



FPM

FACULTY OF PAIN MEDICINE
ANZCA

Pain medicine training program 2015 Curriculum

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<http://www.royalcollege.ca/portal/page/portal/rc/canmeds>

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Glossary

ADL	activities of daily living
CALD	culturally and linguistically diverse
CAM	complementary and alternative medicine
CanMEDS	CanMEDS Physician Competency Framework
CbD	case-based discussion
CRPS	complex regional pain syndrome
CSA	clinical skills assessment
CT	computed tomography
DSM	Diagnostic and Statistical Manual of Mental Disorders
ETA	essential topic area
FPM	Faculty of Pain Medicine
IASP	International Association for the Study of Pain
ICD	International Classification of Diseases and Related Health Problems
ICF	International Classification of Functioning, Disability and Health
MPA	management plan assessment
MRI	magnetic resonance imaging
MsF	multisource feedback
NMDA	N-methyl-D-aspartate
NNT	number needed to treat
OIVI	opioid-induced ventilatory impairment
OST	opioid substitution therapy
PADL	personal activities of daily living
PCA	patient-controlled analgesia
PET	positron emission tomography
POST	pain-oriented sensory testing
PP	professional presentation
QST	quantitative sensory testing
SPMP	specialist pain medicine physician
SSEP	somatosensory evoked potential
SUD	substance use disorder
UDT	urine drug testing
WHO	World Health Organization

Introduction

The Faculty of Pain Medicine (FPM) is the professional organisation in Australia and New Zealand for specialist pain medicine physicians (Fellows) and specialist pain medicine physicians in training (trainees) and is directly responsible for the education and training, examination and specialist accreditation of pain medicine physicians in these countries. The Faculty provides a two-year training program in pain medicine, undertaken in hospitals and clinical placements approved by FPM, leading to the specialist qualification of diploma of fellowship.

The scope of pain medicine practice

The specialty of pain medicine is concerned with the study of pain from a sociopsychobiomedical perspective. Clinically this incorporates the evaluation, treatment and rehabilitation of persons with pain. The field spans three major clinical areas:

1. **Acute pain** – post-operative, post-trauma, acute episodes of pain in medical conditions.
2. **Cancer pain** – pain due to tumour invasion or compression; pain related to diagnostic or therapeutic procedures; pain due to cancer treatment.
3. **Chronic non-cancer pain** – including more than 200 conditions described in the *IASP Taxonomy*¹.

Aim of the curriculum

The purpose of the curriculum is to define the required learning, teaching and assessment of the FPM training program.

More specifically, the curriculum aims to:

- Articulate the scope of practice required by a specialist pain medicine physician (SPMP) including breadth and depth of knowledge, range of skills and professional behaviours necessary for quality patient care.
- Guide supervisors of training and other Fellows involved in the training program with respect to suitable learning experiences for trainees.
- Foster trainees' self-directed learning by providing clear requirements.
- Promote regular and productive interaction between trainees and supervisors, through formative workplace-based assessments and feedback.

¹ Classification of Chronic Pain, Second Edition, IASP Task Force on Taxonomy, edited by H. Merskey and N. Bogduk, IASP Press, Seattle, 1994

- Provide consistency of standards and outcomes across different training settings.
- Enable comparison with international training programs with respect to standards of experience, education and assessment.
- Outline foundation knowledge and skills required to ensure that trainees are ready to commence the training program.
- Provide a framework to inform the scope of continuing professional development activities.

Key sections of the curriculum

The key themes/sections of the curriculum are the:

1. Foundations of Pain Medicine
2. Pain Medicine Roles in Practice
3. Essential topics areas (ETAs)
4. Optional topic areas (OTAs)

The Foundations of Pain Medicine has been developed to inform applicants and trainees about the prerequisite knowledge and skills that underpin learning during the training program. Trainees may have, or may be training toward, a primary fellowship in anaesthesia, psychiatry, rehabilitation medicine, one of the physician or surgical specialties or general practice. Attainment of learning outcomes within the Foundations of Pain Medicine ensures all trainees are prepared similarly to build on their current specialist medical abilities.

A key principle of the curriculum is an emphasis on trainees' development across all professional roles. Using the CanMEDS framework from the Royal College of Physicians and Surgeons of Canada as a base, the Pain Medicine Roles in Practice have been designed to emphasise a sociopsychobiomedical orientation to practice, rather than a narrow biomedical one. They have the titles of clinician, professional, scholar, communicator, collaborator, manager (and leader) and health advocate. The clinician role, which articulates the skills and attitudes required of a specialist pain medicine physician when working with patients and the knowledge to perform these skills, is the focus of outcomes within the various essential topic areas.

The essential topic areas direct teaching and learning in relation to specific topic areas in pain medicine. The topics of the essential topic areas were chosen as those areas in which the expertise of the specialist pain medicine physician should be paramount. They are not

intended to be a comprehensive coverage of the discipline of pain medicine but rather to be integrative. For example, the themes in “neuropathic and related pain” and in “problematic substance use” pervade all areas of pain medicine practice, while there is much clinical overlap between “spinal pain”, “widespread pain” and “visceral pain”. It is important that the essential topic areas are studied in conjunction with the Pain Medicine Roles in Practice.

The four optional topic areas outline sample learning outcomes for areas of pain medicine that may be a focus of the practice development stage of training. A trainee with an interest in one or multiple of these areas may utilise some or all the suggested learning outcomes or develop their own learning outcomes. These are example areas of study and trainees are not limited to these areas. The learning outcomes are assessed via workplace-based progressive feedback tools but will not form part of the fellowship examination.

Assessment

The Faculty has developed an assessment strategy that supports the curriculum. The Foundations of Pain Medicine is assessed in the form of completion of the online Better Pain Management Program and a general physical examination skills assessment within the workplace.

Workplace-based progressive feedback tools provide formative assessment (that is, assessment *for* learning) and involve direct observation of trainees as they complete consultations with patients and explain proposed management plans to them. Trainees are also assessed on their ability to access and use current evidence in the development of management plans, and to comprehensively discuss cases and the rationale for their management approach.

Specific progressive feedback forms correspond to each type of tool. Individual items and descriptors on the workplace-based progressive feedback forms have been developed from learning outcomes within the Pain Medicine Roles in Practice. Workplace-based progressive feedback includes experiences in prescribed topic areas of the curriculum, as well as options for trainees to guide their own learning in areas of need.

Workplace-based progressive feedback tools provide a framework to support teaching and learning in the clinical environment and promote a holistic view of a trainee’s clinical practice. Individually, they provide a prompt for specific feedback on trainee performance and

collectively create a record to demonstrate development and inform regular review at various intervals during the training program.

Trainee progression is based on the achievement of competencies. Eligibility for fellowship is determined by successful completion of a range of formative assessments, as described above, together with summative assessments including a clinical case study, long case assessments and the fellowship examination.

Section One

FOUNDATIONS OF PAIN MEDICINE



1. Foundations of Pain Medicine

Most pre-fellowship and fellowship training programs will have covered basic principles of pain and its management. It is expected that trainees will have acquired the following foundation knowledge and skills prior to commencing training in pain medicine.

At the commencement of training, a trainee will be able to:

Background

1.1	<p>Broadly discuss the importance of the CanMEDS² roles in relation to the specialist pain medicine physician comprising:</p> <ul style="list-style-type: none"> • Medical expert/clinician • Professional • Scholar • Communicator • Collaborator • Health advocate • Manager/leader
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Fundamental concepts

1.2	<p>Discuss bioethical principles:</p> <ul style="list-style-type: none"> • Justice • Autonomy • Beneficence • Non-maleficence
1.3	Critically discuss the International Association for the Study of Pain (IASP) definition of pain
1.4	Discuss the distinction between nociception and pain
1.5	Discuss the differences between acute and chronic pain
1.6	Describe the philosophical models of Cartesian dualism and alternative Monist theories
1.7	Discuss the evolution of different conceptual models in pain medicine
1.8	Describe the principles of the multi-disciplinary approach to pain management

Terminology used in pain medicine

1.9	<p>Define common pain terms according to the International Association for the Study of Pain (IASP):</p> <ul style="list-style-type: none"> • Analgesia • Hyperalgesia
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² CanMEDS is a competency framework designed by the Royal College of Physicians and Surgeons of Canada and comprises seven roles, or thematic groups of competencies, integrated by physicians on a daily basis. For more information refer to <http://rcpsc.medical.org>

	<ul style="list-style-type: none"> • Hypoalgesia • Anaesthesia • Hyperaesthesia • Paraesthesia • Dysaesthesia • Hyperpathia • Allodynia • Anaesthesia dolorosa • Spontaneous pain • Evoked pain • Radicular pain • Radiculopathy
1.10	<p>Define terms used in pain oriented sensory testing (POST) including, but not limited to:</p> <ul style="list-style-type: none"> • Sensory threshold • Pain threshold • Pain tolerance level • Punctate mechanical allodynia • Dynamic mechanical allodynia • Pressure-evoked mechanical allodynia • Cold allodynia • Warmth allodynia • Hyperpathia
1.11	<p>Define:</p> <ul style="list-style-type: none"> • Placebo • Nocebo • Placebo response • Placebo effect
1.12	Broadly discuss current concepts of placebo effect
Basic sciences	
1.13	<p>Describe the anatomy of the peripheral and central nociceptive pathways, including:</p> <ul style="list-style-type: none"> • The somatosensory system with particular reference to dermatomes and peripheral nerves • The autonomic nervous system
1.14	Discuss current concepts of referred pain, including its embryological basis
1.15	Outline the anatomy of ascending and descending pathways of nociceptive modulation in the central nervous system
1.16	Describe the changes that occur following nerve injury, including Wallerian degeneration, neurapraxia, axonotmesis, and neurotmesis

1.17	Outline the concepts of peripheral and central sensitisation of nociception including reference to: <ul style="list-style-type: none"> • Synaptic plasticity • N-methyl-D-aspartate (NMDA) receptors • Long-term potentiation
1.18	Describe mechanisms of transduction, transmission and modulation in nociceptive pathways
1.19	Outline the mechanisms of nociceptive pain and neuropathic pain
1.20	Compare and contrast the clinical features of somatic and visceral pain
1.21	Discuss the physiology of and differences between tolerance, dependence and addiction with respect to pharmacological agents
Assessment of pain	
1.22	Broadly describe how the following factors may influence the patient's experience of illness and pain: <ul style="list-style-type: none"> • Social • Cultural • Psychological • Personality • Physical • Genetic
1.23	Broadly describe different responses to the experience of pain and illness including affective, cognitive and behavioural responses
1.24	Outline the current DSM and ICD framework for classification of psychiatric disorders with particular reference to anxiety and mood disorders
1.25	Demonstrate understanding of the concept of coloured "flags" in relation to risk factors for developing chronic pain
1.26	Perform a basic medical assessment of a patient including: <ul style="list-style-type: none"> • General history-taking • General physical examination • Mental state examination
1.27	Interpret the following basic investigations, including but not limited to: <ul style="list-style-type: none"> • Full blood count • Biochemical screening including liver function tests • Arterial blood gases • Thyroid function tests • Electrocardiograms • Plain radiographs
1.28	Demonstrate basic problem-oriented synthesis of clinical information

Management of pain

1.29	Generally discuss the following treatment modalities that may be used in the management of pain: <ul style="list-style-type: none">• Psychological• Physical• Pharmacological• Interventional
1.30	Broadly discuss the principles of pharmacokinetics and pharmacodynamics
1.31	Describe and give examples of pharmacogenetic variation in relation to a range of drugs, including but not limited to: <ul style="list-style-type: none">– codeine– tramadol– tricyclic antidepressants– non-steroidal anti-inflammatories
1.32	Describe the: <ul style="list-style-type: none">• Mechanism(s) of action• Potential adverse effects (including toxicity)• Indications, precautions, and contraindications for use Of the following drugs <ul style="list-style-type: none">– paracetamol– non-steroidal anti-inflammatory drugs– opioid agonists, partial agonists, agonist-antagonists and antagonists– tramadol and tapentadol– antidepressants– anticonvulsants– benzodiazepines– local anaesthetics
1.33	Discuss the principles of opioid equivalence, including but not limited to <ul style="list-style-type: none">– buprenorphine– codeine– fentanyl– hydromorphone– methadone– morphine– oxycodone– tapentadol– tramadol

1.34	<p>Describe pharmacokinetic and pharmacodynamic differences between the different systemic routes of administration of drugs (for example, onset/offset of action, efficacy, adverse effects), including:</p> <ul style="list-style-type: none"> • Oral • Subcutaneous • Intramuscular • Intravenous • Transdermal • Sublingual • Buccal • Intranasal • Rectal • Inhaled
Research methodology	
1.35	<p>Describe the principles of clinical epidemiology, including:</p> <ul style="list-style-type: none"> • Terminology and presentation of epidemiological data • Different types of epidemiological study design: descriptive (correlational, case reports/series, cross-sectional surveys); analytical (observational, case-control, cohort); interventional (experimental studies or clinical trials)
1.36	<p>Describe the principles of biostatistics, including:</p> <ul style="list-style-type: none"> • Different data types (parametric/non-parametric, continuous/interval, ratio, categorical, dichotomous), and their relevance to statistical analysis • Influence of sample size on derived indices such as a proportion or a mean • Calculation and interpretation of a 95 per cent confidence interval of a mean or a proportion • Concept of probability testing, sample distributions and the importance of appropriate sampling techniques • Concepts of significance and power when testing an hypothesis, that is, type one and type two errors and their relationship to sample size • Appropriate use of tests of agreement between continuous data, such as Pearson and Spearman correlation coefficients and intra-class correlation • Application, limitations and interpretation of tests used to analyse single studies and meta-analyses: specifically t-test, chi-squared test, odds ratios, analysis of variance, effect size, survival curves and number-needed-to-treat (NNT)
1.37	<p>Explain the concepts of:</p> <ul style="list-style-type: none"> • Reliability • Validity • Sensitivity • Specificity
1.38	<p>Describe the principles of assessing scientific evidence, including:</p> <ul style="list-style-type: none"> • Grades of evidence and methodologies and difficulties of combining

	<p>evidence as in systematic reviews and meta-analyses</p> <ul style="list-style-type: none">• Cochrane database of systematic reviews• Influence of bias, chance, and confounding variables in studies, and methods to reduce them• Publication bias
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Section Two

PAIN MEDICINE ROLES IN PRACTICE



2.1 Clinician

As a *clinician*, the specialist pain medicine physician (SPMP) dynamically applies high-level knowledge, skills and professional attitudes in the practice of pain medicine across stable, unpredictable and complex situations.

The clinician role describes in particular the skills to be acquired during the course of pain medicine training. It also contains aspects of knowledge that are considered to permeate and transcend all aspects of the discipline.

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

Code	Learning outcome
Clinical assessment and formulation	
2.1.1	Triage referred patients with respect to urgency, complexity and facilities required
2.1.2	Elicit and interpret a detailed sociopsychobiomedical history of: <ul style="list-style-type: none"> • The patient experiencing pain • The pain experienced by the patient • The consequences of the experience of pain for the patient
2.1.3	Discuss the application of the World Health Organization (WHO) International Classification of Functioning, Disability and Health (ICF) ³ concepts to people experiencing pain: <ul style="list-style-type: none"> • Functioning and disability <ul style="list-style-type: none"> ○ Body functions and body structures ○ Activities and participations • Contextual factors <ul style="list-style-type: none"> ○ Environmental factors ○ Personal factors
2.1.4	Perform a focused sociological assessment of the patient, including but not limited to: <ul style="list-style-type: none"> • Housing • Eating habits • Support • Family and life roles • Employment/occupational factors • Financial status • Recreational activities • Mobility, including driving capability • Cultural beliefs • Meaning and purpose

³ The WHO ICF is a classification of health and health-related domains. For more information refer to <http://who.int/classifications/icf/en/>

2.1.5	<p>Perform a focused psychological assessment and mental state examination of the patient, including but not limited to:</p> <ul style="list-style-type: none"> • Developmental history • Family medical and psychological history • Personal psychological history • Personality style • Coping strategies • Cognitive impairment • Identification of lifetime stresses
2.1.6	<p>Perform a focused biomedical assessment, including but not limited to:</p> <ul style="list-style-type: none"> • Response to treatment • Nutritional status • Sleep function • Sexual function
2.1.7	<p>Adapt assessment techniques to specific populations such as:</p> <ul style="list-style-type: none"> • Children • Older patients • Patients from linguistically or culturally diverse backgrounds • Patients who are cognitively impaired • Patients with behavioural issues
2.1.8	<p>Perform and interpret a pain-orientated physical examination, incorporating:</p> <ul style="list-style-type: none"> • Pain oriented sensory testing (POST) • Assessment of function • Relevant systems
2.1.9	<p>Recognise that pain in any one patient may attract different concurrent descriptors and therefore different inferred mechanisms</p>
2.1.10	<p>Demonstrate ability to infer mechanism(s) of production of pain on the basis of clinical examination, irrespective of pre-existing diagnostic label(s)</p>
2.1.11	<p>Critically review existing investigations and interpretations, including but not limited to bone scans, computed tomography (CT) scans, magnetic resonance imaging (MRI), positron emission tomography (PET) scans, and electro-diagnostic techniques</p>
2.1.12	<p>Make judicious and resource-sensitive decisions about obtaining further investigative options</p>
2.1.13	<p>Integrate multiple sources of information towards a multi-axial formulation of diagnosis-function-context</p>
2.1.14	<p>Identify and explore the patient's issues, concerns, beliefs, goals and expectations with respect to their pain experience</p>
2.1.15	<p>Evaluate whether further specialised assessment and/or management in sociological, psychological or biomedical dimensions is required, and arrange</p>

	if necessary
2.1.16	Develop understanding of the person and their family, in relation to their pain-associated limitations, losses and distress
Preparing management plans	
2.1.17	Synthesise and justify management options based on evidence and the context in which the patient's experience of pain occurs
2.1.18	Formulate a management plan tailored to the individual patient
2.1.19	Recognise and respond to the uncertainty inherent in the practice of pain medicine, including but not limited to: <ul style="list-style-type: none"> • Accommodating unpredictability • Managing risk in complex patient care situations • Varying practice according to contextual and cultural influences
2.1.20	Adapt plans to the specific needs of the following patient groups experiencing pain: <ul style="list-style-type: none"> • Children and adolescents • Pregnant women • Elderly patients (including those with dementia) • Patients with mental health disorders • Opioid-tolerant patients • Patients with active or past substance abuse problems • Indigenous patients and those from other ethnic and cultural backgrounds • Patients with intellectual disabilities
2.1.21	Understand the principles and application of placebo theory in patients with pain
2.1.22	Critically discuss evidence-based psychological therapies related to pain medicine, including: <ul style="list-style-type: none"> • Cognitive and behavioural therapies • Mindfulness-based cognitive behaviour therapy; acceptance and commitment therapy; mindfulness-based stress reduction • Narrative therapy • Psychodynamic psychotherapy
2.1.23	Discuss in detail clinical pharmacotherapy in pain medicine, including but not limited to the use of: <ul style="list-style-type: none"> – paracetamol – non-steroidal anti-inflammatory drugs – opioids – tramadol and tapentadol – NMDA-receptor antagonists – local anaesthetic agents

	<ul style="list-style-type: none"> – anticonvulsants – antidepressants – benzodiazepines – alpha-2 adrenergic agonists – anti-emetics – laxatives
2.1.24	<p>With respect to opioids:</p> <ul style="list-style-type: none"> • Compare and contrast rational use in acute, chronic non-cancer and cancer-associated pain • Critically discuss the evidence base for their efficacy in non-cancer pain • Critically discuss commonly used dose equivalents for oral, parenteral, transdermal and neuraxial (epidural, intraspinal) routes of opioid administration • Describe the pharmacokinetic and pharmacodynamic differences between immediate-release and slow-release oral opioid formulations • Discuss the rationale for opioid rotation • Describe the use and idiosyncrasies of methadone and buprenorphine • Critically discuss opioid-induced hyperalgesia • Discuss the assessment, prevention and symptomatic relief of adverse effects of opioids with particular reference to: <ul style="list-style-type: none"> ○ Constipation ○ Nausea and vomiting ○ Sedation ○ Confusion or delirium • Discuss the long-term effects of the use of opioids including, but not limited to their immuno-modulatory, endocrine and psycho-cognitive effects • Detail the factors that need to be considered when patients are discharged from hospital with opioids for ongoing management of acute pain • Negotiate a plan for withdrawal from opioids where appropriate
2.1.25	Critically discuss the evidence base for the efficacy and adverse effects of benzodiazepines and non-steroidal anti-inflammatories in the management of pain
2.1.26	<p>Discuss in detail physical treatment modalities related to pain medicine, including but not limited to:</p> <ul style="list-style-type: none"> • Principles of physical activity • Principles of pacing and graded activity • Passive and active therapy
2.1.27	<p>Discuss in detail the role of procedural treatment modalities related to pain medicine, including but not limited to:</p> <ul style="list-style-type: none"> • Peripheral injections <ul style="list-style-type: none"> ○ Soft-tissue ○ Intra-articular

	<ul style="list-style-type: none"> • Neuraxial injections • Ablative techniques <ul style="list-style-type: none"> ○ Chemical ○ Electrical/thermal ○ Surgical • Neuromodulation <ul style="list-style-type: none"> ○ Neurostimulation ○ Cerebrospinal fluid drug delivery • Surgical interventions
2.1.28	<p>Critically discuss the use of complementary and alternative medicine (CAM) used in the community for the treatment of pain including:</p> <ul style="list-style-type: none"> • Evidence for mechanisms of action • Analgesic efficacy • Potential interactions and adverse effects
2.1.29	Describe the application of multidisciplinary treatment principles in pain management programs
Implementing management plans	
2.1.30	Explain to the patient the diagnostic formulation and the proposed management plan
2.1.31	Negotiate a therapeutic alliance with the patient towards implementation of the management plan
2.1.32	Supervise and monitor patient status and intervene as required to optimise patient care
2.1.33	<p>Differentiate those patients who require:</p> <ul style="list-style-type: none"> • Multimodal approach from one practitioner • Multidisciplinary approach from a team • Referral to other medical specialists and/or allied healthcare professionals
2.1.34	Consult colleagues and other healthcare professionals to optimise patient wellbeing and enhance patient outcomes
2.1.35	Demonstrate the skills required to lead a multidisciplinary team in the implementation of a pain management plan
2.1.36	<p>Incorporate as part of a comprehensive pain management plan, where indicated:</p> <ul style="list-style-type: none"> • Risk assessment • Psychological treatment modalities • Suitable physical therapies • Rational pharmacotherapy • Appropriate interventional treatment modalities • Patient education

2.1.37	Demonstrate ability to rationalise and supervise complex pharmacotherapy in patients experiencing pain
2.1.38	Consider the use of alternative therapies to meet patient needs
2.1.39	Arrange appropriate follow up

2.2 Professional

As a *professional*, the specialist pain medicine physician (SPMP) has a unique role arising out of their advanced knowledge of the sociobiology of pain and its complex effects on people. Such work requires mastery of a complex skill set and the knowledge underpinning this, in addition to the art of medicine. The SPMP is committed to the health and wellbeing of individuals and society through ethical practice, characterised by high personal standards of behaviour, accountability and leadership.

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

Code	Learning outcome
Ethical practice	
2.2.1	Exhibit professional behaviours in practice, including honesty, integrity, commitment, compassion, respect and altruism
2.2.2	Exhibit understanding of principles of confidentiality, including access to, content of, and security of records
2.2.3	Discuss the principle of informed consent without coercion
2.2.4	Explain the concepts of competence, contract and negligence
2.2.5	Demonstrate professional relationships with colleagues and patients
2.2.6	Accept the responsibilities involved in continuing care of people with complex conditions
2.2.7	Recognise and respond to ethical issues encountered in practice
2.2.8	Recognise limitations of expertise and seek appropriate guidance
2.2.9	Demonstrate professional integrity, probity and ethical conduct in response to industry marketing strategies
2.2.10	Recognise and manage conflicts of interest
Cultural awareness and sensitivity	
2.2.11	Demonstrate an understanding of how personal beliefs and cultural bias may influence interactions with others
2.2.12	Describe how the special history of Māori and Pacific peoples and of Aboriginal and Torres Strait Islander peoples impacts on their current health status, education and communication
2.2.13	Demonstrate respect for differences in cultural and social responses to health and illness in general, and to pain in particular
2.2.14	Incorporate health beliefs of the individual/community into management modalities in a culturally sensitive manner

Legal and regulatory environment	
2.2.15	Adhere to professional, legal and ethical codes of practice
2.2.16	Fulfill regulatory and legal obligations required of current practice
2.2.17	Respond to requests for medico-legal opinion, especially in compensation settings
2.2.18	Demonstrate accountability in considering access, clinical efficacy and quality when making patient-care decisions
2.2.19	Recognise and respond to others' unprofessional behaviour, which may include notification to regulatory authorities
2.2.20	Demonstrate detailed knowledge of regulations with respect to controlled substances in the relevant jurisdiction(s)
2.2.21	Be aware of the restrictions regarding the use of cannabinoids in the relevant jurisdiction(s)
2.2.22	Recognise the features of substance abuse in the patient and in the healthcare professional
Health and sustainable practice of specialist pain medicine physicians	
2.2.23	Identify risks to personal physical and mental wellbeing
2.2.24	Adopt strategies to enhance personal and professional awareness and insight, such as developing a mentor relationship
2.2.25	Recognise and respond to other professionals in need

2.3 Scholar

As a *scholar*, the specialist pain medicine physician (SPMP) demonstrates active commitment to learning, to the creation, dissemination, application and translation of knowledge relevant to pain medicine, and to the education of their patients, students, colleagues and within the community.

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

Code	Learning outcome
Ongoing personal learning	
2.3.1	Identify opportunities for further personal development and learning
2.3.2	Participate in relevant professional and educational development in pain medicine and apply insights in practice
2.3.3	Participate in practice evaluation and quality improvement activities
2.3.4	Participate in audit of specific areas of practice
Critical appraisal of medical information	
2.3.5	Access established and evolving knowledge in the clinical and social sciences relevant to pain medicine
2.3.6	Conduct a systematic search for evidence
2.3.7	Determine the validity and risk of bias in a wide range of scholarly sources
2.3.8	Critically appraise scientific literature and translate evidence into decision-making about the care of patients with pain
2.3.9	Describe the principles, application and limitations of evidence-based medicine
Learning of others, with respect to pain and pain medicine	
2.3.10	Identify the learning needs of others and prioritise learning outcomes
2.3.11	Demonstrate effective teaching strategies to facilitate learning
2.3.12	Provide meaningful feedback to others
2.3.13	Facilitate the learning of colleagues and other health professionals by leading education sessions related to pain medicine
New knowledge and practices in pain medicine	
2.3.14	Describe principles of research ethics as applied to human and animal research in pain medicine
2.3.15	Contribute to clinical trials and/or research projects

2.4 Communicator

As a *communicator*, the specialist pain medicine physician (SPMP) offers the patient a relationship with a professional who has particular interest and expertise in the pain, which is the focus of their concern and suffering. The SPMP is able to listen, interpret and explain the predicament and concerns of the patient in a broad sociopsychobiomedical framework.

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

Code	Learning outcome
Therapeutic relationships	
2.4.1	Establish therapeutic relationships with patients, their families and carers, and foster their involvement as partners in their care
2.4.2	Communicate using a patient-centred approach that encourages patient trust and autonomy, and is characterised by empathy and respect
2.4.3	Demonstrate effective communication skills, including but not limited to: <ul style="list-style-type: none"> • Active listening • Encouraging discussion • Reinforcing key messages • Attending to verbal and non-verbal cues • Respecting patient difference and diversity • Adapting communication skills to individual patients • Recognising and addressing miscommunication
2.4.4	Acknowledge and validate the patient's experiences of pain
2.4.5	Optimise the physical environment for patient comfort, dignity, privacy, engagement and safety
2.4.6	Recognise and negotiate challenging communication situations, including conflict
2.4.7	Identify and manage emotionally charged situations
Obtaining relevant information	
2.4.8	Gather, prioritise and synthesise information about the patient's medical condition, including beliefs, anxieties, expectations and experiences, from a variety of sources
2.4.9	Utilise appropriate personnel and resources to facilitate communication with patients from culturally and linguistically diverse populations
2.4.10	Elicit a patient's understanding of their referral to a pain service and correct misconceptions

Sharing information with patients	
2.4.11	Advise patients about the risks and benefits of treatment options, specifically the limitations of evidence, to help with informed choices
2.4.12	Facilitate discussion with patients and their families to ensure a common understanding of the problems and plans
2.4.13	Respect diversity and difference and the impact these have upon decision-making
2.4.14	Encourage active involvement in shared decision-making
2.4.15	Provide patients with information regarding model of care, discharge and follow up
2.4.16	Explain unanticipated complications to patients, their families and other healthcare providers
2.4.17	Assist patients and others to identify and make use of information and communication technologies to support their care and manage their health
Sharing information	
2.4.18	Demonstrate effective written and verbal communication skills tailored to audience, purpose, intent and context
2.4.19	Comprehensively and succinctly document the assessment and agreed management plan for the individual patient with pain
2.4.20	Develop skills especially for communication in medico-legal settings and with administrative bodies
2.4.21	Develop skills for communication with consumer groups and the broader community

2.5 Collaborator

As a *collaborator*, the specialist pain medicine physician (SPMP) effectively works in a healthcare team to achieve optimal patient care.

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

Code	Learning outcome
Participating in a multidisciplinary healthcare team	
2.5.1	Negotiate overlapping and shared responsibilities with inter-professional healthcare providers for episodic or ongoing care of patients
2.5.2	Participate constructively as a member of a multidisciplinary team
2.5.3	Demonstrate ability to work respectfully with consumer and carer representatives, other healthcare professionals and agencies, to facilitate and improve patient outcomes
2.5.4	Enlist the co-operation and support of others to optimise patient care and safety
2.5.5	Discuss the particular personal and team-related stressors inherent in specialist pain medicine practice, and seek assistance or provide support as necessary
Effective co-operation and conflict mitigation	
2.5.6	Demonstrate consideration for the professional perspectives, goals and priorities of all team members
2.5.7	Negotiate and work with others to minimise and resolve conflict
2.5.8	Respect and acknowledge differences, misunderstandings and limitations in oneself and other healthcare professionals that may contribute to inter-professional tension(s)
2.5.9	Participate in team debriefings and implement strategies to improve performance
2.5.10	Convey all relevant information when transferring care of a patient to another practitioner

2.6 Manager (and leader)

As a *manager*, the specialist pain medicine physician (SPMP) has the ability to make and manage decisions about resource allocation as may apply personally, professionally and at an organisational level, to provide leadership and to contribute to the effectiveness of the healthcare system.

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

Code	Learning outcome
Organisational work practice	
2.6.1	Define the characteristics underpinning the provision of quality patient-centred pain management services that are safe, effective, efficient and timely
2.6.2	Contribute to the processes of quality assurance, quality improvement and accreditation activities within their department/practice
2.6.3	Use and adapt systems to learn from adverse events and critical incidents
2.6.4	Apply legislative/regulatory requirements and service policies, for example, adverse outcomes reporting
Personal work practice	
2.6.5	Describe their own scope of practice, responsibilities and line of reporting
2.6.6	Identify the operational structure and their role in the pain management service/practice
2.6.7	Organise, prioritise and delegate tasks in order to achieve balance between professional requirements and personal life
2.6.8	Demonstrate self-reflection to appraise and improve efficiency and effectiveness in the workplace
2.6.9	Use information technology to optimise patient care
Equitable allocation of finite health resources	
2.6.10	Understand the general principles of organisational and healthcare funding
2.6.11	Optimise cost-appropriate care in pain medicine
2.6.12	Demonstrate leadership in the management and allocation of tasks and resources
Participation in administrative and leadership	
2.6.13	Contribute to clinical governance forums
2.6.14	Participate in committees and meetings at various organisational levels as appropriate

2.6.15	Understand the financial, administrative and human resource requirements in order to manage a pain management unit or private practice
2.6.16	Model leadership in interdisciplinary and administrative settings

2.7 Health advocate

As a *health advocate*, the specialist pain medicine physician (SPMP) responsibly uses their expertise and influence to advance the health and wellbeing of patients, colleagues, communities and populations.

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

Code	Learning outcome
Patient advocate	
2.7.1	Work with patients experiencing pain to address relevant determinants of health
2.7.2	Identify opportunities for advocacy, promotion of health and improvement in quality of life for patients with pain
2.7.3	Advocate for access to evidence-based treatments for pain
2.7.4	Advocate for patient-centred management options, including in palliative and end-of-life contexts
2.7.5	Identify circumstances where advanced care directives or plans, particularly with respect to management of pain, should be formulated by the patient and their family
2.7.6	Promote strategies regarding the recognition of pain in patients with other conditions
2.7.7	Promote patient self-advocacy for access to health-related resources
Community advocate	
2.7.8	Work with a community or population to identify those determinants of health that might influence the experience of pain
2.7.9	Describe the role of specialist pain medicine physicians in advocating for improved resources locally, nationally and internationally in order to improve access for and management of patients with pain
2.7.10	Promote the appropriate and safe use of controlled substances within the population
Personal advocate	
2.7.11	Identify risks to personal, physical and mental wellbeing
2.7.12	Actively promote safety and risk reduction in the workplace
2.7.13	Advocate for the health, wellbeing and safety of colleagues and assist or intervene if required

Section Three

ESSENTIAL TOPIC AREAS



3.1 Neuropathic and related pain

The recognition that disease of, damage to, or altered function of the somatosensory nervous system itself can be associated with the experience of pain has been a major insight. The recent change in the definition of "neuropathic" pain and its role as a descriptor, not a diagnosis, has prompted a reappraisal of how to deliver this topic. Technically, "neuropathic pain" is pain of neurological disease or damage. However this topic looks more broadly at pain due to altered somatosensory *function* as well as disease or damage of the nervous system.

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

Background

3.1.1	Critically discuss the main descriptors of pain and other pain-related terms as in the International Association for the Study of Pain (IASP) Taxonomy.
3.1.2	Distinguish between the descriptive and diagnostic usage use of terms such as nociceptive, neuropathic and "nociplastic" ⁴
3.1.3	Distinguish between a clinical phenomenon, its inferred explanation and its relationship to a diagnostic entity

Applied foundation knowledge

3.1.4	Outline the neurobiological (functional and structural) basis for allodynia, hyperalgesia and hyperpathia
3.1.5	Describe the mechanism(s) leading to the experience of pain in the following examples of damage to neural tissue: <ul style="list-style-type: none"> • Brain injury • Spinal cord injury • Traumatic peripheral nerve injury, including that incurred during surgery • Compression neuropathy <p><i>See also Section 3.6.9 Cancer pain</i></p>
3.1.6	Describe the mechanism(s) leading to the experience of pain following amputation of a limb

Clinical identification of neuropathic and related pain

3.1.7	Describe purpose, scoring, interpretation and limitations of common validated tools to assess presumed neuropathic pain
3.1.8	Describe the different presentations of pain in the following primary neurological diseases: <ul style="list-style-type: none"> • Stroke (particularly thalamic and lateral medullary sites) • Trigeminal neuralgia • Parkinson's disease • Multiple sclerosis

⁴ Currently under consideration by the Taxonomy Committee of IASP

	<ul style="list-style-type: none"> • Syringomyelia • Peripheral neuropathies: diabetic, HIV-associated • Acute herpes zoster infection and post-herpetic neuralgia • Guillain-Barre syndrome • Neurofibromatosis • Erythromelalgia
Management of neuropathic and related pain	
3.1.9	Critically discuss the use of a mechanism-based <i>versus</i> a disease-based approach to the pharmacological treatment of neuropathic pain
3.1.10	Describe the basic pharmacological principles of drug and botulinum toxin treatment for painful dystonia
3.1.11	Identify clinical scenarios in which neuromodulation may be considered for control of central neuropathic pain; in particular, pain related to stroke, pain associated with spinal injury and pain associated with dystonia

3.2 Acute pain

The specialist pain medicine physician (SPMP) will be asked to assist in the management of patients with acute pain. The advice requested often will relate to the management of more complex patients, such as those who have pre-existing chronic pain or are opioid-tolerant, or, have a substance abuse disorder or a significant medical comorbidity. This requires the SPMP to have a thorough knowledge of all drugs, techniques and equipment used in acute pain management and an understanding of their efficacy as well as recognition and management of their adverse effects and complications. An important aspect is understanding risk factors and mechanisms involved in transition of acute to chronic pain and possible ways to mitigate these.

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

Background

3.2.1	Discuss the role of an acute pain service
3.2.2	Discuss general requirements that might enable safe and effective delivery of all acute pain management techniques in hospitals including: education of staff and patient monitoring requirements; responses to inadequate or excessive medication; use of “standard orders”; and equipment used
3.2.3	Discuss the issues related to the ongoing management of acute pain following discharge from hospital
3.2.4	Evaluate the role of acute pain management in rehabilitation, including enhanced recovery or “fast-track” surgery
3.2.5	Discuss the risk factors and mechanisms involved in the transition of acute to chronic pain, and critically evaluate the evidence for measures that may mitigate this transition

Applied foundation knowledge

3.2.6	Describe the pharmacokinetics and pharmacodynamics of opioids and local anaesthetics administered into the epidural space or cerebrospinal fluid
3.2.7	Describe the physiological consequences of a central neuraxial (epidural or intrathecal) block with local anaesthetics and/or opioids
3.2.8	Describe the adjuvant agents that may be used to enhance the quality or extend the duration of central neuraxial or other regional analgesia blocks, and discuss their mechanisms of action, risks and benefits
3.2.9	Discuss the contribution of maladaptive psychological coping skills and psychiatric illness and socio-environmental factors to the experience of acute pain (pain ratings, opioid use) and the risks of persistent pain and prolonged opioid use after discharge from hospital

Clinical assessment of acute pain

3.2.10	Discuss assessment of acute pain (including acute neuropathic pain) in the adult patient, including the nonverbal patient and those from indigenous or other
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	culturally and linguistically diverse communities, and the relevance of functional assessment
3.2.11	Discuss assessment of acute pain in the older patient (especially those with dementia) including difficulties, relevance of functional assessment and use of other pain evaluation methods that do not rely on verbal ability
3.2.12	Discuss assessment of acute pain in children including difficulties, relevance of functional assessment and use of paediatric pain scales
3.2.13	Recognise causes of delirium in the acute pain setting and the effect this may have on assessment and treatment of the patient with acute pain
Management of acute pain	
3.2.14	Compare and contrast the evidence for efficacy and adverse effects in the management of acute pain with: <ul style="list-style-type: none"> – opioids – paracetamol – non-steroidal anti-inflammatory drugs – tramadol and tapentadol
3.2.15	Critically discuss the evidence-base for the indications, efficacy and adverse effects of the following drugs in the management of acute pain: <ul style="list-style-type: none"> – NMDA-receptor antagonists – anticonvulsants – antidepressants – alpha-2 adrenergic agonists – inhalational agents – calcitonin – corticosteroids – systemic lignocaine
3.2.16	Assess and manage all adverse effects related to pharmacological therapies in acute pain management, including but not limited to: <ul style="list-style-type: none"> • Opioid-induced ventilatory impairment (OIVI) and excessive sedation • Nausea and vomiting • Opioid-induced pruritus • Constipation • Opioid-induced cognitive dysfunction
3.2.17	Describe the complications that may be associated with neuraxial analgesia and other regional analgesia (including secondary to needle/catheter insertion and drug administration) and how these may be mitigated and managed
3.2.18	Outline a plan to transition patients to oral analgesia from patient-controlled analgesia (PCA), epidural or regional analgesia for the management of acute pain
3.2.19	Discuss the use of ultrasound imaging in the performance of regional analgesic techniques

3.2.20	<p>For patients receiving:</p> <ul style="list-style-type: none"> • PCA • Epidural analgesia (including patient-controlled epidural analgesia) • Intrathecal analgesia • Plexus analgesia (including patient-controlled regional analgesia) • Major peripheral nerve analgesia • Paravertebral analgesia <p>Outline:</p> <ol style="list-style-type: none"> 1. Risk-benefit analysis 2. Monitoring of efficacy 3. Safety considerations
3.2.21	<p>Discuss issues specific to the management of acute pain in patients with:</p> <ul style="list-style-type: none"> • Spinal cord injury • Burns • Trauma • Crush injuries and ischaemic limbs with a risk of compartment syndrome • Patients with obstructive sleep apnoea • Patients who are pregnant or breast-feeding • Patients with renal impairment (including those on dialysis) • Patients with chronic pain • Opioid-tolerant patients • Patients with past or present substance abuse disorder
3.2.22	<p>Discuss the management of patients who are taking anticoagulants or anti-platelet agents and who have or are about to receive catheters in situ for neuraxial or major peripheral nerve analgesia</p>
3.2.23	<p>Discuss the potential complications specific to the concurrent use of anticoagulant and antiplatelet agents in patients undergoing central neuraxial and major regional nerve blockade</p>
3.2.24	<p>Discuss the management of patients undergoing repeated painful procedures</p>

3.3 Spinal pain

Spinal pain is a major contributor to lost productivity. Low back pain, which affects 9 per cent of the world's population, and neck pain, which affects 5 per cent of the world's population, are major contributors to global non-fatal health burden (years lived with disability). Definitions and approaches to assessment and management of spinal pain vary according to the belief systems of the diverse craft groups involved. It is essential that specialist pain medicine physicians develop a comprehensive, integrated approach to this burden on society.

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

Background

3.3.1	Compare and contrast the current International Association for the Study of Pain (IASP) Classification of Spinal Pain with other classification systems
3.3.2	Discuss controversies in diagnostic terminology in spinal pain
3.3.3	Discuss the public health dimensions of the problem of spinal pain, including but not limited to: <ul style="list-style-type: none"> • Prevalence • Demography • Personal and community costs
3.3.4	Recognise risk factors for transition of acute to chronic low back pain
3.3.5	Recognise risk factors for transition of acute to chronic neck pain following "whiplash" injury
3.3.6	Discuss factors predictive of chronicity after acute spinal pain, including but not restricted to the "flag" system

Applied foundation knowledge

3.3.7	Describe the neuroanatomy and function of the spine and identify potential structures that can be associated with pain
3.3.8	Critically appraise the value of zygo-apophyseal joint blocks, medial branch blocks and denervation as part of a long-term plan

Clinical assessment of spinal pain

3.3.9	Discuss the rationale and use of psychological and functional questionnaires for chronic spinal pain
3.3.10	Identify the potential specific causes of acute and chronic spinal pain: <ul style="list-style-type: none"> • Infection • Trauma • Neoplasia • Metabolic bone disease • Inflammatory disease

3.3.11	Distinguish between radiculopathic and referred pain, with respect to limb girdle or limb pain associated with spinal pain
3.3.12	Critically interpret commonly used physical examination tests, for example, Lasegue/straight leg raise test, slump test, etc
3.3.13	Perform a gait analysis
3.3.14	Recognise the clinical presentation of symptomatic spinal stenosis
3.3.15	Distinguish between acute and acute-on-chronic episodes of spinal pain
3.3.16	Reinterpret pre-existing investigations and opinions in the light of clinical findings
Management of spinal pain	
3.3.17	Critically discuss the evidence base for management of acute low back pain with or without radiculopathic pain
3.3.18	Discuss the efficacy of psychological therapies in chronic spinal pain, including but not limited to: <ul style="list-style-type: none"> • Cognitive • Behavioural • Acceptance commitment
3.3.19	Discuss principles of activity prescription in the management of spinal pain
3.3.20	Generally discuss the evidence for efficacy and adverse effects of physical therapies in chronic spinal pain, including but not limited to: <ul style="list-style-type: none"> • Graded exercise exposure • Stretching/strengthening • Posture training • Hydrotherapy • Alexander technique • Feldenkrais technique • Manual therapy • Massage • Acupuncture • Biofeedback
3.3.21	Critically discuss the evidence base for the efficacy of pharmacological treatments for chronic spinal pain
3.3.22	Critically discuss the evidence base for the indications, efficacy and complications of interventions used for chronic spinal pain, including: <ul style="list-style-type: none"> • Injections <ul style="list-style-type: none"> ○ Epidural/caudal steroids ○ Medial branch injections ○ Prolotherapy ○ Trigger point injections

	<ul style="list-style-type: none"> ○ Botulinum toxin ○ Intra-articular steroids (apophyseal and sacro-iliac) ● Radiofrequency and electrothermal treatment <ul style="list-style-type: none"> ○ Facet joint ○ Intervertebral disc ○ Sacro-Iliac joint ○ Dorsal root ganglion ● Spinal cord stimulation ● Peripheral nerve stimulation ● Intrathecal drug infusion
3.3.23	<p>Critically discuss the evidence base for the indications, efficacy and limitations of surgical interventions for chronic spinal pain:</p> <ul style="list-style-type: none"> ● Decompression/laminectomy ● Discectomy ● Disc replacement ● Fusion
3.3.24	<p>Broadly appreciate the evidence base for the efficacy and complications of complementary and alternative medicine in spinal pain, for example, acupuncture, chiropractic</p>

3.4 Problematic substance use

Pain and substance misuse are often "co-morbid". The specialist pain medicine physician (SPMP) must not only be aware of the spectrum of substance abuse in the clinical pain community but also be equipped to identify, if possible prevent, and institute management of such problems in patients and in colleagues.

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

Background

3.4.1	Define the following concepts: <ul style="list-style-type: none"> • Tolerance • Physical dependence • Psychological dependence • Problematic substance use • Addiction
3.4.2	Critically discuss the differences in understanding and use of these terms between the disciplines of pain medicine and addiction medicine
3.4.3	Distinguish between inappropriate prescription (inappropriate prescriber behaviour) and unsanctioned use (unsanctioned user behaviour) of drugs
3.4.4	Describe the impact of the following non-prescription substances on health and pain experience: <ul style="list-style-type: none"> – caffeine – nicotine – alcohol – cannabis – methamphetamine and other stimulants

Applied foundation knowledge

3.4.5	Describe in detail regulations regarding the prescription, restrictions and monitoring of controlled substances in the relevant jurisdiction(s) <i>See also Section 2.2 Professional role</i>
3.4.6	Discuss the current DSM criteria for diagnosis of substance use disorder
3.4.7	Discuss in detail the role of benzodiazepines in acute pain and chronic non-cancer pain

Clinical presentations and risk assessment

3.4.8	Recognise the different forms of substance abuse that may be co-morbid with the experience of chronic pain
3.4.9	Compare and contrast intoxication and withdrawal syndromes from: <ul style="list-style-type: none"> – opioids – alcohol

	<ul style="list-style-type: none"> – benzodiazepines – amphetamines – cannabis
3.4.10	Identify people with or at risk of substance abuse
3.4.11	Identify fellow healthcare professionals with or at risk of substance abuse <i>See also Section 2.2 Professional role</i>
3.4.12	Critically appraise the tools available to assist clinical assessment of suitability for, and monitoring of, prescription of opioids for chronic non-cancer pain
3.4.13	Demonstrate familiarity with the operation of: <ul style="list-style-type: none"> • Prescription shopping information service (Australia) • Real-time online monitoring of controlled drugs
3.4.14	Stratify patients into “risk” categories when considering opioid prescription for pain
3.4.15	Discuss the uses and limitations of urine drug testing
Management of problematic substance use	
3.4.16	Quantify medication use by persons with chronic pain, including assessing the cumulative effects of multiple substances
3.4.17	Discuss strategies to reduce opioid diversion
3.4.18	Broadly discuss regimens of supervised withdrawal from: <ul style="list-style-type: none"> – opioids – benzodiazepines – alcohol
3.4.19	Demonstrate understanding of controlled opioid substitution therapy programs in the relevant jurisdiction
3.4.20	Assist in the management of patients with problematic substance use in the context of acute and chronic pain, including monitoring, drug therapy and rehabilitation
3.4.21	Counsel patients, their families and carers, and colleagues regarding the conduct of withdrawal of opioids and benzodiazepines in chronic non-cancer pain.
3.4.22	Work ethically with general practitioners, families and, where appropriate, employers of patients with co-morbid pain and problematic substance use
3.4.23	Assist in the management of the healthcare professional with problematic substance use, especially benzodiazepines and opioids; including monitoring, drug therapy and rehabilitation

3.5 Visceral pain

Visceral pain is common and yet poorly understood. The unique afferent neurobiological basis for visceral pain, with predilection for somatic referral and ability to provoke strong emotional responses make this topic clinically distinctive and challenging.

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

Background

3.5.1	Appreciate the taxonomy of functional gastrointestinal disorders and chronic pelvic pain syndromes, in particular the trend to move away from end-organ nomenclature
3.5.2	Discuss the concurrence of somatic and visceral pain syndromes

Applied Foundation Knowledge

3.5.3	<p>Generally describe the innervation of the viscera within the:</p> <ul style="list-style-type: none"> • Thorax (cardiac and non-cardiac) • Abdomen (including peritoneal and retroperitoneal spaces) • Pelvis (female and male) <p>With particular reference to:</p> <ul style="list-style-type: none"> • Stellate ganglion • Splanchnic nerves • Coeliac ganglion • Hypogastric plexus • Ganglion impar • Pudendal nerve
3.5.4	<p>Demonstrate an understanding of the neurobiology underlying:</p> <ul style="list-style-type: none"> • Visceral pain • Visceral hyperalgesia <p><i>See also Section 3.6 Cancer pain</i></p>
3.5.5	<p>Discuss current concepts of referred pain:</p> <ul style="list-style-type: none"> • Viscero-somatic • Viscero-visceral • Somato-somatic
3.5.6	Discuss the “brain-gut axis” and the neurohumoural functions of the gut

Clinical assessment of visceral pain

3.5.7	<p>Elicit a history of painful visceral dysfunction, including but not limited to:</p> <ul style="list-style-type: none"> • Dysuria • Dyschezia • Dysmenorrhoea • Dyspareunia
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3.5.8	Identify 'red flag' features that suggest active visceral disease
3.5.9	Distinguish clinically between: <ul style="list-style-type: none"> • Active visceral nociception • Visceral hyperalgesia • Referred pain with and without hyperalgesia: <ul style="list-style-type: none"> ○ Viscero-somatic ○ Viscero-visceral
3.5.10	Demonstrate a mechanistic approach to identifying non-visceral causes of thoracic, abdominal and pelvic pain, especially post-surgical neuropathic pain
3.5.11	Demonstrate a mechanistic approach to differentiating causes of pain at the somatic-visceral interface of the pelvis and perineum, in female and in male patients
Management of visceral pain	
3.5.12	Discuss the principles of pharmacotherapy for visceral pain and visceral hyperalgesia
3.5.13	Discuss the evidence base for the indications, effectiveness and adverse effects of invasive therapies used for chronic visceral pain <i>See also Section 3.6 Cancer pain</i>
3.5.14	Discuss treatment options for capsular pain associated with liver, spleen and renal pathology
3.5.15	Discuss the role of exogenous gonadal hormones in treatment of gynaecological visceral pain
3.5.16	Discuss treatment options for the management of irritable bowel syndrome

3.6 Pain related to cancer

Thirty per cent of patients with cancer will have pain at diagnosis. Seventy per cent will have pain by the time their disease is advanced. Yet the outcomes for management of cancer pain are often poor. Management of pain in the presence of a terminal illness is different from the management of acute or chronic pain, but uses techniques from both fields. This essential topic area also addresses chronic pain experienced by patients arising out of successful management of their cancer.

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

Background

3.6.1	Identify sociocultural influences on the experience of cancer and of cancer-related pain
3.6.2	Compare and contrast the assessment and management of persons with cancer pain and those with chronic non-cancer pain
3.6.3	Recognise the problems faced by cancer survivors who have persistent pain
3.6.4	Discuss the meaning and significance of the World Health Organization analgesic guidelines for pain in cancer
3.6.5	Show awareness of protocols addressing unpleasant end-of-life symptoms including but not limited to: <ul style="list-style-type: none"> • Pain • Nausea/vomiting • Respiratory distress • Itch
3.6.6	Recognise the essential role of close liaison with other teams, specifically from oncology, radiation oncology and palliative care

Applied foundation knowledge

3.6.7	Discuss the biological mechanisms contributing to the experience of pain: <ul style="list-style-type: none"> • Arising from a solid viscus • Arising from a hollow viscus • Directly related to cancer (tumour invasion, compression, metastases etc.) • Indirectly related to cancer (pressure areas, acute herpes zoster infection) • Related to cancer treatments (surgery, radiotherapy, chemotherapy, hormone therapy or immunotherapy) <p><i>See also Section 3.5 Visceral pain</i></p>
3.6.8	Recognise interactions of medications, particularly the anti-cancer drugs, with the cytochrome P450 enzyme system and how this might influence analgesic treatments

3.6.9	Discuss the analgesic benefits of cancer-modifying treatments such as: <ul style="list-style-type: none"> • Chemotherapy • Radiotherapy • Hormone therapy
3.6.10	Discuss biological mechanisms contributing to: <ul style="list-style-type: none"> • Post-chemotherapy pain, with particular reference to <ul style="list-style-type: none"> ○ Chemotherapy-induced peripheral neuropathy ○ Mucositis • Post-radiotherapy neuropathic pain
Clinical assessment of cancer pain	
3.6.11	Define and distinguish between incident pain and incompletely relieved persistent pain
3.6.12	Apply a mechanism-based approach to identifying the origins and contributing factors to pain in cancer patients
3.6.13	Describe the clinical presentations of mucositis induced by chemotherapy or immunotherapy
3.6.14	Discuss the presentation of oncological emergencies in the patient with cancer-related pain, including but not limited to: <ul style="list-style-type: none"> • Acute spinal cord compression • Life-threatening increased intracranial pressure • Acute bowel obstruction and perforation of a viscus • Hypercalcaemia • Long bone fracture
Management of cancer-associated pain	
3.6.15	Discuss the different goals of care for a pre-terminal patient compared with those for a terminal patient
3.6.16	Discuss the role of cancer therapies in the management of cancer-related pain, including but not limited to: <ul style="list-style-type: none"> • Radiotherapy • Radiopharmaceuticals • Chemotherapy • Immune therapy • Surgery
3.6.17	Discuss the management of acute pain in cancer patients, including: <ul style="list-style-type: none"> • Diagnostic interventions • Therapeutic interventions • Surgery • Radiotherapy • Chemotherapy

3.6.18	Discuss management of post-chemotherapy and post-radiotherapy pain
3.6.19	Discuss management of mucositis, with particular reference to children
3.6.20	Outline the changes in pain management when a patient is: <ul style="list-style-type: none"> • No longer able to swallow • Unconscious • Likely to die within days
3.6.21	Critically discuss the use of other adjuvant analgesics in cancer pain including but not limited to: <ul style="list-style-type: none"> – bisphosphonates – denosumab – corticosteroids – ketamine
3.6.22	Discuss the role of interventional procedures in the management of cancer pain that is unresponsive to non-invasive treatment, including but not limited to: <ul style="list-style-type: none"> • Neuraxial and intracerebroventricular administration of medications • Neurolytic blocks, with particular reference to: <ul style="list-style-type: none"> ○ Saddle block ○ Coeliac plexus block • Surgical procedures <ul style="list-style-type: none"> ○ Cordotomy
3.6.23	Critically discuss the use of complementary and alternative medicines in patients with cancer pain
3.6.24	Discuss the evidence base for cannabinoids in the management of pain and other symptoms in patients with terminal disease

3.7 Headache and orofacial pain

Headache, facial and dental pain are among the most common pain disorders. Almost half of the adult population have headache at least once a year. Headache disorders are associated with the major personal and societal burdens of pain and disability. Only a minority of people with headache disorders are appropriately diagnosed; headache is an underestimated and undertreated problem throughout the world. More than 10 per cent of people have migraine, while medication overuse headache may affect up to 5 per cent of some populations. A number of specific headache and facial pain disorders may be identified based on careful clinical assessment.

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

Background

3.7.1	Appraise the International Classification of Headache Disorders
3.7.2	Generally discuss accepted definitions of terms associated with headache syndromes
3.7.3	Describe a taxonomy of orofacial pain

Applied foundation knowledge

3.7.4	Describe the anatomy of the cranial and upper cervical nerves and the innervation of the scalp, sinuses and teeth
3.7.5	Describe potential neurobiological mechanisms for: <ul style="list-style-type: none"> • Headache • Facial pain • Orofacial pain
3.7.6	Discuss the pathophysiology of trigeminal neuralgia
3.7.7	Discuss the pathophysiology of: <ul style="list-style-type: none"> • Post-traumatic headache • Post-craniotomy headache • Post-dural puncture headache

Assessment of headache and orofacial pain

3.7.8	Perform a cranial nerve examination, including fundoscopy
3.7.9	Perform an examination of the temporomandibular joint
3.7.10	Perform an examination of the cervical spine
3.7.11	Detail the critical factors for assessing life-threatening headache
3.7.12	Demonstrate awareness of potential causes of headache that may be overlooked on initial assessment including: <ul style="list-style-type: none"> • Idiopathic intracranial hypertension

	<ul style="list-style-type: none"> • Low cerebrospinal fluid (CSF) pressure headache (intracranial hypotension) • Post-craniotomy headache • Pathology in the eyes and ears • Space-occupying lesions • Vascular disease • Sinus pathology
Headache	
3.7.13	Distinguish between the clinical features of the following <i>primary</i> chronic daily headache syndromes: <ul style="list-style-type: none"> • Migraine (with and without aura) • Transformed migraine • Cluster headache and variants
3.7.14	Distinguish between the clinical features of the following <i>secondary</i> chronic daily headache syndromes: <ul style="list-style-type: none"> • Medication-related <ul style="list-style-type: none"> ○ Medication overuse headache ○ Medication-induced side effects • Post-traumatic <ul style="list-style-type: none"> ○ Headache attributable to head injury ○ Headache attributable to neck injury or whiplash • Disorders of intracranial pressure <ul style="list-style-type: none"> ○ Increased intracranial pressure ○ Decreased intracranial pressure • Headache referred from other structures <ul style="list-style-type: none"> ○ Tension-type headache ○ Cervicogenic headache
Orofacial pain	
3.7.15	Recognise the clinical features of: <ul style="list-style-type: none"> • Trigeminal neuralgia • Other cranial neuralgias • Post-herpetic neuralgia • “Burning mouth” syndrome
3.7.16	Apply a differential diagnosis approach to determining the anatomical origin of “atypical” facial pain
3.7.17	Distinguish pain of odontogenic and non-odontogenic origin
3.7.18	Describe the spectrum of temporomandibular joint dysfunction
Management of headache and orofacial pain	
3.7.19	Discuss the evidence base for non-drug interventions in primary and secondary

	<p>headache syndromes:</p> <ul style="list-style-type: none"> • Cognitive-behavioural therapy • Relaxation • Sleep hygiene • Exercise • Diet • Massage • Acupuncture
3.7.20	<p>Discuss the evidence base for pharmacological treatment of acute migraine:</p> <ul style="list-style-type: none"> – simple analgesics – non-steroidal anti-inflammatory drugs – antiemetics – triptans – opioids
3.7.21	<p>Discuss the evidence base for pharmacological prophylaxis in migraine:</p> <ul style="list-style-type: none"> – beta-blockers – calcium channel blockers – sodium valproate – tricyclic agents – topiramate – pizotifen – ergot derivatives – other agents including SNRIs
3.7.22	<p>Discuss the evidence base for and the role of botulinum toxin in the management of chronic migraine</p>
3.7.23	<p>Discuss the role of occipital nerve stimulation in the management of refractory migraine</p>
3.7.24	<p>Discuss the treatment options available in the management of medication-overuse headache</p>
3.7.25	<p>Discuss the evidence base for pharmacological treatment of trigeminal neuralgia with:</p> <ul style="list-style-type: none"> – carbamazepine – gabapentin – clonazepam – baclofen
3.7.26	<p>Discuss the efficacy and complications of surgical options for trigeminal neuralgia:</p> <ul style="list-style-type: none"> • Microvascular decompression • Radiofrequency ablation • Balloon compression
3.7.27	<p>Discuss the evidence base behind the treatments for temporomandibular joint</p>

	disease including but not limited to: <ul style="list-style-type: none">• Cognitive behavioural therapy• Physical therapies• Dental splints• Temporomandibular joint irrigation• Temporomandibular joint surgery
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3.8 Complex regional pain syndrome (CRPS)

Complex regional pain syndromes (CRPS) are enigmatic challenges to understanding and management. The specialist pain medicine physician (SPMP) must have expertise in the presentation, diagnosis and differential diagnosis of these conditions. Insight into their pathophysiology and natural history, and application of evidence-based approaches to prevention and treatment are essential.

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

Background

3.8.1	Discuss the historical progression of terminology of these conditions, towards the current clinical and research (Budapest) diagnostic criteria (including sensitivity, specificity and positive predictive value)
3.8.2	Compare and contrast adult and paediatric CRPS in terms of presentation, disease course, and prognosis

Applied foundation knowledge

3.8.3	Discuss proposed pathophysiological mechanisms of CRPS
3.8.4	Critically discuss “sympathetically maintained pain”
3.8.5	Explain the rationale for programs of: <ul style="list-style-type: none"> • Desensitisation • Graded mobilisation

Clinical identification and assessment of CRPS

3.8.6	Generate a differential diagnosis for a patient with presumed CRPS
3.8.7	Perform a functional assessment of the CRPS-affected part including: <ul style="list-style-type: none"> • Comparison with the non-affected side • Performance of activities of daily living • Gait analysis, where relevant <p><i>See also Section 3.3 Spinal pain</i></p>

Management of CRPS

3.8.8	Outline the role of the following strategies in achieving improved function in patients with CRPS: <ul style="list-style-type: none"> • Psychological (including cognitive) and physical techniques, including but not limited to: <ul style="list-style-type: none"> ○ Desensitisation ○ Graded paced exercise and activity ○ Restoration of independence in activities of daily living ○ Management of fear/avoidance ○ Graded motor imagery • Pharmacotherapy
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	<ul style="list-style-type: none">• Interventions, including but not limited to:<ul style="list-style-type: none">○ Implantable devices○ Sympathectomy○ Infusion therapy
3.8.9	Critically discuss preventative strategies employed for CRPS according to the current evidence base (for example, vitamin C, steroids, ketamine)

3.9 Chronic widespread pain

Specialist pain medicine physicians will be asked to assess and manage patients who have pain that is not well understood by medical science. Such presentations are marked by incomplete knowledge, uncertainty as to causation, and controversy as to appropriate management. Not infrequently the conditions are associated with strongly held but scientifically unsupported beliefs. “Chronic widespread pain for which there is no obvious cause” is a case in point. This study unit requires integration of the other essential topic areas.

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

Background

3.9.1	<p>Demonstrate understanding of historical speculations about the nature of pain that is not well understood, the shortcomings of these speculations, and the medical and social outcomes that have arisen as a result of the adoption of these concepts. These include but are not limited to:</p> <ul style="list-style-type: none"> • Symptoms as psychological by default (DSM-V and ICD-10) • Symptoms as injury (for example, “repetitive strain injury”) • Symptoms as disease entity (for example, “fibromyalgia syndrome”)
3.9.2	<p>Be aware of developments in the field of psycho-neuro-immuno-biology relevant to the experience of chronic pain</p>

Applied foundation knowledge

3.9.3	<p>Critically discuss the concepts of somatisation and hypervigilance</p>
3.9.4	<p>Discuss the "diagnostic" category of somatic symptom and related disorders (according to DSM-V or ICD-10), including but not limited to:</p> <ul style="list-style-type: none"> • Somatic symptom disorder • Illness anxiety disorder • Conversion disorder (functional neurological symptom disorder) • Psychological factors affecting other medical conditions • Factitious disorder
3.9.5	<p>Recognise the potential contributions of sources of somatic and visceral nociception to the experience of widespread pain</p>

Assessment of widespread pain

3.9.6	<p>Outline the heterogeneity of clinical presentations of “widespread pain”</p>
3.9.7	<p>Critically interpret the clinical finding of “tenderness”</p>
3.9.8	<p>Critically evaluate the constructs of “myofascial pain” and “fibromyalgia”</p>

Management of widespread pain

3.9.9	<p>Discuss reasons for the paucity of quality evidence in the management of chronic widespread pain</p>
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Section Four

OPTIONAL TOPIC AREAS



4.1 Persistent Pelvic Pain

Like other chronic pain conditions, in persistent pelvic pain (PPP) there is: pain from end organs (pelvic organs); the musculoskeletal response to pain; central sensitisation; and the psychological sequelae of the pain condition. In addition, PPP presents personal challenges above and beyond those suffered by others with chronic pain. Patients may be reluctant to present to health care providers as their pain has embarrassing gender, fertility and sexual overtones.

The specialist pain medicine physician (SPMP) needs a sound understanding of the social context and the psychological impact of PPP in order to develop a comprehensive management plan. Learning outcomes are an extension of those in the essential topic areas (ETA), especially, ETA 5 on Visceral Pain.

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

Background

4.1.1	Describe epidemiology and natural history of pelvic pain in women and men.
4.1.2	Discuss the psychological sequelae of persistent pelvic pain and the implications it may have on medical management.
4.1.3	Be cognisant that persistent pelvic pain usually presents with multiple issues and is likely to have four components: <ul style="list-style-type: none"> • Pelvic organ contributions or causes of nociception • Somatic nociception • Peripheral and central sensitisation, cross sensitisation between organs • Patient's adaptation to chronic pain
4.1.4	Recognise the lifestyle, posture, exercise and obstetric issues that predispose to the development of pelvic pain.
4.1.5	Identify nociception involving the pelvic floor muscles and ligaments, their presenting symptoms, examination findings and management options.
4.1.6	Discuss in detail the concept of neural plasticity, i.e. sensitisation or neuropathic mechanisms in persistent pelvic pain.
4.1.7	Outline the mechanisms of pain in: <ul style="list-style-type: none"> • Surgical nerve injury, e.g. ilioinguinal/hypogastric, obturator, pudendal • Irritable bowel syndrome • Painful Bladder Syndrome • Pudendal Neuralgia
4.1.8	Describe gender specific mechanisms in pain, including the role of sex hormones
4.1.9	Describe the mechanisms by which menstrual suppression may have an effect on pain control.

4.1.10	Outline the mechanisms of pain in: <ul style="list-style-type: none"> • Dysmenorrhoea • Endometriosis • Vulvodynia • Menstrual Migraine • Chronic Candidiasis
Assessment	
4.1.11	Elicit a history from the patient with pelvic pain to evaluate the pain and its impact on physical and social function, including: <ul style="list-style-type: none"> • Bladder function • Bowel function including 'bloating' • Food intolerances • Surgical history • Cognitive factors such as fear-avoidance beliefs and coping styles • Precipitating neural injury • Pain or relief of pain through exercise and activity • Sexual history • Abuse history
4.1.12	Distinguish clinically conditions that are suggestive of: <ul style="list-style-type: none"> • Inflammatory and neuropathic sources of pelvic pain • Nociception from pelvic muscles including pubococcygeus and obturator internus. • Central sensitisation • Symptoms and signs that reflect convergence
4.1.13	Elicit the presence of pelvic muscle allodynia by both history and appropriate examination.
4.1.14	Describe the possible causes of acute 'flares' of pain in the context of persistent pelvic pain.
4.1.15	Evaluate the relationship between pain and the menstrual cycle, including the effect of hormonal changes.
4.1.16	Perform a thorough physical examination to exclude infection and diagnose the cause of pelvic pain.
Management of Pelvic Pain	
4.1.17	Discuss treatment options for <ul style="list-style-type: none"> • bladder symptoms of frequency, nocturia or urgency • irritable bowel and food intolerance • pudendal neuralgia

4.1.18	Discuss the management of pelvic muscle pain, including the contribution of obturator internus, pubococcygeus, puborectalis, piriformis, mechanical allodynia and the role of pelvic physiotherapy.
4.1.19	Describe the role of psychological measures in the management of pelvic pain.
4.1.20	Describe the role of neuropathic medications and pharmacological combinations of therapy, including but not limited to: <ul style="list-style-type: none"> • Amitriptyline • Anticonvulsants including pregabalin and gabapentin • SNRI medications including duloxetine
4.1.21	Describe gender specific risks and consequences of long term pharmacotherapy including hormonal therapies used in the treatment of pelvic pain.
4.1.22	List the allied health professionals that may be involved in the care of persistent pelvic pain and outline their respective contributions to management.
4.1.23	Discuss the importance of psychological support strategies in conjunction with other treatment.
4.1.24	Explain the role of multidisciplinary management, i.e. combinations of pharmacotherapy and non-pharmacological treatments in the management of persistent pelvic pain.
4.1.25	Discuss specific treatment options for <ul style="list-style-type: none"> • dysmenorrhea • endometriosis • vulvovaginal irritation • chronic candidiasis • menstrual migraine
4.1.26	Describe the indications, effectiveness and adverse effects of pharmacotherapies used to suppress ovarian and uterine function.
4.1.27	Discuss the evidence base for the indications, effectiveness and adverse effects of surgical interventions as a treatment for pelvic pain, including but not limited to laparoscopy and hysterectomy.
4.1.28	Outline the treatment options available for women with persistent pelvic pain who are trying to conceive.
4.1.29	Critically discuss the treatment options for management of persistent pelvic pain during pregnancy, the postpartum period and breastfeeding.

4.2 Consultation Liaison Psychiatry

Patients with mental health disorders and experiencing pain may face challenges above and beyond others suffering with chronic pain. These patients may have difficulty accessing and engaging in appropriate care. The specialist pain medicine physician (SPMP) needs a sound understanding of the interrelationship between personality factors, psychological syndromes, psychiatric disorders and the experience of pain. They also require the skills to provide brief psychotherapy and manage psychiatric emergencies in the pain setting.

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

Background

4.2.1	Outline the nature and extent of psychiatric morbidity commonly encountered in clinical pain populations.
4.2.2	Demonstrate a sophisticated understanding of the sociopsychobiomedical framework for clinical pain disorders
4.2.3	Critically discuss the concept of 'abnormal illness behaviour'.
4.2.4	Describe the core symptoms and course of a range of psychological syndromes and psychiatric disorders, including but not limited to: <ul style="list-style-type: none"> • Depressive disorders • Anxiety disorders • Trauma and Stressor Related disorders • Schizophrenia Spectrum & Other Psychotic disorders • Personality disorders • Somatic symptom and related disorders • Neurocognitive Disorders, including delirium and dementia
4.2.5	Outline the influence of personality factors on the experience of illness and pain.
4.2.6	Explain the psychological and psychiatric effects of medical and surgical treatments, medications and toxins as they apply to pain medicine.
4.2.7	Describe common drug toxicity syndrome including serotonin syndrome and neuroleptic malignant syndrome
4.2.8	Discuss relevant jurisdictional legislation relating to mental health, guardianship/substitute consent and child safety legislation

Assessment

4.2.9	Perform a psychiatric evaluation of patients with pain
4.2.10	Undertake a risk assessment (risk to self, others, vulnerability risks) in in-patient and

	out-patient settings.
4.2.11	Identify factors that may lead to refusal of treatment, determine capacity to refuse treatment, and implement strategies to help patients make choices that are in their best interests.
4.2.12	Discuss the impact of older person's mental health, including delirium and dementias, on pain presentation. Undertake a risk assessment (risk to self, others, vulnerability risks) in medical, surgical and obstetric wards.
4.2.13	Differentiate among depressive syndromes and disorders such as major depression, adjustment disorder, demoralisation, grief and bereavement and recognise each in the pain medicine setting.
4.2.14	Differentiate acute stress reactions and post-traumatic stress disorders and recognise each in the pain medicine setting.
4.2.15	Assess and safely manage patients with overwhelming distress, suicidality and extreme agitation.
4.2.16	Recognise the impact on staff of distressing situations, and the ability to evaluate the effect on staff behaviour and to modulate its effects where necessary
4.2.17	Recognise impact of childhood trauma on personality development, complex post trauma states, psychiatric morbidity and chronic pain states.
4.2.18	Outline the determinants of somatisation.
4.2.19	Assess and formulate somatic symptoms in terms of their impact on function and in relation to premorbid variables.
Management	
4.2.20	Describe the indications for and use of psychotropic medications in patients with pain
4.2.21	Discuss the use of psychotropic medication, including the impact of unwanted effects in the presence of other medications and in the context of pain medicine
4.2.22	Develop a management plan for patients with self-harm and suicidal ideation.
4.2.23	Apply a range of clinical interventions for patients, including crisis intervention, brief psychotherapy and psychopharmacotherapy.
4.2.24	Modify basic psychodynamic, cognitive behavioural and supportive psychotherapy in the presence of medical illness and pain, with special attention to cognitive limitations.
4.2.25	Identify and manage transference and countertransference issues that arise between patients with psychiatric disorders and/or interpersonal conflicts and their caregivers in pain medicine settings.

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	Demonstrate an understanding of pain management strategies specific for children and adolescents in medical conditions, including but not limited to: <ul style="list-style-type: none"> • CRPS • Chronic widespread pain

	<ul style="list-style-type: none"> • 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	Outline the pain and symptom management of the child in palliative care.
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	Demonstrate effective collaboration with other paediatric health professionals and social, educational and community paediatric services.
4.3.37	Demonstrate a leadership role in children's pain management, including multidisciplinary management of chronic and cancer pain.
4.3.38	Initiate and take an appropriate role in child protection processes.
4.3.39	Recognise the challenging issues associated with transition from paediatric to adult health and social services, and manage accordingly.

4.4 Interventional Pain Medicine

Interventional procedures may temporarily modulate the experience of pain in either palliative or non-palliative settings. They are not curative. In the non-palliative context they are intended to facilitate physical and psychological rehabilitation.

In addition to performing selected procedures under appropriate supervision, trainees should observe as broad a range of techniques as possible.

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

Background

4.4.1	Discuss the potential role interventional procedures may have for selected patients with chronic pain.
4.4.2	Discuss the potential harm of interventional procedures in patients focused on the passive receipt of medical treatments.
4.4.3	Describe anatomy relevant to interventional procedures.
4.4.4	Outline the physical principles of radiological, magnetic resonance and ultrasound imaging techniques used to identify relevant anatomy as it relates to interventional procedures.
4.4.5	Outline the elements of informed consent for an interventional procedure, including but not limited to: <ul style="list-style-type: none"> • Risks vs benefits • Potential complications • Alternatives to the procedure
4.4.6	Discuss the guidelines for safe sedation for interventional procedures as described in ANZCA professional document PS09.
4.4.7	Describe the legal reporting requirements for interventional procedures.
4.4.8	Critically evaluate the evidence for the procedures listed in 4.4.17.
4.4.9	Discuss the use of blinded procedures (sham v active and comparative local anaesthetic blocks) to evaluate the placebo component of any response.

Assessment

4.4.10	Identify from the history patient factors that are supportive or contrary to provision of interventional procedures.
4.4.11	Identify psychosocial risk factors (including depression, distress and high opioid intake) that predict poor outcome from interventional procedures.
4.4.12	Conduct a physical examination and interpret findings that may influence patient selection for an interventional procedure.
4.4.13	Interpret investigations in the context of patient selection for interventional procedures.

Management	
4.4.14	Discuss the staffing requirements of an interventional pain medicine suite.
4.4.15	Describe the options for providing analgesia and/or anxiolysis for patients undergoing interventional procedures.
4.4.16	Outline the requirements for conducting an interventional procedure safely, including but not limited to: <ul style="list-style-type: none"> • Aseptic technique • Universal precautions • Radiation safety • Appropriate levels of support and assistance.
4.4.17	Perform with appropriate supervision the following types of interventional procedures : <ul style="list-style-type: none"> • Peripheral nerve block • Plexus block • Sympathetic block • Radiofrequency ablation • Epidural/intrathecal block/infusion • Implantable devices
4.4.18	Develop and implement a post procedure care plan, including the management of any associated complications.
4.4.19	Participate in regular clinical audit of interventional practice.

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FPM Examination Committee

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