

Index

abdominal examination 7-8, 17	pulmonary embolism 176-7	premedication 32–3
abdominal sepsis 176	vasovagal syncope 180–1	regional anaesthesia 33–5 combined spinal epidural
abruption 70	Addison's disease 236	anaesthesia 35
acidaemia 45-6	adhesions, caesarean section and 114	epidural anaesthesia 34-5
acidosis 45	admission cardiotocograph (CTG) 39	increasing rates of 78 postpartum collapse 177–8
activated factor VII 169	adrenal insufficiency 236-7	spinal anaesthesia 34
acupuncture 26–7	adverse drug reactions 179 anaphylactic/anaphylactoid	vaginal birth after caesarean 246 risk 31, 76-7
acute chest syndrome (ACS) 234	reactions 179	selection of anaesthetic technique
acute illness, postpartum period 171, 181	drug withdrawal 179 toxicity/side effects 179	31-2 anal canal 183-4
adverse drug reactions 179	adverse events see clinical incidents	anal sphincters 184
anaphylactic/anaphylactoid reactions 179	air embolus 180	injury 99, 182
drug withdrawal 179	all-fours manoeuvre 137	diagnosis 186–7 follow-up 191
toxicity/side effects 179 air embolus 180	amniocentesis, preterm prelabour	postoperative care 190–1
amniotic fluid embolus 176	rupture of membranes and	repair 188–90
cardiac disease 178	212–13	subsequent pregnancy management 191–3
aortic dissection 178	amnioinfusion, intravenous	
arrhythmias 178	resuscitation 71	anal triangle 183–4
myocardial infarction (MI) 178 causes 171, 172	amniotic fluid embolus 176	analgesia 18, 26-31
epilepsy 180	amniotomy 196	acupuncture 26–7
general anaesthesia 177	ampicillin, preterm prelabour rupture	asthma and 237 hydrotherapy 26
aspiration pneumonitis 177	of membranes and 209–11,	induction of labour and 202, 204
atelectasis 177	212–13	with intrauterine death 205–6
respiratory depression 177	anaemia 295	inhalational analgesia 27
hypertensive disorders 175		nitrous oxide 27
incidence 171 management 172–5	anaesthesia 18, 31–7, 105 asthma and 237	regional analgesia 28-31
assessment 172–5	changes in practice 77–8	complications and side effects
resuscitation 173	complications 112	29–30 contra-indications for 28
metabolic conditions 179-80	fetal reserve and 68	effects on labour 30–1
peripartum cardiomyopathy	general anaesthesia 35-7	establishment of 29
(PPCM) 176	diminishing rates of 77-8	heart disease and 228
postpartum haemorrhage 175	failed intubation 35-7	indications for 28
presentation 171–2	indications for 77	low molecular weight heparin
regional anaesthesia 177-8	myasthenia gravis and 238	and 230
respiratory disease 178-9	postpartum collapse 177	maintenance of 29
asthma 178	preoxygenation 35	myasthenia gravis and 238
pneumonia 179	pulmonary aspiration risk	patient-controlled 29
stroke/cerebrovascular accident (CVA) 180	76–7, 177 rapid sequence induction 35	support during labour 26
thromboembolic disease 176–7	maternal position 33	systemic opioid analgesia 27–8, 78
cerebral vein thrombosis 177	pre-eclampsia and 270	pethidine 27–8 remifentanil 28
	± ±	iciliiciltailii 20

Index

transcutaneous electrical nerve stimulation (TENS) 27	practical obstetric considerations 76–7	manoeuvres for delay in delivery of the arms 122–4
twin birth 126	asthma 178, 237	selection for 118–19
anaphylactic/anaphylactoid reactions 179	asynclitism 7	see also external cephalic version (ECV)
	atelectasis 177	bupivacaine 29
antepartum haemorrhage (APH)	atonia 160, 162	
141–50 aetiology 141		caesarean section (CS) 104, 114–15, 241
causes of 142	atosiban 70, 220	adjuncts to 112
history 141	attitude 7	anaesthesia for see anaesthesia
management 141–2	augmentation see management	classification 104, 105
physical examination 141 placenta percreta/accreta 146	autocaval compression 68-9	complications 108, 112–14 adhesions 114
placenta praevia 142-6	backache 293	anaesthetic 112
placental abruption 146–50	backache, regional analgesia and 30	endometriosis 114
vasa praevia 146		fetal complications 112
anti-shock garment 168	Berry aneurysms 239	fistula formation 114
antibiotic therapy	birth canal 1–3	future fertility 113–14
group B streptococcus eradication	Bishop score 9, 197, 198	haemorrhage , 112–13 hernia formation 114
212	bladder	infection 113
infective endocarditis prophylaxis	dysfunction, regional analgesia	keloid scarring 114
229	and 30	paralytic ileus 113
preterm labour management 221-2	injury 112, 249–50	pelvic organ damage 112
preterm prelabour rupture of	postnatal check 286	placenta praevia 114
membranes 209–11, 212–13	blood pressure measurement 264–5	puerperal problems 294-5
puerperal sepsis 288		scar rupture 114
urinary tract infection 293–4	blood sampling 162	thromboembolic disease 113
anticoagulation management 230-2	see also fetal scalp blood sampling (FBS)	wound 113, 294–5 cord prolapse and 133
metal heart valves and 231–2	, ,	fetal distress and 72
recurrent miscarriage and 230–1	blood transfusion 163-4	heart disease and 228
urgent delivery and 232 venous thromboembolism	bowel	indications 104, 106-7
prophylaxis 231	injury 112, 249–50	intraoperative procedures 105-11
	Ogilvie's syndrome 113, 289	delivering the baby 109-10
antihypertensive therapy 266–7 hydralazine 267	postnatal check 286	delivering the placenta 110
labetalol 267	brachial plexus injury 100	drains and closure 111
methyldopa 267	classification 139	patient preparation 105
nifedipine 267	Erb's palsy 139	skin incision and peritoneal cavity access 108
antiretroviral treatment 239	Klumpke's palsy 139	surgical principles 105
	total brachial plexus injury 139 shoulder dystocia and 138–9	uterine closure 110–11
aortic dissection 178	risk of 139	uterus exposure and entry
Apgar score, prolonged second stage of labour and 85	Bracht technique 120, 122	108–9, 110 multiple birth 124–5, 127
	breast problems 295	preterm breech 127–9
apnoea 273–4	-	postnatal check 285
see also hypoxia	breastfeeding 286	preoperative procedures 104–5
arrhythmias 178	breech presentation 6, 116	blood tests/products 105
arteriovenous malformations (AVM),	breech birth at term 116	consent 104–5
cerebral 238-9	twin birth 127	rate 14
artificial rupture of membranes	preterm breech 127–9	scar dehiscence 59
(ARM) 23, 196	vaginal breech birth 118–24 assisted breech delivery 120–1	subsequent pregnancy management 241
asphyxia 66, 274–5	Bracht technique 122	augmentation 246–7, 248
see also hypoxia; resuscitation	conduct of breech birth 120	data limitations 241
• •	conduct of labour 119–20	delivery setting 246
aspiration of gastric contents 32–3, 76	contra-indications 119	epidural anaesthesia 246
aspiration pneumonitis 177	head entrapment 124	

head entrapment 124



Index

caesarean section (CS) (cont.)	types of 333	computerized records 319-20
induction of labour 201–2, 246–7, 247–8	dyskinetic or athetoid 333 spastic quadriplegic 333	congenital abnormalities 282
mode of delivery 241–6, 249 monitoring in labour 246–7	cerebral vein thrombosis 177	connective tissue disorders, uterine rupture and 254–5
outcome of future pregnancies	cerebrovascular accident (CVA) 180	consent, caesarean section 104-5
249 uterine contractions 59	cervical cerclage 222-3	continuous positive airway pressure
see also elective repeat caesarean	cervical consistency 9	(CPAP) 234
section (ERCS); vaginal birth	cervical dilatation	contraction-associated proteins
after caesarean (VBAC) timing of 105	labour progress 14	(CAPS) 6
versus operative vaginal delivery	nomogram/partogram 14–15, 19 action line 15, 21–3	contractions 6, 54–62
90-1	alert line 15	abnormal patterns 60 efficiency of 21
caput succedaneum 4	secondary arrest of (SACD) 19-20	electric and physical basis of 54
carbetocin 155, 164	cervical dilators 195-6	fetal distress and 68
carbohydrate solutions 79-80	cervical effacement 9-10	intrauterine resuscitation 70 induced labour and 59–60
carboprost 155, 229	cervical length measurement 198-9	maternal characteristics and 59
cardiotocograph (CTG) 39–41, 43–4	preterm labour prediction 219	measurement of 24, 54-7
acting on a suspicious CTG 44	cervical position 9	external tocography 55
failure to monitor appropriately	chest compressions 279	internal tocography 55–6 manual palpation 55
334-6	chest infection 113	maternal perception 54–5
failure to respond to abnormal CTG 336–8	chorioamnionitis 208	need for 54
incorporating the clinical picture 45		quantification 56–7
interpretation 44	classical arm development 123	uterine electromyography (EMG) 56
on admission 39	clinical governance 311	normal labour 58
see also electronic fetal monitoring (EFM); fetal heart rate (FHR)	clinical incidents 311–12	parameters 55
monitoring	impacts of 312 reporting 313–15	parity and 58
cardiovascular disease see heart	triggers 314	previous caesarean section and 59 see also labour; uterine activity
disease; thromboembolic	see also cerebral palsy; risk	•
disease	management	controlled cord traction (CCT) 154
cell salvaging 169	co-amoxiclav 221-2	convulsions see seizures
cephalhaematoma 99	coagulation failure 160	cord compression 68 induction of labour and 203
cerebral arteriovenous malformations	see also inherited coagulation	reducing 132–3
(AVM) 239	deficiencies	bladder filling 133
cerebral palsy 332, 340	combined spinal epidural anaesthesia	digital elevation 132
arising from events in labour	(CSE) 35 sequential block 35	maternal positioning 133
334–40	communication 305–6, 318–20	cord prolapse 69, 131–4
application of excessive force 338–9	among team members 328	definition 131 documentation 134
failed or delayed diagnosis 339	between staff 319	incidence 131
failed or delayed intervention	feedback 321	management 132-4
339–40	with patient 318–19	call for help 132
failure to monitor fetus appropriately 334–6	complication 338	delivery 133 preparation for immediate
failure to recognize complication	failure to recognize 338 see also caesarean section (CS);	delivery 132, 133
338	puerperium; uterine rupture;	recognition of prolapse 132
failure to respond to abnormal	wound complications	reducing compression 132–3
cardiotocograph 336–8 inappropriate intervention 334	compression duplex ultrasound 290	morbidity and mortality 134 pathophysiology 131
see also risk management	compression sutures 165-6	prediction 131
causes 332	computed tomography pulmonary	prevention 131–2
negligence claims 332-3	angiogram (CTPA) 290-1	risk factors 131, 132

More information

corticosteroid therapy preterm labour management 221, 222 preterm prelabour rupture of membranes 211	course planning and administration 325–6 equipment 327 facilitation 326 location of training 325	engagement 10 epidural anaesthesia 34–5 combined spinal epidural anaesthesia (CSE) 35 sequential block 35
corticotrophin-releasing hormone (CRH) 5	objectives, feedback and assessment 326 patient-actresses 326–7	dosing 34–5 increasing rates of 78
cortisol 5	record keeping 327	prolonged second stage of labour and 86–7
creatinine monitoring 265-6	scenarios 326	side effects 86–7
Crew Resource Management (CRM) 323, 330	drug reactions <i>see</i> adverse drug reactions	vaginal birth after caesarean 246 epidural analgesia 28
cystic fibrosis 237	dural puncture	accidental dural puncture 30
cytokines, preterm labour and 217	epidural analgesia and 30 postdural puncture headache 30,	backache and 30 effects on labour 30-1
decelerations see fetal heart rate (FHR)	292–3	patient-controlled (PCEA) 29
decision-making fetal distress 67, 73-4	clinical features 292–3 management 293	see also analgesia epidural haemorrhage 100
information filtering 74	dystocia 19	epilepsy 180, 237–8
nature of in emergency situations 73	vaginal birth after caesarean 248	episiotomy 185–6, 187–8
deep vein thrombosis see venous thromboembolism (VTE)	see also shoulder dystocia eclampsia 175, 262, 264	in prolonged second stage of labour 88
dehydroepiandrosterone sulphate (DHEAS) 5	definitions 262 see also pre-eclampsia	indications 185–6 shoulder dystocia and 136
depression, postnatal 296, 298	elective repeat caesarean section (ERCS)	see also perineum
management 298	comparative risks and benefits 243, 244, 250	Erb's palsy 139
diabetes 179–80, 234–6 delivery and 234–5, 235–6	data limitations 241 determining the mode of delivery	ergot alkaloids 154, 164 heart disease and 228, 229
gestational diabetes 236 labour and 235–6 induction of labour 201	241–3 timing of 249 see also caesarean section (CS)	error 311–12 see also clinical incidents
neonate management 236 postpartum diabetic control 236 pre-existing diabetes 234 shoulder dystocia risk and 134	electrocardiogram see fetal electrocardiogram (ECG) electromyography (EMG), uterine 56	erythromycin preterm labour management 221–2 preterm prelabour rupture of membranes and 209–11, 212–13
diaphragmatic hernia 282	electronic fetal monitoring (EFM) 38	examination 15–17
dinoprostone 197 administration 203	continuous 39–43 failure to monitor appropriately	abdominal 7–8, 17 antepartum haemorrhage and 141 pelvic 8–9
disseminated intravascular coagulation (DIC) 150 stages of 150	334–6 failure to respond to abnormal cardiotocograph 336–8 indications for 40	pre-eclampsia 264 vaginal 9, 17 excessive force 338–9
treatment 150	intermittent 39	external cephalic version (ECV)
documentation cord prolapse 134	see also fetal heart rate (FHR) monitoring	116–18 conduct of 117–18
shoulder dystocia 138	electronic records 319–20	efficacy 116-17
drills evaluation 324–5	emergencies 323, 324 training <i>see</i> drills	safety 117 techniques to improve success 117
cost-effectiveness 325 healthcare outcome 324–5	endometriosis, caesarean section and 114	twin birth 127 uptake 117
learning outcome 324 obstetric emergencies suitable	endometritis 288-9	facial nerve palsy 100
for 324	caesarean section and 113	false labour 17
organization 325–7	clinical features 288	fatigue 295
access 326	management 288–9	feedback



Index

feedback (cont.) from drills 326 risk management 321	intermittent auscultation (IA) 38–9 intermittent electronic fetal monitoring (EFM) 39	suitability assessment for induction of labour 199 first stage of labour 15–18, 20–4
fentanyl 29, 78	Recommendation Grades 335	abdominal examination 17
fertility, caesarean section and 113-14	sinusoidal trace 43–4 twin birth 125–6	analgesia and anaesthesia 18
fetal distress 66 causes 67–70	see also cardiotocograph (CTG); intrapartum fetal surveillance	breech delivery 119–20 general examination 15–17 initial assessment 15
abruption 70	fetal pulse-oxymetry (FPO) 48-9	investigations 17
contractions 68 cord compression 68	fetal reserve 67	mobility and posture 18 practical aspects 21–3
cord prolapse 69	anaesthesia and 68	twin birth 126
failure to progress 68	antenatal factors 67 assessment 67	vaginal examination 17
maternal positioning 68–9 uterine rupture 70	fetal scalp blood sampling (FBS) 45–7	fistula formation, caesarean section
vasa praevia 69	interpretation of results 45	and 114
consequences of intervention 66-7	lactate measurements 46-7	fluid balance management 269, 270-1
decision-making 67, 73–4	problems with 46	fluid infusion 162
delivery 71–2 caesarean section 72	fetal scalp stimulation tests 45	forceps delivery 97-8
forceps or vacuum delivery 72	feto-maternal haemorrhage 147	classical forceps 97
fetal reserve 67	fetus	excessive force 338–9
assessment 67 management 67–74	assessment in pre-eclampsia 266	fetal distress and 72 forceps application 97
non-technical skills 72–4	asynclitism 7 attitude 7	in malposition of the fetal head 98
see also intrauterine resuscitation	blood sampling see fetal scalp blood	special forceps 97
fetal electrocardiogram (ECG) 47-8	sampling (FBS)	traction 97–8
ST segment analysis 47	caesarean section complications 112	versus vacuum delivery 89–90 see also operative vaginal delivery
pathophysiological changes 47–8	injuries during operative vaginal delivery 99–100, 100–1	gastroesophageal reflux 77
fetal fibronectin see fibronectin, fetal	cephalhaematoma 99	gemeprost 204
fetal growth restriction <i>see</i> intrauterine	intracranial trauma 100	• •
growth restriction (IUGR)	nerve injury 100–1 scalp trauma 99	general anaesthesia see anaesthesia
fetal heart rate (FHR)	skull fractures 100	genital tract sepsis 176
cord prolapse and 133 hypoxia responses 274	subgaleal haemorrhage 99–100	gestational diabetes 236 delivery 236
uterine rupture and 256	intrauterine fetal demise (IUD) 201 induction of labour management	diabetic control 236
fetal heart rate (FHR) monitoring	205–6	Glasgow Coma Score 175
accelerations 41–2	lie 6	group B streptococcus (GBS), preterm
baseline heart rate 41 baseline variability (BLV) 41	position 6–7 delivery in malposition of the	prelabour rupture of
categorization of FHR features 43–4	fetal head 98	membranes and 211–12
continuous electronic fetal	occipito-transverse (OT) position	eradication therapy 212
monitoring (EFN) 39–43 cycling 42	of the head 98	haematoma see cephalhaematoma;
decelerations 42–3	persistent occipito-posterior position (POP) 86	pelvic haematoma
complicated variable	presentation 6, 86	haemophilia 233 delivery 234
decelerations 42	skull 3–4	postnatal management 234
early decelerations 42 interpretation of 42–3	caput succedaneum 4	treatment 233
late decelerations 42	fractures during operative vaginal delivery 100	haemorrhage
prolonged decelerations 42	moulding 3, 21	caesarean section complications
uncomplicated variable	see also fetal distress; fetal heart rate	112-13
decelerations 42 failure to monitor appropriately	(FHR); intrapartum fetal surveillance	epidural 100 feto-maternal 147
334–6		retinal 101
failure to respond to abnormal cardiotocograph 336–8	fibronectin, fetal preterm labour prediction 219	subdural 100 subgaleal 99–100

More information

uterine rupture and 257 see also antepartum haemorrhage	hypotonia 160	suitability assessment 198–9 Bishop score 197, 198
(APH); postpartum haemorrhage	hypoxia 40, 42–3, 45 causes 332	cervical length measurement by ultrasound 198–9
haemorrhagic shock 149–50	ECG changes 47–8 negligence claims 332–3	fetal fibronectin 199
anti-shock garment 168	pathophysiology, animal studies	infection
shock index (SI) 169	273-4	caesarean section complications 113
see also postpartum haemorrhage (PPH)	see also asphyxia; cerebral palsy; resuscitation	wound infection 294–5 group B streptococcus (GBS)
head entrapment 124	hypoxic ischaemic encephalopathy	211–12
headache	(НІЕ) 258	maternal infectious diseases 239–40
postdural puncture headache 30,	hysterectomy	genital herpes 240 hepatitis B 239
292–3	postpartum haemorrhage and 167-8	hepatitis C 240
postnatal, causes 292	previous caesarean section and 249–50	HIV 239
heart disease 227–9 acute postpartum illness 178	uterine rupture and 257–8	myasthenia gravis and 239 perineal breakdown 292
infective endocarditis 229	immediate puerperium 285	preterm labour risk and 218
mode of delivery 228	see also puerperium	puerperal sepsis 288–9
monitoring during labour 229 postpartum haemorrhage and 229	incident reporting 313-15	urinary tract 113, 293–4 see also antibiotic therapy
regional analgesia and 228	see also clinical incidents	infective endocarditis 229
timing of delivery 228	induction of labour 195	prophylaxis 229
HELLP syndrome 266, 271	care during 203–4 failed induction 203	inflation breaths 276
heparin see low molecular weight heparin (LMWH)	options 204 indications for 199–202	informed consent, caesarean section
_	diabetes 201	104–5
hepatitis B 239	fetal growth restriction 200	inherited coagulation deficiencies 233–4
hepatitis C 240	hypertension 200 intrauterine fetal demise (IUD)	delivery 234
hernia formation, caesarean section and 114	201, 205–6	postnatal management 234
high blood pressure see hypertension;	isolated oligohydramnios	treatment 233
pre-eclampsia	at term 200–1 macrosomia 201	insulin, sliding scale of , 235–6
HIV infection 239	maternal request 201	internal iliac artery ligation 166–7
antiretroviral treatment 239 mode of delivery 239	prelabour rupture of membranes (PROM) 199–200	internal podalic version (IPV) twin birth 127
hydralazine 267	previous caesarean section 201-2	interventional radiology, postpartum
hydration in labour 76, 81–2	prolonged pregnancy 199 twin pregnancy 201	haemorrhage 167
carbohydrate solutions 79–80	methods 195–8	intracranial trauma 100
isotonic sport drinks 79	artificial rupture of membranes	intrapartum fetal surveillance 38, 49
oral intake 78–9 patient choice 81	196 dinoprostone 197	continuous electronic fetal monitoring (EFM) 39–43
rehydration 17	mechanical methods 195-6	accelerations 41–2
hydrotherapy 26	membrane sweeping 195	baseline heart rate 41
hyperstimulation 202-3	misoprostol 197–8 oxytocin 196–7	baseline variability 41 cycling 42
hypertension 262	risks of 202-3	decelerations 42-3
antihypertensive therapy 266–7	fetal heart rate abnormalities 203 hyperstimulation 202–3	fetal pulse oxymetry (EPO) 48-9
blood pressure measurement 264–5 induction of labour and 200	increased analgesia requirements	fetal pulse-oxymetry (FPO) 48–9 fetal scalp blood sampling (FBS) 45–7
postpartum 291	202	fetal scalp stimulation tests 45
see also pre-eclampsia	increased operative delivery 202 prostaglandin side effects 202	intermittent fetal monitoring 38–9 admission cardiotocograph
hyponatraemia 180	uterine rupture 203, 254	(CTG) 39
hypotension, regional analgesia and 29	with previous caesarean section 246–7, 247–8	intermittent auscultation (IA) 38–9



Index

intrapartum fetal surveillance (cont.) intermittent electronic fetal monitoring (EFM) 39 sinusoidal trace 43–4 see also cardiotocograph (CTG); fetal heart rate (FHR)	true versus false labour 17 see also hydration in labour; nutrition in labour; preterm labour labour ward clinical scenarios 306–10	latent phase of labour 23 prolonged second stage of labour avoidance 88 twin birth 126 uterine contractions and 59–60 uterine rupture and 254
intrauterine fetal demise (IUD) 201 induction of labour management 205-6 intrauterine growth restriction (IUGR) 200 pre-eclampsia and 266	communication 305–6 space 303 staffing issues 302–3 workload 303–4 see also teamwork; triage lactate measurements 46–7	when to augment 21 key components of 20 optimal uterine activity achievement 24 previous caesarean section and 241 see also elective repeat caesarean section (ERCS); vaginal birth
intrauterine resuscitation 70–1 amnioinfusion 71 intravenous fluids 70–1 maternal positioning 70 oxygen 71 potential responses 70 stopping the contractions 70 tocolysis 70	laryngeal nerve injury 100 latent phase 19 augmentation in 23 leadership 327–8 Leopold manoeuvres 7–8 levator ani 184–5	after caesarean (VBAC) see also first stage of labour; second stage of labour; specific conditions; third stage of labour maternal medical disorders 227 Addison's disease 236–7 anticoagulation management
intravenous fluids, intrauterine resuscitation 70–1 intubation difficulties 32 failed intubation 35–7	lidocaine 35 litigation 332–3 legal process 333 see also cerebral palsy	asthma 237 Berry aneurysms 239 cerebral arteriovenous malformations 239
investigations 17	liver function tests 266	cystic fibrosis 237 diabetes 234–6
isotonic sport drinks 79	lochia 285	epilepsy 237–8
keloid scarring 114	Lovset's manoeuvre 122	heart disease 227–9
ketones 78–9	low molecular weight heparin	infectious diseases 239–40 genital herpes 240
Kleihauer-Betke test 147	(LMWH) 229-30, 230-2, 291	hepatitis B 239
Klumpke's palsy 139	metal heart valves and 231-2	hepatitis C 240 HIV 239
labetalol 267	recurrent miscarriage and 230-1 regional analgesia and 230	inherited coagulation deficiencies
labour 1, 6–7 breech birth 119–20 diagnosis of 15 fetal presentation 6, 86	therapeutic dose 230 urgent delivery and 232 venous thromboembolism prophylaxis 231	233–4 myasthenia gravis 238 obstetric cholestasis (OC) 240 renal disease 240
induction of see induction of labour initiation of 5–6 management of see management mechanism 10–11	McRoberts' position 135–6 macrosomia 134 induction of labour and 201 vaginal birth after caesarean	sickle cell disease 234 thrombocytopenia 232–3 thrombosis 229–30 see also specific conditions
descent 10 engagement 10 expulsion 11	and 249–50 magnesium sulphate	maternal morbidity see morbidity maternal position anaesthesia and 33
extension 10 external rotation 11 flexion 10	seizure management 268 seizure prevention 268–9 management 14	fetal distress and 68–9 intrauterine resuscitation 70 prolonged second stage of labour
internal rotation 10 normal 14–15	anticoagulation see anticoagulation management	and 87 reducing cord compression 133
progress of 14 diagnosis of poor progress 19–20 fetal distress and 68	augmentation 20–4 active phase of labour 23 breech birth 119–20	Mauriceau–Smellie–Viet technique 120, 121
stages of 10 see also first stage of labour;	duration of 24 following previous caesarean	meconium 18–19 aspiration 281–2
second stage of labour; third stage of labour	section 246–7, 248 indications 20–1	medical disorders <i>see</i> maternal medical disorders

More information

medical error 311–12 see also cerebral palsy; clinical	placental abruption 147 postpartum haemorrhage 160	nitrous oxide 27
incidents; negligence claims	pre-eclampsia/eclampsia 265	nuchal arms 123–4
membrane sweeping 195	preterm birth and 216–17 uterine rupture 258–9	nutrition in labour 76, 81–2 carbohydrate solutions 79–80
Mendelson's syndrome <i>see</i> aspiration of gastric contents	moulding 3, 21	isotonic sport drinks 79 light diet 79
mental disorders <i>see</i> psychiatric disorders	multiple birth 116, 124–9 at term 124–5	oral intake 78–9 patient choice 81
metabolic acidaemia 45-6	caesarean section 124–5, 127 preterm breech 127–9	see also aspiration of gastric contents
metal heart valves 231-2	induction of labour 201	obesity, shoulder dystocia risk and 134–5
methyldopa 267	preterm labour risk 218 vaginal twin birth 125–9	objective structured assessment of
metoclopramide 33	after previous caesarean section	technical skills (OSATS) 341
mifepristone 205	249–50 birth of non-vertex second twin	development with specialty training 341–2
misoprostol 155, 164 heart disease and 229 induction in intrauterine death 205 uterine rupture and 254 mobility in labour 18	127 conduct of birth 126–7 conduct of labour 125–6 inter twin delivery interval 126–7 selection 125 myasthenia gravis (MG) 238–9	format 342–3 future developments 347 generic technical skills assessment domain 343–6 in practice 346–7 requirements 346
monitoring 335 failure to monitor appropriately 334–6	drug use and drug interactions 238 neonatal 238	obstetric anal sphincter injuries (OASIS) 99, 182
Recommendation Grades 335	myocardial infarction (MI) 178	diagnosis 186–7 repair 188–90
labour following previous caesarean section 246–7 pre-eclampsia 265–6	myomectomy, uterine rupture and 254	follow-up 191 postoperative care 190–1
see also fetal heart rate (FHR)	myometrial activity see uterine activity	subsequent pregnancy management 191–3
monitoring	necrotizing fasciitis 295	obstetric cholestasis (OC) 240
morbidity 14, 66 breech birth at term 116 cord prolapse and 134	negligence claims 332–3 legal process 333 <i>see also</i> cerebral palsy	occipito-transverse (OT) position of the fetal head 98
operative vaginal delivery fetal trauma 99–100	neonate	Ogilvie's syndrome 113, 289
maternal trauma 98–9	congenital abnormalities 282 management with maternal	oligohydramnios 200-1
89–90, 98 versus caesarean section 90–1 placenta praevia 142–3 fetal 143 maternal 142–3 placental abruption 147 fetal 147 maternal 147 preterm birth and 216–17 shoulder dystocia, 138–9 maternal morbidity 138 neonatal morbidity 138–9 uterine rupture 258, 259 vaginal birth after caesarean 243 mortality 14, 38, 66, 311 anaesthetic related 31	diabetes 236 neonatal myasthenia gravis 238 persistent pulmonary hypertension of the newborn (PPHN) 282–3 premature 223 resuscitation 134, 273–9 babies born outside hospital 282 meconium-stained liquor and 281–2 opening the airway 279–81 premature baby 281 shock 283 shoulder dystocia 138–9 see also morbidity; mortality nerve injury during operative vaginal delivery 100–1	choice of instrument 101 classification 93 contra-indications 94 fetal injuries 99–100, 100–1 cephalhaematoma 99 intracranial trauma 100 nerve injury 100–1 scalp trauma 99 skull factures 100 subgaleal haemorrhage 99–100 indications 93 induction of labour and 202 maternal injuries 98–9 prior assessment 88–9, 94–5 training 101 vacuum versus forceps 89–90
causes of maternal death 173, 268 cord prolapse 134	neuropraxia 293	versus caesarean section 90–1 see also forceps delivery; vacuum
multiple birth 124-5	nifedipine 220–1, 267	delivery
placenta praevia 143	nitroglycerin 70	opioid analgesia 27-8, 78



Index

oral intake 17, 78–9	medico-legal considerations 193	management 148–50
patient choice 81	postnatal check 286	disseminated intravascular
see also hydration in labour;	prevention 193	coagulation 150
nutrition in labour	tears 98–9	expectant management 148-9
ovarian artery ligation 166	training 193	haemorrhagic shock 149-50
, 6	see also episiotomy	immediate delivery 149
oxygen, intrauterine resuscitation 71	perineum	postpartum haemorrhage 150
oxytocin 154, 196-7	anatomy 182	renal failure 150
administration 204	anal triangle 183–4	subsequent pregnancy 150
dosage 23-4	levator ani 184–5	previous caesarean section
intraumbilical 155	perineal body 184	and 249–50
postpartum haemorrhage 164	urogenital triangle 182–3	risk factors 146–7
prelabour rupture of membranes	assessment after birth 154	platelet monitoring 266
and 200	postpartum breakdown 291–2	postdural puncture headache
prolonged second stage of labour	see also perineal trauma	30, 292–3
avoidance 88	peripartum cardiomyopathy (PPCM)	clinical features 292–3
twin birth 126	176	management 293
uterine contractions and 59–60		
pain relief 26	persistent occipito-posterior position	postnatal check 285–6
asthma and 237	(POP) 86	bladder function 286
induction of labour and 204	persistent pulmonary hypertension of	bowel function 286
with intrauterine death 205-6	the newborn (PPHN) 282-3	caesarean section scar 285
women's views of 26	nothiding 27, 9	emotional/mental state 286
see also analgesia	pethidine 27–8	infant feeding issues 286
paralytic ileus 113	Pierre Robin sequence 282	lochia 285 maternal observations 285
	placenta	perineal wound 286
partogram 14–15, 19	delivery in caesarean section 110	social issues 286
action line 15, 21–3	separation 153	thrombosis risk 286
alert line 15	signs of 153-4	uterus 285
patient-controlled epidural analgesia	see also retained placenta	
(PCEA) 29		postnatal depression 296, 298
Pawlik's manoeuvre 8	placenta accreta/increta/percreta	management 298
Fawlik's Illalloeuvie 8	146, 158–9	postpartum collapse see acute illness,
pelvic devascularization 166-7	previous caesarean section and 249–50	postpartum period
pelvic floor morbidity 99	pre-operative investigations 249	
	see also retained placenta	postpartum haemorrhage (PPH) 150, 156, 160, 169, 175
pelvic haematoma 287–8		causes of 160
clinical features 287	placenta praevia 114, 142-6	
management 287–8	definition 142	haemodynamic changes 161
pelvis 1–3	diagnosis 143–4	heart disease and 229
examination 8–9	fetal risks 143	management 161-2
inlet 1	grading of 142	activated factor VII 169
outlet 1-3	management 144-6	anti-shock garment 168
shapes 1	expectant management 144-5	cell salvaging 169
tilt 1	immediate delivery 144	compression sutures 165–6
	mode of delivery 145-6	direct uterine massage 165
perineal repair see perineal trauma	maternal risks 142–3	hysterectomy 167–8
perineal trauma 98-9, 182	prevalence 142	interventional radiology 167
classification 185	previous caesarean section and 249	pharmacological treatment 164
diagnosis 186-7	pre-operative investigations 249	surgical management 164
management 182, 187–93	screening 144	systematic pelvic
first-degree tears 187	placental abruption 146-50	devascularization 166–7
follow-up 191	clinical implication 147	tamponade or uterine packing
postoperative care 190–1	fetal risks 147	164-5
second-degree tears 187–8	maternal risks 147	mortality 160
subsequent pregnancy 191–3	diagnosis 147–8	prevention 158
third- and fourth-degree tears	<u>.</u>	primary PPH 161
188-90	ultrasonography 148	resuscitation 162–4
	grading of 146	risk factors 157–8, 161

More information

rule of 161 secondary PPH 161, 286–7 sepsis 176 shock index (SI) 169	antibiotics 221–2 cervical cerclage 222–3 corticosteroids 221, 222 tocolysis 220–1	non-serious emotional disturbance 296 postnatal depression 298 puerperal psychosis 297–8 serious disorders 296
tamponade test 168 posture in labour 18	mode of delivery 223 pathophysiology 217–18 prevention 222–3	puerperal psychosis 297-8
pre-eclampsia 175, 262 assessment 264 blood pressure measurement 264–5 fetal assessment 266 proteinuria measurement 265 classification 264	risk factors 218–19 demographics 218 infection 218 obstetric history 218 psychosocial factors 218–19 see also preterm birth	management 298 puerperium 285 complications 286–98 anaemia 295 backache 293 breast problems 295 caesarean section wound
definitions 262 diagnosis 262, 264 management 266–9, 269–70 antihypertensive therapy 266–7 delivery 269–70 discharge 271 fluid balance 269, 270–1 postdelivery care 270–1	preterm prelabour rupture of membranes (pPROM) 207-13 amniocentesis role 212-13 diagnosis 208 group B streptococcal colonization and 211-12 eradication therapy 212	problems 294–5 fatigue 295 neuropraxia 293 Ogilvie's syndrome 289 pelvic haematoma 287–8 perineal breakdown 291–2 postdural puncture headache 292–3
predelivery care 266–9 problems 263–4 seizures 268–9 thromboprophylaxis 269 monitoring 265–6 fluid management 266 liver function tests 266	management 208–11 antibiotic therapy 209–11 appropriate setting for 208–9 corticosteroid therapy 211 timing of delivery 209 tocolysis 211 pathophysiology 207	postpartum hypertension 291 psychiatric disorders 295–8 secondary postpartum haemorrhage 286–7 sepsis and endometritis 288–9 symphysis pubis pain 293 thromboembolism 289–91
platelets 266 urea and creatinine 265–6 uric acid 265	primary dysfunctional labour (PDL) 19 prioritization <i>see</i> triage	urinary incontinence 294 urinary retention 294 urinary tract infection 293–4 postnatal check 285–6
prelabour rupture of membranes (PROM) 199–200 see also preterm prelabour rupture	progesterone 5 preterm labour and 217 prevention 222	pulmonary aspiration <i>see</i> aspiration of gastric contents
of membranes (pPROM) premature labour <i>see</i> preterm labour	progress of labour 14 augmentation see management	pulmonary embolism (PE) 176-7 pulmonary oedema 269, 270-1
premedication 32–3	diagnosis of poor progress 19–20 fetal distress and 68	pushing in labour 87–8
presentation 6 breech presentation 6	prolonged pregnancy 199	ranitidine 33
prolonged second stage of labour and 86	prolonged second stage of labour see second stage of labour	regional anaesthesia see anaesthesia regional analgesia see analgesia
preterm birth 216 causes 217	prostaglandins 5-6, 164, 198, 200 asthma and 237	rehydration 17 fluid infusion 162
epidemiology 216, 217 resuscitation of the premature	care during administration 203–4	remifentanil 28
baby 281 seguelae 216–17	options on failed induction 204	renal disease 239-40
vaginal birth after caesarean 249–50	previous caesarean section and 247	renal failure 150
preterm labour 216	side effects 202	respiratory depression 177
care of premature neonate 223 long-term prediction of 219–20 cervical length 219 fetal fibronectins 219 inflammatory markers 219–20	hyperstimulation 202–3 proteinuria measurement 265 psychiatric disorders 295–6, 296–7 management 296–7	resuscitation neonate 134, 273–9 babies born outside hospital 282 meconium-stained liquor and 281–2
risk scoring systems 220 management 220–2	pharmacological treatments 297 psychological treatments 297	opening the airway 279–81 premature baby 281



Index

resuscitation (cont.) postpartum collapse 173, 174	epidural anaesthesia and 86–7 episiotomy and 88	previous shoulder dystocia 134 training recommendations 139–40
postpartum haemorrhage 162–4	operative vaginal delivery versus	sickle cell disease 234
see also intrauterine resuscitation	caesarean section 90–1 outcomes 85	sinusoidal trace 43-4
retained placenta 156–9 causes of 156	vacuum versus forceps delivery	skin incision 108
management 156 manual removal technique 156–7 postpartum care 157 postpartum haemorrhage prevention 158	89–90 secondary arrest of cervical dilatation (SACD) 19–20 seizures eclamptic 268–9	skull, fetal 3–4 caput succedaneum 4 fractures during operative vaginal delivery 100 moulding 3, 21
risk factors 156 for postpartum haemorrhage	management 268	sodium citrate 32-3
157–8 special circumstances 158–9	prevention 268–9 epileptic 237–8	speculum examination 8-9
retinal haemorrhage 101	sepsis 176, 288	spinal anaesthesia 34
risk management 311, 313–20, 321 context 311–12	puerperal 288–9 clinical features 288 management 288–9	combined spinal epidural anaesthesia (CSE) 35 sequential block 35
developments 320–1	shock, neonatal 283	spinal cord injury 101
feedback 321 hierarchy of 320	see also haemorrhagic shock	staffing issues 302-3
resulting changes in practice 317 risk analysis 315–16	shock index (SI) 169	starvation in labour <i>see</i> nutrition in labour
risk control 316-20	shoulder dystocia 134–40 definition 134	steroid therapy 237
audit 320 communication 318–20	documentation 138	see also corticosteroid therapy
guidelines 318	incidence 134 management 135–8	stroke 180
induction 316	after the birth 138	subaponeurotic haemorrhage 99-100
training 317–18 risk identification 313–15	all-fours manoeuvre 137	subarachnoid haemorrhage 100
clinical incidents 313–15	call for help 135 delivery of the posterior arm 137	subdural haemorrhage 100
risk assessment 313-15, 316	episiotomy and 136	subgaleal haemorrhage 99–100
ritodrine 220, 221	internal rotational manoeuvres 136–7	support in labour 87
Root Cause Analysis (RCA) 316	McRoberts' position 135–6	suprapubic pressure 136
Rubin I manoeuvre 136	recognition of shoulder dystocia 135	symphyseal-fundal height (SFH) 7
Rubin II manoeuvre 136-7	Rubin II manoeuvre 136–7 stating the problem 135	symphysiotomy 137–8
rupture of membranes see artificial	suprapubic pressure 136	symphysis pubis pain 293
rupture of membranes (ARM); prelabour rupture of	symphysiotomy 137–8	synometrine 154–5, 164
membranes (PROM)	things not to do 138 Woods' screw 136	syntocinon 164, 205
safety culture 328-9	Zavenelli manoeuvre 137	heart disease and 228, 229
scalp stimulation tests 45	maternal morbidity 138 neonatal morbidity and mortality	regimens 198
scalp trauma during operative vaginal delivery 99–100	138–9 brachial plexus injury 138–9	systemic inflammatory response syndrome (SIRS) 176
scar dehiscence 59	pathophysiology 134 prediction 135	tamponade, postpartum haemorrhage 164–5
screening, placenta praevia 144	prevention 135	tamponade test 168
second stage of labour 84 duration 84–5 prolonged 84–5, 91 assessment prior to operative delivery 88–9 avoidance 87–8 causes of 86	risk factors 134–5 gestational age 135 instrumental delivery 134 intrapartum risks 135 macrosomia 134 maternal diabetes mellitus 134 maternal obesity 134–5 parity 135	teamwork 323–4, 327–9 communication among team members 328 leadership 327–8 lessons from experience 329–30 safety culture 328–9 team characteristics 327
	1 " '/ '	

Index

team performance measurement 328 training 323–4, 330 integral versus additional training 329 lessons from experience 329–30 see also drills technical skills see objective structured assessment of technical skills (OSATS); training	training 341 emergency training see drills operative vaginal delivery 101 perineal trauma 193 risk control 317–18 shoulder dystocia 139–40 teamwork 323–4, 330 integral versus additional training 329 lessons from experience 329–30 see also objective structured	clinical features 255–6 antepartum rupture 255 intrapartum rupture 255–6 postpartum rupture 256 complications 258–9 maternal 258–9 perinatal 258 diagnosis 256–7 differential diagnosis 258 epidemiology 252 findings at time of laparotomy 256
terbutaline 70	assessment of technical skills	management 257–8
termination of pregnancy, uterine rupture risk 254 third stage of labour 153 haemostasis 153	(OSATS) transcutaneous electrical nerve stimulation (TENS) 27 trauma	mechanisms 255 risk factors 253–5 augmentation 254 congenital uterine malformation
management 154–5 active management 154 caesarean section 154 errors 158 expectant management 154 uterotonic drugs 154–5 perineum assessment 154 placental separation 153 signs of 153–4 see also retained placenta vaginal examination 154	operative vaginal delivery 98–100 uterine rupture and 254 see also morbidity; perineal trauma triage 300, 301 clinical scenarios 306–10 in obstetrics 301–2, 304–6 principles of 300–1 twin births see multiple birth umbilical artery blood sampling 46	connective tissue disorders 254–5 induction of labour 203, 254 obstructed labour 254 pregnancy termination 254 previous caesarean section 114, 246, 247, 253 previous uterine surgery 254 trauma 254 subsequent reproductive outcome 259–60
thrombocytopenia 232-3	umbilical cord see cord compression;	uterus atonia 160, 162
thromboembolic disease 176–7, 229–30 air embolus 180 amniotic fluid embolus 176 anticoagulation management 230–2 caesarean section complications 113 cerebral vein thrombosis 177 postnatal check 286 prophylaxis with pre-eclampsia 269 puerperal 289–91 clinical features 290 investigations 290–1 management 290, 291 risk factors 289–90 pulmonary embolism (PE) 176–7	cord prolapse urea monitoring 265–6 ureteric injury 112, 249–50 uric acid monitoring 265 urinary incontinence 294 urinary retention 294 management 294 urinary tract infection caesarean section complications 113 management 293–4 puerperal 293–4 urogenital triangle 182–3 uterine activity 4–5, 6 achievement of optimal activity 24	closure 110–11 compression sutures 165–6 congenital malformation 254 exposure and entry 108–9 lower segment incision 109 midline and classical incisions 110 hyperstimulation 202–3 hypotonia 160 massage 165 packing, postpartum haemorrhage 164–5 postnatal check 285 see also uterine activity; uterine rupture vacuum delivery 95–7 fetal distress and 72
thrombophilia screen 290	hyperstimulation 202–3	in malposition of the fetal head 98
tocography external 55 internal 55–6	normal labour 58 quantification of 56–7 uterine activity units 57–8 see also contractions	traction 96–7 vacuum cup attachment 95–6 versus forceps delivery 89–90 see also operative vaginal delivery
tocolysis external cephalic version and 117 intrauterine resuscitation 70 preterm labour management 220–1 preterm prelabour rupture of membranes and 211	uterine artery catheterization 167 ligation 166 uterine electromyography (EMG) 56 uterine rupture 70, 252, 260	vaginal birth after caesarean (VBAC) augmentation 246–7, 248 comparative risks and benefits 243, 244, 250 contra-indications 243–5 obstetric complications 245

causes 253

classification 252-3

twin birth 126

previous uterine incision 245

data limitations 241



Index

vaginal birth after caesarean (VBAC) (cont.) definition of terms 242 delivery setting 246 determining the mode of delivery 241 - 3epidural anaesthesia 246 fetal macrosomia and 249-50 induction of labour 201-2, 246-7, 247 - 8intrapartum care 246 likelihood of success 245-6 monitoring in labour 246-7 preterm VBAC 249-50 short interdelivery period 249-50 twin gestation 249-50 see also caesarean section (CS)

vaginal examination 9, 17
after birth 154
vaginosis, preterm labour and
219–20
vasa praevia 69, 146
vasovagal syncope 180–1
venous thromboembolism (VTE)
113, 229–30
prophylaxis 231, 269
puerperal 289–91
clinical features 290
investigations 290–1
management 290, 291

risk factors 289-90

ventilation-perfusion (V/Q) lung scan 290-1
vesicouterine fistula 114
von Willebrand's disease (VWD) 233
delivery 234
postnatal management 234
treatment 233
warfarin 231, 232, 291
Woods' screw 136
workload 303-4
wound complications 113, 294-5
management 295
Zavenelli manoeuvre 137