Cambridge University Press 978-1-108-29677-9 — Obstetric Decision-Making and Simulation Edited by Kirsty MacLennan , Catherine Robinson Index More Information

Index

acute coronary syndrome, 244 acute fatty liver of pregnancy (AFLP), 142 acute pulmonary embolism, 104-12. See also venous thromboembolism investigations, 110-11 compression duplex ultrasound, 110 CT pulmonary angiography, 111 CXR, 110 D-dimer assays, 110 ECG, 110 V/Q scanning, 111 management, 111-12 counselling, 112 delivery planning, 111 embolectomy, 111 heparin, 111 thrombolysis, 111 risk factors, 110 scenario, 104-9 Advocacy with Inquiry method, 25 airway changes in pregnancy, 188 airway management general anaesthesia, 191 preterm infant, 312 amniotic fluid embolism, 87-94 diagnosis, 93 frequency of presenting features, 93 incidence, 92 management, 93-94 mortality, 92 pathophysiology, 92 risk factors, 92 scenario, 87-92 anaesthesia. See also severe local anaesthetic toxicity; subdural block; total spinal anaesthesia current areas of interest, 189-92 airway management, 191-92 consent, 189 induction drugs, 190-91 maintenance of anaesthsia, 191 muscle relaxants, 191 opioids, 191 positioning, 190 pre-oxygenation, 190 general anaesthesia scenarios, 177-92 organisational factors, 189 physiological considerations in pregnancy, 188-89 airway changes, 188 cardiovascular changes, 189 CNS changes, 189 gastrointestinal changes, 189 respiratory changes, 188

severe pre-eclampsia and, 130-31 analytical decision-making, 40 anaphylaxis, 95-103 causes, 100 definition, 100 differential diagnosis in pregnancy, 101 investigation, 101 management, 101 recognition of, 100-101 scenario, 95-100 anchoring, heuristic, 40 aneurysmal subarachnoid haemorrhage. See subarachnoid haemorrhage antepartum haemorrhage, 193-200 causes, 198, 206 definition, 198 perimortem caesarean section scenario, 193-97 anticoagulation, acute pulmonary embolism management, 111 antiplatelet medication, 247 antiviral therapy, influenza in pregnancy, 236 aortic dissection, 247 treatment, 247 asking for help, 42 AT-MIST communication tool, 47 atrioventricular heart block. See heart block attention allocation, 39 authentic learning, 17 availability heuristic, 40 behavioural learning, 18 behaviourist theories, 5 biases, 40-41 cognitive debiasing, 43 blood pressure monitoring, pre-eclampsia management, 128 blood products amniotic fluid embolism management, 94 postpartum haemorrhage management, 215 - 16bradycardia, 261 management, 263 breathlessness differential diagnosis, 254 caesarean section decision to delivery interval (DDI) minimisation, 79-82 communication in an emergency, 84 consent issues in an emergency, 83-84 simulated patient actors, 84-85

perimortem. See perimortem caesarean section urgency classification, 82-83 carboprost, 215 cardiac arrest, 198. See also perimortem caesarean section outcomes, 199 cardiomyopathy. See peripartum cardiomyopathy cardiovascular changes in pregnancy, 55, 189, 263 cardiovascular disease. See also specific conditions risk factors, 244 trends, 244 central nervous system changes in pregnancy, 189 checklists, 48-49 chest drain, 236 chest pain, 239-48 cardiac ischaemic, 246 scenario, 239-44 Clindamycin, 226 cognitive debiasing, 43 cognitive load theory, 5 cognitive theories, 5 commission bias, 41 communication, 46-47 elements of effective communication, 46 in an emergency, 84 tools, 47-49 AT-MIST, 47 checklists, 48-49 GAMES, 48 SBAR, 47 with family of preterm infant, 312 complexity theory, 17 comprehension of the current situation, 38 errors, 39 compression duplex ultrasound, pulmonary embolism investigation, 110 computer screen-based simulators, 30 confidentiality agreement, 23 confirmation bias, 41 consent issues in an emergency, 84 in anaesthesia, 189 constructivist approach, 5 cord clamping, preterm infant, 311 coronary angiography, 247 coronary artery dissection, 246 treatment, 246 cost issues, 33

315

Cambridge University Press 978-1-108-29677-9 — Obstetric Decision-Making and Simulation Edited by Kirsty MacLennan , Catherine Robinson Index More Information

Index

crew resource management (CRM), 36 CT pulmonary angiography (CTPA), 111 DASH structure, 27 DC cardioversion, 273-75 D-dimer assays, 110 debriefing, 12, 13, 22-23 assessment of, 27 challenges, 26-27 destroyers, 26-27 non-talkers, 26 talkers, 26 debrief delivery stage, 23-24 debrief models, 24-26 Advocacy with Inquiry, 25 Frames model, 25-26 GREAT model, 25 Sharp model, 24-25 historical background, 22 psychological debriefing phases, 24 topics for discussion, 54 video-assisted debrief, 27 decision-making, 40-42 analytical, 40 dual process, 41-42 heuristics, 40-41 naturalistic, 41 pattern matching, 40 shared, 42 strategies, 42-43 deep vein thrombosis, 110. See also acute pulmonary embolism deliberate practice, 5 destroyers, 26-27 developmental conversation, 11 diabetic ketoacidosis, 277-85 aetiology, 283 biochemical monitoring, 284-85 clinical presentation, 283 definition, 283 in pregnancy, 283 management, 283 insulin infusion, 284 IV fluids, 284 triggers, 284 resolution, 285 scenario, 277-83 directed communication, 47 distributed practice, 33 distributed situational awareness, 38 dual process decision-making, 41-42 early warning scoring system, 55 ECG changes during pregnancy, 246-48 pulmonary embolism investigation, 110 eclampsia, 120 acute seizure management, 117-18 clinical presentation, 119 definition, 118 incidence, 118 management, 119-20 delivery, 120 magnesium sulphate, 119 therapy monitoring, 119-20 scenario, 113-17 educational design, 5

embedded participants, 18 embolectomy, 111 engineering fidelity, 29 equipment, 12, 54 equipment race, 13 ergometrine, 215 ergonomics, 35. See also human factors errors, 35. See also human factors situational awareness, 39 expertise, 39-40 facilitation, 23-24 feedback from patients, 14 fentanyl, 155 fibrinogen, 216 fidelity, 3, 5, 18, 29 appropriateness of, 32 cost issues, 33 enhancement measures, 32-33 high vs low, 31-32 physical vs psychological, 29 flipped-classroom approach, 18 fluids amniotic fluid embolism management, 94 diabetic ketoacidosis management, 284 postpartum haemorrhage management, 215-16 pre-eclampsia management, 129 Frames model, 25-26 fresh frozen plasma (FFP), 216 functional resonance analysis method (FRAM), 12 GAMES pneumonic, 48 gastrointestinal changes in pregnancy, 189 general anaesthesia. See anaesthesia GREAT model, 25 group A Streptococcal puerperal sepsis, 219-26 clinical presentation, 225 incidence, 224 investigations, 225 management, 226 pathogenesis, 225 scenario, 219-24 transmission, 225 haematological changes in pregnancy, 55 haemolytic-uraemic syndrome (HUS), 141-42 atypical (aHUS), 141 haptic systems, 30 Haultain procedure, 64 healthcare simulation. See simulation heart block, 257-65 causes, 263 complete heart block management plan, 263 anaesthetic assessment, 263 delivery, 263 pacing, 263-65 complete heart block scenario, 257-61 first degree, 261 in pregnancy, 261-63 second degree, 262 Mobitz type 1, 262

Mobitz type 2, 263 third degree/complete, 263 heart disease in pregnancy, 272. See also specific conditions HELLP syndrome, 129-30 clinical presentation, 130 complications, 130 definition, 129 incidence, 130 management, 130 risk factors, 130 heparin, 247 acute pulmonary embolism management, 111 heuristics, 40-41 high fidelity simulation, 31. See also fidelity high neuraxial block, 155-57. See also total spinal anaesthesia aetiology, 155 clinical effects, 155 definition, 155 incidence, 155 management, 155-57 human factors, 35, 45 definition, 35-36 errors, 35 Huntingdon's procedure, 64 hybrid simulations, 3, 30 hyperkalaemia, 284 hypokalaemia, 284 in situ simulation, 11. See also interprofessional *in situ* simulation; simulation aims of, 11, 12 psychological impact, 14 resources for, 12-13 safety issues, 12 space for, 13 influenza in pregnancy, 234-36. See also pneumonia and respiratory failure clinical features, 235 diagnosis, 235 management, 235-36 antiviral therapy, 236 instinct, trusting, 42 insulin infusion, diabetic ketoacidosis, 284 integrated simulators, 30-31 interprofessional education (IPE), 16 interprofessional in situ simulation, 16 design characteristics, 18-19 evaluation, 19 by facilitators, 20 by participants, 19 facilitation, 19 facilitators/faculty, 17 linked learning activities, 19 organisation and management, 16-17 participants, 17 theories and practice, 17-18 intrauterine hydrostatic balloon, 64 intubation, with pre-eclampsia, 131

Johnson manoeuvre, 64

laparoscopic uterine replacement, 64 laryngoscopy, with pre-eclampsia, 131 Cambridge University Press 978-1-108-29677-9 — Obstetric Decision-Making and Simulation Edited by Kirsty MacLennan, Catherine Robinson Index More Information

Index

learning linked learning activities, 19 objectives, 18 theories, 17-18 lidocaine, 154 local anaesthetic systemic toxicity (LAST), 163-64. See also severe local anaesthetic toxicity scenario clinical features, 165 incidence, 163 management, 165 predisposing factors, 164-65 drug factors, 164 patient factors, 164 wrong route errors, 163-64 low-fidelity simulation, 31. See also fidelity low molecular weight heparin (LMWH), acute pulmonary embolism management, 111 low-resource settings, 33 lung function changes in pregnancy, 55 macro-level factors, 1 magnesium sulphate eclampsia management, 119 mechanism of action, 119 therapy monitoring, 119-20 manikins. 3 mastery learning, 5 mentoring, 18 microangiopathic haemolytic anaemia (MAHA), 133-42 definition, 140 differential diagnosis, 140-41 scenario, 133-40 misoprostol, 215 motivation, 14 muscle relaxants, 191 myocardial infarction, 248. See also chest pain differential diagnosis, 245 treatment in pregnancy, 247 myocardial ischaemia, 244 clinical presentation, 246 narrow complex tachycardia. See tachycardia management naturalistic decision-making, 41 non-talkers, 26 Objective Structured Assessment of the Debrief (OSAD), 27 obstetric haemorrhage, 33. See also antepartum haemorrhage; postpartum haemorrhage case studies, 37-38, 39 protocols, 49 obstetric trauma, 297–304. See also trauma in pregnancy incidence, 302 scenario, 297-302 omission bias, 41 online resources, 8 opioids, 191 oseltamivir, 236 O'Sullivan's technique, 64

pacing, complete heart block management, 263-65 pacemaker settings, 265 palpitation causes in pregnancy, 273 part-task trainers, 30 participant safety, 14 PartoPants simulator, 33 patients, 43 patient experience, 13 feedback, 14 safety issues, 14 simulated patients, 30 pattern matching, 40 peer-reviewed journals, 7 penicillin, 226 allergy, 103. See also anaphylaxis perception of the environment, 37 errors, 39 perimortem caesarean section, 198-99. See also antepartum haemorrhage outcomes, 199-200 procedure, 200 setting and equipment, 199 trauma management, 304 peripartum cardiomyopathy, 249-55 definition, 253 risk factors, 253 scenario, 249-53 treatment, 255 physical fidelity, 29 placental abruption, 198, 304 case study, 40 pneumonia and respiratory failure, 227-37. See also influenza community-acquired pneumonia, 234 scenario, 227-33 posterior axillary sling traction, 71 postpartum haemorrhage, 33, 208-16 definition, 214 management, 215 fluids/blood products, 216 post PPH management, 216 uterotonics, 215 massive postpartum haemorrhage scenario, 208-14 risk factors, 214 pre-briefing stage, 19, 23 pre-eclampsia, 118 aetiology, 127 anaesthetic considerations, 130-31 clinical presentation, 128 complications, 129 definition, 118 fetal well-being, 128 incidence, 127 management, 128 blood pressure monitoring and control, 128 delivery, 129 fluid management, 129 severe pre-eclampsia, 128-29 risk factors, 128 severe pre-eclampsia features, 127 pre-oxygenation before anaesthesia, 190 preterm infant life support, 305-14 airway and ventilation management, 312

communication with families, 312 cord clamping, 311 scenario, 305-11 teamwork and effective handover, 311 thermoregulation, 311 professional society websites, 8 projection of the future, 38 errors, 39 PROMPT training package, 3 costs, 33 PRONTO course, 33 propofol, 190, 192 prospective hindsight, 43 psychological fidelity, 29 puerperal sepsis, 224. See also group A Streptococcal puerperal sepsis reference books, 8 reflection encouragement, 43 reflective practice, 5 remifentanil PCA, 169-75 contraindications, 174 efficacy, 173 monitoring, 174, 175 pharmacological properties, 173 protocol, 173-74 scenario, 169–74 side effects, 174-75 fetal, 174 maternal, 174 representativeness, hueristics, 40 resilience development, 42 respiratory changes in pregnancy, 188 respiratory failure in pregnancy, 234. See also pneumonia and respiratory failure differential diagnosis, 234 resuscitation amniotic fluid embolism, 94 intrauterine fetal resuscitation, 84 massive postpartum haemorrhage, 215-16 Rh immunoglobulin therapy, 304 robotic surgery, 3 rocuronium, 191 safety issues in situ simulation, 12 latent safety threat detection, 12 participant safety, 14 patient safety, 14 simulated patient actors, 84-85 SBAR communication tool, 47 scenarios, introduction, 53-54 debrief topics for discussion, 54 equipment, 54 information given to learners, 54 learning objectives, 53 schedule, 54 set up overview, 54 suggested learners, 53 summary for facilitators, 53 target learners, 53 screen-based simulators, 3 seizure in pregnancy. See also eclampsia acute management, 117-18 differential diagnosis, 117 investigations, 118

317

Cambridge University Press 978-1-108-29677-9 — Obstetric Decision-Making and Simulation Edited by Kirsty MacLennan , Catherine Robinson Index

More Information

Index

sepsis, 224, 233-34. See also group A Streptococcal puerperal sepsis in obstetrics, 234 management, 234 red flags for maternal sepsis, 234 risk factors for maternal sepsis, 234 septic shock, 233 severe local anaesthetic toxicity scenario, 158-63. See also local anaesthetic systemic toxicity (LAST) shared decision-making, 42 Sharp model, 24-25 shoulder dystocia, 66-72 definition, 69 fetal complications, 71 incidence, 69 management, 69 environment, 70 final-stage manoeuvres, 71 practical manoeuvres, 71 maternal complications, 71 risk factors, 69 risk reduction, 71 scenario, 66-69 signs of, 69 simulated participants (SPs), 3 simulated patient actors, 30 safety issues, 84 simulation, 1. See also in situ simulation; simulation-based education (SBE) aims of, 11, 12 cost issues, 33 limitations, 3 modalities, 3-5 patient experience, 13 time for, 13 training, 32 simulation-based education (SBE) design considerations, 18-19 drivers for uptake, 4 healthcare landscape, 1-3 simulation-based training packages, 3 simulators, 29-31 computer screen-based systems, 30 hybrid simulators, 30 integrated simulators, 30-31 part-task trainers, 30 simulated patients, 30 virtual reality (VR), 30 sinus node dysfunction, 261 situated learning, 17 situational awareness, 37 comprehension of the current situation, 38.39 distributed, 38 errors, 39 expertise importance, 40 individual, 37-38 perception of the environment, 37, 39 projection of the future, 38, 39 strategies, 42-43 team, 38 social constructivism, 17 STACK mnemonic, 48 stress effects on behaviour, 49

subarachnoid haemorrhage, 287-95 associated conditions, 294 cardiac complications, 295 clinical presentation, 294 emergency of, 295 neuroprotective strategies, 294-95 physiological effects of, 294 scenario, 287-94 subdural block, 143-48 cause, 146 clinical features, 147 complications, 148 diagnosis, 147-48 incidence, 146 management, 148 risk factors, 147 scenario, 143-46 subdural space anatomy, 143-46 suxamethonium, 191, 192 syntocinon, 215 tachycardia management, 273-75 ALS tachyarrhythmia algorithm, 273 DC cardioversion, 273-75 drug treatment, 273 vagal manoeuvres, 273 talkers, 26 task fixation, 41 task trainers, 3 team resource management (TRM), 36 teamworking, 35, 45-46 preterm infant life support scenario, 311 situational awareness, 38 team brief, 47 team, definitions of, 45 tension pneumothorax, 236-37 clinical signs, 236 management, 236 Tetralogy of Fallot, 272, 266-75 characteristics, 272 fetal complications, 273 maternal complications, 273 scenario, 266-72 thermoregulation, preterm infant, 311 thiopentone, 190, 192 thoracocentesis, 236 thrombolysis, acute pulmonary embolism management, 111 thrombotic microangiopathies (TMA), 140 thrombotic thrombocytopenic purpura (TTP), 141 total spinal anaesthesia, 150-57. See also high neuraxial block detection of intrathecal or intravascular placement, 154-55 epidural catheter meniscus, 154 epidural test dose, 154 intrathecal placement, 154 intravascular placement, 154 negative aspiration of blood or CSF, 154 visible CSF, 154 scenario, 150-54 training, 32 facilitators, 17

tranexamic acid, 215 trauma and, 303-4 trauma in pregnancy, 302. See also obstetric trauma approach to, 303 tranexamic acid and, 303-4 troponin level, 246 umbilical cord prolapse, 73-78 at the threshold of viability, 78 clinical governance, 78 complications, 77 definition, 76 diagnosis, 77 in the community, 78 incidence, 76 management, 77-78 risk factors, 76 risk reduction, 77 scenario, 73-76 uterine adaptations in pregnancy, 303 uterine inversion, 57-65 classification, 63 clinical presentation, 63 complications, 64 incidence, 63 management, 63 hydrostatic replacement (O'Sullivan's technique), 64 intrauterine hydrostatic balloon, 64 manual replacement (Johnson manoeuvre), 64 surgical replacement, 64 risk factors, 63 scenario, 57-63 uterine rupture, 304 uterotonics, 215 vaginal uterine replacement, 64 valsalva manoeuvre, modified, 273 vasa praevia, 202-6 antenatal diagnosis, 206 differential diagnosis, 206 management, 206-7 risk factors, 205-6 scenario, 202-5 subtypes, 205 venous thromboembolism. See also acute pulmonary embolism clinical presentation, 110 delivery planning, 111 incidence, 109 ventilation/perfusion (V/Q) scanning, 111 video-assisted debrief, 27 video capture, 13 virtual reality (VR), 30 WHO classification of maternal conditions, 273 WHO surgical safety checklist, 48 wrong route errors, 163-64

zanamivir, 236 zone of proximal development, 17