palliative care for children in resource-limited countries	79
	Tsitsi Chawatama, David Southall (R)			Anne Merriman, Mary Bunn, David Southall, Susan O'Halloran, Diane Watson (R)	
1.4	Essential imaging facilities	12	1.17	Hospital issues regarding immunisation	92
	Savvas Andronikou, Kieran McHugh			Yawar Najam, Barbara Phillips	
1.5	Essential operating-theatre resources	14	1.18	Recognition by hospital workers of the abuse and exploitation of pregnant women and children	96
	Aqeel Safdar			David Southall	
1.6	Drug and fluid administration	16	1.19	Transport of ill patients	97
	David Southall			Mary Montgomery	
1.7	Safe blood transfusion practice	21	1.20	Ethics in healthcare	98
	Gamal Gabra, Maha Mansour			Diane Watson	
1.8	Essential laboratory services	26	1.21	Traditional medicine and its relevance to hospital care	104
	Wendi Bailey			Paul Dienne, David Southall	
1.9	Records, history taking and examination	29	1.22	Emergency equipment and drugs for obstetric and paediatric care	109
	Tsitsi Chawatama			Barbara Phillips, Martin Samuels, David Southall	
1.10	Triage: seeing the sickest first	30	1.23	Grief and loss in societies affected by conflict and disaster	110
	Brigid Hayden, David Southall, Ann Wright			Lynne Jones	
1.11	Structured approach to managing emergencies in pregnancy and childhood	34	1.24	Obstetric and paediatric anaesthesia in low resource settings	121
	David Southall, Barbara Phillips, Yawar Najam, Brigid Hayden			Diane Watson, Oliver Ross	
1.12	Basic life support for children and pregnant mothers	43	1.25	Non-invasive respiratory support	131
	Barbara Phillips, David Southall			Martin Samuels	
1.13	Advanced life support for children and pregnant mothers	55			
	David Southall, Barbara Phillips				

Section 2: Pregnancy-related problems

Authors are Katie Christie, Alice Clack, Johan Creemers, Brigid Hayden, Grace Kodindo, Shamsunnisa Sadia, David Southall, Diane Watson and Ann Wright. (Unless otherwise stated)		2.6.D	Multiple births	232	
2.1	Antenatal care and the hospital	136	2.6.E	Malpresentations and malpositions including breech delivery	235
2.2	Nursing pregnant women and girls in hospital (midwifery)	139	2.6.F	Preterm pre-labour rupture of membranes (PPROM) and/or preterm labour	244
	Wendy Martin		2.6.G	Prolapsed umbilical cord	246
2.3	Managing normal labour and delivery	144	2.6.H	Inverted uterus	248
2.4	Pathways of care summarising the diagnosis of complications of pregnancy or delivery	158	2.6.I	Hyperemesis gravidarum	251
2.4.A	Abdominal pain in early pregnancy	158	2.7	Medical disorders complicating pregnancy and delivery	252
2.4.B	Abdominal pain in late pregnancy	159	2.7.A	Heart failure during pregnancy, including rheumatic heart disease	252
2.4.C	Vaginal bleeding in early pregnancy	162	2.7.B	Asthma	255
2.4.D	Vaginal bleeding in late pregnancy	163	2.7.C	Anaphylaxis	258
2.4.E	Vaginal bleeding after delivery	164	2.7.D	Diabetes mellitus	261
2.4.F	The diagnosis of breathing difficulties in pregnancy	165	2.7.E	Reduced consciousness and coma	265
2.5	Life-threatening complications of pregnancy and delivery	166	2.8	Infections complicating pregnancy, delivery and after birth	269
2.5.A	The pregnant woman or girl with shock during pregnancy and the puerperium	166	2.8.A	Pneumonia	269
2.5.B	Severe anaemia, including sickle-cell disease	172	2.8.B	Severe dehydration and gastroenteritis	270
	Gavin Cho		2.8.C	HIV/AIDS	273
2.5.C	Septic abortion or miscarriage	176		Francis Ssali, Katherine Ajdukiewicz	
2.5.D	Obstetric haemorrhage	177	2.8.D	Malaria	276
2.5.D.i	Ruptured ectopic pregnancy	177		Prudence Hamade	
2.5.D.ii	Miscarriage	179	2.8.E	Acute appendicitis	285
2.5.D.iii	Antepartum haemorrhage	183	2.8.F	Cystitis and acute pyelonephritis	286
2.5.D.iv	Postpartum haemorrhage	189	2.8.G	Tuberculosis in pregnancy	286
2.5.E	Hypertension, pre-eclampsia and eclampsia	200		Ejaz Khan	
2.5.F	Prolonged and obstructed labour, uterine rupture and shoulder dystocia	211	2.8.H	Syphilis in pregnancy and the newborn infant	289
2.5.G	Severe infection in the puerperal period	219		Dave Woods (R)	
2.5.H	Pulmonary embolism	223	2.8.I	Varicella zoster (chickenpox) in pregnancy	291
2.5.I	Amniotic fluid embolism	225		Dave Woods (R)	
2.6	Complications that require hospital care	226	2.9	Mental health problems associated with pregnancy and the postnatal period	292
2.6.A	Ovarian cysts in pregnancy	226		Susan Smith	
2.6.B	Reduced fetal movements, intrauterine death and stillbirth	227	2.10	Female genital cutting	298
2.6.C	Fetal distress during labour	230		Comfort Momoh, David Southall	
			2.11	Domestic/intimate partner violence and pregnancy	301
				Comfort Momoh, David Southall	
			2.12	Post-operative care	303
			2.13	Obstetric procedures	305

Section 3: Neonatal care

	Dave Woods, June Brady, David Southall, Yawar Najam, Tsitsi Chawatama	3.2	Resuscitation of the newly born	334	
3.1	Preparation for and care of the baby at birth	330	3.3	Clinical care of the infant in the early months of life	342
			3.4	Neonatal illnesses and emergencies	352

Section 4: Children in hospital

4.1	The differential diagnosis of common or serious presenting symptoms and signs in children	380	4.1.L	The child with respiratory distress	390
4.1.A	The child with diarrhoea	380	4.1.M	The child with pyrexia (fever) of unknown origin (PUO)	391
4.1.B	The child with jaundice	380	4.2	Caring for children and young people in hospital	392
4.1.C	The child with lymphadenopathy	381	4.2.A	Nursing sick children	392
4.1.D	The child with abdominal pain	382		Andrew Clarke	
4.1.E	The child with anaemia	383	4.2.B	Nursing care for adolescents	395
4.1.F	The child who is vomiting	384		Gill Barber	
4.1.G	The child with a rash	385	4.2.C	The child with a disability in hospital	397
4.1.H	The child with failure to thrive	386		David Cundall, Anne Nesbitt	
4.1.I	The child with fits, faints and apparent life-threatening events (ALTEs)	387	4.2.D	Care of children and young people with a spinal cord injury	406
4.1.J	The child with generalised oedema	388		Wagih El Masri, David Southall	
4.1.K	The child with headaches	389	4.2.E	Facilities for children with special needs and learning difficulties	418
				Susan O'Halloran, Prudence Hamade	

Section 5: The child presenting with a system or organ dysfunction

5.1	Upper airway disorders	422	5.3.B	Pleural effusion, empyema and bronchiectasis	441
5.1.A	Acute upper airway infections: croup and epiglottitis	422		Alan Smyth, Massimo Serventi (R), Anne Nesbitt (R)	
	David Southall, Barbara Phillips		5.3.C	Cystic fibrosis	442
5.1.B	The child with anaphylaxis	425		Alan Smyth, Massimo Serventi (R), Anne Nesbitt (R)	
	Diane Watson, David Southall		5.4	Cardiac disorders	446
5.1.C	The child with tonsillitis, otitis media, mastoiditis or retropharyngeal abscess	426	5.4.A	Congenital and rheumatic heart disease	446
	David Southall			Christopher Duke, Shakeel Qureshi, Zdenka Reinhardt	
5.1.D	The child with sleep-related upper airway obstruction	429	5.4.B	The child with heart failure and cardiomyopathy	453
	Martin Samuels			Christopher Duke, Shakeel Qureshi, Zdenka Reinhardt, David Southall	
5.2	Lower airway disorders	430	5.4.C	The child with a cardiac arrhythmia	456
5.2.A	Bronchiolitis	430		Christopher Duke, Shakeel Qureshi, Zdenka Reinhardt	
	David Southall		5.5	Shock	458
5.2.B	Asthma	431	5.5.A	Shock	458
	Martin Samuels			David Southall, Barbara Phillips	
5.2.C	The child with an inhaled foreign body	435	5.5.B	The child with shock from dehydration	463
	David Southall			Barbara Phillips, David Southall	
5.3	Lung disorders	436			
5.3.A	Pneumonia	436			
	Alan Smyth, Massimo Serventi, Anne Nesbitt				

5.5.C	The child with septic shock Barbara Phillips, David Southall	466	5.12.C	Constipation Brian Coulter, Su Bunn, Alli Morrison	559
5.6	Renal disorders	469	5.12.D	Inflammatory bowel disease Brian Coulter, Su Bunn, Alli Morrison	561
5.6.A	Medical renal disorders Heather Lambert, Miriam Adhikari	469	5.12.E	Upper gastroenterological disorders Brian Coulter, Su Bunn, Alli Morrison	563
5.6.B	The child with vesico-ureteric reflux Aqeel Safdar, David Southall	480	5.12.F	Gastrointestinal bleeding Brian Coulter, Su Bunn, Alli Morrison	565
5.6.C	Acute renal failure Heather Lambert, Miriam Adhikari	481	5.12.G	Malabsorption, including coeliac disease Brian Coulter, Su Bunn, Alli Morrison	566
5.7	Liver disorders	486	5.13	Rheumatology Taunton Southwood, Sarah Malleson, Surjit Singh, Christiaan Scott	569
5.7.A	Acute liver failure Alastair Baker	486	5.14	Cancer in children Ramandeep Arora, Tim Eden, Barry Pizer, Jay Halbert (R)	574
5.7.B	Chronic liver disease Alastair Baker	489	5.15	Eye disorders John Sandford Smith, Geoff Woodruff	588
5.8	Endocrine disorders	494	5.16	Neurological disorders	592
5.8.A	Diabetes Jerry KH Wales, John W Gregory	494	5.16.A	Coma Charles Newton	592
5.8.B	The child with hypoglycaemia David Southall	498	5.16.B	Bacterial meningitis Elizabeth Molyneux, Sarah Morley	597
5.8.C	Other endocrine disorders Jerry KH Wales, John W Gregory	500	5.16.C	Encephalitis Sarawathy Sabanathan, Bridget Wills	601
5.9	The child or adolescent with a mental health problem Pamela Yerassimou, Anita Ajjaz, Shoba Srinath, Susan O'Halloran	504	5.16.D	Epilepsy Charles Newton	606
5.10	Nutritional disorders	512	5.16.E	Convulsive status epilepticus Yawar Najam, Charles Newton, Bernhards Ogutu	610
5.10.A	Vitamin or mineral deficiencies Qudrat Malik, Rob Moy, Susan O'Halloran (R), Bernadette O'Hare (R)	512	5.16.F	Neuropathies Allie Moosa	613
5.10.B	Severe malnutrition James Bunn, Massimo Serventi	516	5.16.G	Guillain–Barré syndrome Charles Newton, Ejaz Khan	614
5.11	Haematological disorders	530	5.16.H	Muscular dystrophy Allie Moosa	615
5.11.A	Anaemia Simon Parke, Susan O'Halloran, Bernadette O'Hare	530	5.16.I	Breath-holding episodes Allie Moosa	616
5.11.B	Sickle-cell disease Michele Afif, Simon Parke	532	5.16.J	Migraine Allie Moosa	617
5.11.C	Haemolytic anaemias Susan O'Halloran	539	5.16.K	Neurosurgical disorders Jamshed Akhtar, Aqeel Safdar	618
5.11.D	Blood clotting disorders Susan O'Halloran	543	5.17	Orthopaedic problems Jamshed Akhtar, Yogesh Nathdwarawala, Ian Mackie (R)	620
5.12	Gastrointestinal disorders	544	5.18	Skin disorders Roderick Hay	625
5.12.A	Acute diarrhoea Peter B Sullivan, Sapthagiri Gantasala, Barbara Phillips, David Southall	544	5.19	Surgical disorders Aqeel Safdar	628
5.12.B	Post-infectious prolonged or persistent diarrhoea Zulfiqar A Bhutta	556			

Section 6: Infections in children

6.1	Bacterial infections	640	6.2.D	Human immunodeficiency virus (HIV) infection	687
6.1.A	Botulism David Southall	640		Victor Musiime, Paddy McMaster, Ejaz Khan	
6.1.B	Buruli ulcer Tim O'Dempsey	641	6.2.E	Measles Ejaz Khan	719
6.1.C	Diphtheria David Southall	643	6.2.F	Mumps James Tumwine, Ejaz Khan (R)	721
6.1.D	Leprosy Terence Ryan	645	6.2.G	Poliomyelitis Charles Newton	722
6.1.E	Leptospirosis Paddy McMaster, Ejaz Khan, Bernadette O'Hare (R)	647	6.2.H	Rabies management and prevention after animal bites	723
6.1.F	Lyme disease David Southall	648		Mary J Warrell	
6.1.G	Meningococcal disease Sarah Morley	649	6.2.I	Viral haemorrhagic fevers James Bunn	726
6.1.H	Pertussis Alan Smyth, David Southall	653	6.2.J	Yellow fever Tim O'Dempsey	729
6.1.I	Relapsing fevers Tim O'Dempsey	654	6.3	Other parasitic infections	730
6.1.J	Sexually transmitted diseases Theunis Avenant	655	6.3.A	Systemic protozoal infections	730
6.1.K	Streptococcal disease James Tumwine	658	6.3.A.a	African trypanosomiasis Tim O'Dempsey	730
6.1.L	Tetanus David Southall, Bernadette O'Hare	660	6.3.A.b	American trypanosomiasis (Chagas disease)	732
6.1.M	Trachoma Anthony Solomon	663		David Southall	
6.1.N	Tuberculosis Brian Coulter, Paddy McMaster, Ejaz Khan	665	6.3.A.c	Leishmaniasis Brian Coulter	733
6.1.O	Typhoid or paratyphoid Zulfiqar Bhutta	671	6.3.A.d	Malaria Elizabeth Molyneux, Prudence Hamade, David Southall	736
6.1.P	Rickettsial diseases James Bunn, David Southall	675	6.3.B	Other protozoal infections Brian Coulter	747
6.1.Q	Scrub typhus Pornthep Chanthavanich	677	6.3.C	Helminth infections	748
6.1.R	Yaws David Southall	677	6.3.C.a	Worms Ed Cooper, Anne Nesbitt (R), Bernadette O'Hare	748
6.1.S	Other bacterial infections Brian Coulter, Paddy McMaster, Ejaz Khan, Charles Newton	678	6.3.C.b	Hydatid disease Paddy McMaster, Tim O'Dempsey	751
6.2	Viral infections	680	6.3.C.c	Schistosomiasis Brian Coulter, Tim O'Dempsey	752
6.2.A	Chickenpox James Tumwine, Ejaz Khan	680	6.3.C.d	Fascioliasis (liver fluke infections) Tim O'Dempsey	754
6.2.B	Dengue Sirijitt Vasanawathana	681	6.3.C.e	Dracunculiasis (guinea-worm disease) David Southall	754
6.2.C	Acute hepatitis Alastair Baker	686	6.3.C.f	Filariasis Tim O'Dempsey	755
			6.3.C.g	Onchocerciasis Tim O'Dempsey	757
			6.3.C.h	Strongyloidiasis Tim O'Dempsey	759

Section 7: Major injuries in pregnancy and childhood

7.1	Wounds and their management	762	7.3.F	Heat stroke and hypothermia	798
	Joan Robson			Aqeel Safdar	
7.2	Fractures in children	764	7.3.G	Landmine injuries	799
	Jamshed Akhtar, Saeed Minhas			David Southall	
7.3	Life-threatening trauma	769	7.3.H	Gunshot wounds	800
				David Southall	
7.3.A	Structured approach to trauma in pregnancy and childhood	769	7.3.I.a	Ingestion burns	803
	Saeed Minhas, Barbara Phillips, Brigid Hayden, Douglas Wilkinson, David Southall			Anthony Roberts, Barbara Phillips	
7.3.B	Emergency trauma radiology	788	7.3.I.b	Burns in children and in pregnancy	803
	Peter Driscoll			Anthony Roberts, Barbara Phillips, David Southall	
7.3.C	The child with a head injury	792	7.4	Poisoning	810
	Jamshed Akhtar			Barbara Phillips, Joan Robson	
7.3.D	Electrical injury	795	7.5	Envenomation	815
	David Southall			David Laloo	
7.3.E	Drowning	796	7.6	The child who has been ill treated, abused or exploited	818
	David Southall			Anita Aijaz, Neela Shabde, Camille Lazaro, Anne Nesbitt, David Southall	

Section 8: Procedures in children and newborn infants

	David Southall		8.4.A	Minimising error in drug and fluid administration: giving injections	850
8.1	Preparation for procedures	836	8.4.B	Gaining circulatory access	854
8.2	Airway procedures	837	8.5	Other procedures	863
8.3	Breathing procedures	841	8.6	Assessing nutrition, growth and development	871
8.4	Circulatory procedures	850			

Section 9: Appendix

	Appendix	877
	Index	896

Foreword

Professor David Southall and the expert contributors to this textbook must be commended. They have delivered a consolidated, practical guide on maternal and child health with an understanding that care should not be compromised even in the face of conflict, material shortage, or human resource limitations.

Maternal and child health has made great strides in recent decades, but requires continued work. This textbook tackles the challenge by taking a uniquely holistic perspective and will help to push forward this public health agenda. This book is enriched by in-depth clinical questions, in addition to a sympathetic and exceptional understanding of the challenges facing health systems worldwide.

The segment on respectful and compassionate care caught my attention in particular. It is a crucial aspect of quality medical service and a patient's continued engagement in

the healthcare system. This goes hand-in-hand with grief management, medical and nursing ethics, and the realisation that healthcare moves well beyond the clinical setting alone. Comfort and communication go a long way, and I applaud the authors for their promotion of complete care.

I am particularly grateful to the authors for providing this textbook free of charge in resource-limited clinical settings. I am excited to see literature that understands the importance of continued education for a strong health workforce.

It is with the help of textbooks like this that we can move towards increased access to evidence-based, comprehensive healthcare for women and children. It is my hope that this textbook will become an essential part of a holistic, systems-based approach to maternal and child healthcare.

Dr Bernice Dahn MD MPH FLCP
**Deputy Minister of Health/
Chief Medical Officer-Republic of Liberia**
July 2014

Preface

This textbook is written to help health workers treating pregnant women and adolescents, their newborn infants, and children admitted to hospitals in countries all over the world. It is especially aimed at those working in settings in which material and human resources are limited, where borders and infrastructures are insecure, and in rural areas where health workers may find it particularly difficult to work. Building on existing global efforts, dedicated doctors, nurses and midwives in these settings are already providing life-saving healthcare, but often find their work hard and sometimes overwhelming. Access to up-to-date evidence-based guidelines in such settings is often extremely difficult. The Internet is often too slow, printing from computers is often too expensive, and so, in our experience, books remain essential.

This textbook has been written and peer-reviewed by over 100 experts from around the world, with experience in hospital settings in which there are poor resources, who have freely given their time and expertise. Covering all aspects of hospital care for pregnant women and adolescents, newborn infants and children, this textbook addresses a full range of possible illnesses, conditions, and injuries and includes complications of pregnancy and delivery. Based on the latest evidence and guidelines available, including Cochrane reviews and World Health Organization (WHO) guidelines, this textbook builds on existing efforts and identifies an internationally applicable minimum standard of healthcare in poorly resourced

hospitals and reflects the management of problems often inherent in resource-limited countries. The textbook proposes minimum standards, both in the treatments given and also in the medical ethics and professional standards, which should be practised in caring for the particularly vulnerable patients attending hospitals in resource-limited settings.

MCAI is funding the costs of publishing, printing and distributing this textbook on a 'not for profit' basis. Following requests from health workers in resource-limited settings, the aim of the editors and authors is to provide this textbook free of charge (on condition that health workers agree to use and look after the textbook; see inside cover). The textbook is particularly targeted at front-line health workers in the most disadvantaged hospitals in the world, particularly those in rural areas of low-income countries, especially those treating all women and children regardless of their or their family's ability to pay. In all other countries, the textbook will be charged at above cost price with all profit from these sales going to help fund the provision of further copies of the textbook for health workers in low income countries and to the work of MCAI in strengthening the emergency healthcare systems of hospitals in the world's poorest countries.

The aim of all authors and editors is to provide a useful, comprehensive reference for all health workers in all settings to help them provide the best possible clinical care and management for pregnant women and adolescents, their newborn infants, and children.

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Introduction

HOW TO USE THIS MANUAL

This is a comprehensive manual designed for all health workers caring for pregnant women and adolescent girls, infants and children in hospitals. It can be used by those with limited resources and also where greater resources are available.

Minimum standards required to practice well are given in a highlighted box at the beginning of each section addressing clinical practice.

Aspects of care where resources are so limited that they cannot at present be undertaken in most poorly resourced settings are highlighted in grey.

Key points, especially those where inappropriate actions might be dangerous, are presented in **bold font**.

This in-depth manual has been written for doctors, midwives and nurses caring for pregnant women and adolescent girls, newborn infants and children in the poorest, most disadvantaged, countries of the world, particularly concentrated in sub-Saharan Africa and South Asia. It is primarily designed to develop a minimum standard of care in hospitals for every woman, baby and child, regardless of the resources available for the country as a whole.

The startling numbers in the Tables below illustrate the unethical and unacceptable mortality rates for pregnant women, newborn infants and children in resource-poor countries. The continued presence of armed conflict and,

in many cases, the associated and deliberate targeting of healthcare (see www.ihpi.org) has contributed to a worsening situation in many countries.

ARTICLE 25 of the Universal Declaration of Human Rights adopted in 1948 states the following: 'Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control. Motherhood and childhood are entitled to special care and assistance. All children, whether born in or out of wedlock, shall enjoy the same social protection'.

There is no question that a considerable burden of unnecessary suffering is endured by women and children in hospitals; not only those in poorly-resourced settings. This situation is not all related to a lack of funds; much also relates to deficiencies in the training of health workers. Often, the training and continuous professional development of doctors, midwives and nurses is a low priority and even after training they are often not provided with adequate salaries, professional recognition or up to date evidence-based teaching and clinical materials. Standard medical textbooks for health workers in disadvantaged countries are usually too expensive and out-of-date, hampering their continuing medical education.

TABLE 1 Comparison of maternal and child mortality rates in rich versus poor countries in the world

	47 high income countries defined as those with GNI ≥ 12,616 USD per capita per annum [†]		33 low income countries defined as those with GNI ≤ 1035 USD per capita per annum [†]	
	Range	Median	Range	Median
Under 5 year mortality rate per 1000 live births: 2012 data	2–21	5	40–182	90
Maternal mortality ratio (MMR)* per 100,000 live births: 2010 data 'adjusted'	2–47	8	70–1100	460

Data from State of the World's Children (2014) by UNICEF.

*MMR is the number of deaths of women from pregnancy-related causes per 100,000 live births during the same period. The data that are 'adjusted' refer to 2010 United Nations inter-agency maternal mortality estimates released in May 2012.

[†]GNI = Gross National Income from World Bank data; USD = United States Dollars

TABLE 2 Details of individual numbers of maternal and under 5 year deaths comparing low and high income countries

	Total number of births 2012	Total number of maternal deaths 2010 adjusted*	Total number of child deaths under 5 years 2012	Number of live births resulting in 1 maternal death	Number of live births resulting in 1 child death
Low income countries (N = 33, 32 with data on maternal deaths and 33 with data on under 5 year child deaths)	26,007,000	110,376 (median number for individual countries = 2049)	2,197,982 (median number for individual countries = 43,228)	236	12
High income countries (N = 47, 45 with data on maternal deaths and 47 with data on under 5 year child deaths)	14,149,000	2190 (median number for individual countries =7)	84,479 (median number for individual countries = 420)	6461	167

Data from State of the World's Children (2014) by UNICEF.

Editing and writing this book has been challenging for the editors and authors. We have identified what we regard as the acceptable minimum standards of treatment for all major diseases and injuries that affect the pregnant woman, newborn baby, infant and child, wherever they are cared for. But we also wanted to offer a set of ideal standards for care where resources are adequate. Therefore, we have incorporated the essential minimum standard of care alongside some of the best standards currently available. However, readers will notice that for most of the treatments recommended, the minimum and gold standards are identical because there are certain treatments that should be provided as essential hospital care, whatever the

pressures. This manual should ideally be supplemented by scenario- and skill-based short training courses, combined with apprenticeship and small group teaching on the wards and in the operating theatre.

We believe in the continuing value of printed books to the practical application of healthcare, recognising that with time and improved access to high-speed internet in low resource settings, electronic materials, particularly videos and an easily accessed internet, will introduce major benefits. In the meantime books should be available for all health workers regardless of their ability to pay for them. We hope that you will find this in-depth manual helpful.

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2. The Advanced Life Support Group (ALSG) is very pleased to be a partner in this landmark text which presents up-to-date and practical information in an accessible form to clinicians working in low resource settings. ALSG clinicians have made a significant contribution to the textbook but the organisation must make it clear that their contribution has been confined to emergency topics as this is the organisation's field of experience and expertise in both high and low resource settings.

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Section 1

General issues regarding hospital care

