

4.3 Paediatric Pain Medicine

Children are a unique patient group. Young children, neonates and infants in particular, have significant anatomical, physiological, psychological and social differences compared with adults. Developmental issues influence all aspects of the child's pain experience, including biological responses, language and communication, comprehension, and choice and effectiveness of pain management techniques. The long-term effects of repeated acute pain and the impact of analgesic drugs on the developing nervous system are issues of considerable concern that must also be taken into account when developing a pain management strategy for a child. The development of bidirectional relationships with other health professionals is key to effective long term management.

By the end of training, a trainee will be able to:

Background

4.3.1	Explain the developmental neurobiology of pain, including embryological considerations.
4.3.2	Outline the implications of genetic predisposition in the development of pain in children.
4.3.3	Explain the transition of acute to chronic pain as it applies to pain in children.
4.3.4	Identify the common pain syndromes that occur in childhood.
4.3.5	Describe the long term consequences of pain in infancy and childhood, including the effects of pain related to: <ul style="list-style-type: none"> • Neonatal intensive care • Paediatric intensive care
4.3.6	Explain the association between painful childhood conditions and the development of persistent pain in adulthood.
4.3.7	Outline the association between childhood abuse (physical, emotional and sexual) and pain in adolescence or adulthood.
4.3.8	Describe the evidence base for pharmacological treatment of pain in children, in particular, the implications of applying adult data for paediatric purposes.
4.3.9	Explain the ethical and legal aspects of prescribing for children.
4.3.10	Demonstrate an understanding of the ethical issues concerning the conduct of drug trials in children.
4.3.11	Describe the organisational aspects of children's pain services including: <ul style="list-style-type: none"> • Acute (postoperative, medical and procedural pain) • Cancer pain and palliative medicine • Chronic pain
4.3.12	Demonstrate an understanding of Child Protection issues, including reporting responsibilities and the systems in place to manage such issues.

Assessment	
4.3.13	Build rapport and trust with children and their families.
4.3.14	Demonstrate use of developmentally appropriate pain assessment tools.
4.3.15	<p>Explain the developmental, contextual and practical considerations in acute, procedural and chronic pain assessment in:</p> <ul style="list-style-type: none"> • Infants, including the premature neonate • Children • Adolescents • The child with neurodevelopmental delay, including autism spectrum disorders • Congenital disorders (e.g. deafness, visual impairment, Epidermolysis Bullosa)
4.3.16	<p>Elicit a comprehensive history to identify:</p> <ul style="list-style-type: none"> • Psychiatric issues including but not limited to: anxiety, depression, conversion, somatisation • adverse consequences of pain, including maintaining and reinforcing factors • Avoidance behaviours - primary, secondary and tertiary gain • Sleep problems
4.3.17	<p>Compare and contrast the differences between children and adults in the</p> <ul style="list-style-type: none"> • Presentation • Differential diagnosis • Classification <p>of pain in medical conditions, including but not limited to:</p> <ul style="list-style-type: none"> • Complex Regional Pain Syndrome (CRPS) • Chronic widespread pain • Congenital conditions, including Epidermolysis Bullosa • Guillain-Barre syndrome • Headache • Chronic abdominal pain • Musculoskeletal conditions, including rheumatoid disease
4.3.18	Compare and contrast differences in presentation of pain related to cancer and cancer treatment between adults and children.
Management	
4.3.19	Outline the key differences in managing pain in infants, children and adolescents, as opposed to adult patients.
4.3.20	Demonstrate innovative, developmentally appropriate ways of explaining pain that engage children.
4.3.21	Identify maladaptive approaches used by carers and health professionals that may reinforce a child's pain behaviours.
4.3.22	Identify strategies that may be used by carers to promote supported self-

	management skills in children and adolescents.
4.3.23	Describe the role of each health professional in the management of pain in infants, children and adolescents, including but not limited to: <ul style="list-style-type: none"> • physiotherapists • psychologists • occupational therapists • social workers • child life therapists • music therapists • art therapists • family therapists
4.3.24	Discuss the indications for, and evidence base of, specific physiotherapy modalities used in the context of paediatric pain management, including but not limited to: <ul style="list-style-type: none"> • TENS • Graded motor imagery
4.3.25	Discuss the indications for, and evidence base of, the following psychological interventions used in paediatric pain management: <ul style="list-style-type: none"> • Cognitive behavioural therapy (CBT) • Acceptance and Commitment Therapy (ACT)
4.3.26	Explain the role of psychiatry, including indications and goals of referral, in the management of pain in children.
4.3.27	Describe the structure of a typical inpatient rehabilitation program for paediatric patients.
4.3.28	Describe the evidence-base for pharmacological treatment of acute and chronic pain in infants, children and adolescents.
4.3.29	Describe techniques used to assist in the management of procedural pain experienced by paediatric patients, including: <ul style="list-style-type: none"> • Physical (e.g. comfort positioning) • Psychological (distraction, language used) • Topical analgesia (eg EMLA, other local anaesthetics) • Sucrose • Pharmacological sedation (oral, intravenous agents, Nitrous Oxide)
4.3.30	Describe appropriate and mandatory safeguards for managing paediatric sedation.
4.3.31	Describe the prescription, set up, monitoring and safe guards relevant to pharmacological management of acute and procedural pain in paediatric patients of all ages including: <ul style="list-style-type: none"> • PCA/NCA • Parent controlled analgesia • Epidural and caudal analgesia • Intravenous therapies, including lignocaine and ketamine • Intrathecal opioids

4.3.32	<p>Demonstrate an understanding of pain management strategies specific for children and adolescents in medical conditions, including but not limited to:</p> <ul style="list-style-type: none"> • CRPS • Chronic widespread pain • Congenital conditions (including Epidermolysis Bullosa) • Guillain-Barre syndrome • Headache • Chronic abdominal pain • Musculoskeletal conditions (including rheumatoid disease)
4.3.33	<p>Effectively manage the child with cancer pain-related complications, including but not limited to:</p> <ul style="list-style-type: none"> • Acute pain crisis • Bone pain • Neutropaenia with mucositis • Peripheral neuropathy
4.3.34	<p>Outline the pain and symptom management of the child in palliative care.</p>
4.3.35	<p>Demonstrate effective communication skills and engagement with:</p> <ul style="list-style-type: none"> • Children • Families • Other healthcare professionals • Social services • Education institutions • Other community paediatric services
4.3.36	<p>Demonstrate effective collaboration with other paediatric health professionals and social, educational and community paediatric services.</p>
4.3.37	<p>Demonstrate a leadership role in children's pain management, including multidisciplinary management of chronic and cancer pain.</p>
4.3.38	<p>Initiate and take an appropriate role in child protection processes.</p>
4.3.39	<p>Recognise the challenging issues associated with transition from paediatric to adult health and social services, and manage accordingly.</p>