

NEW CURRICULA

Advanced Training in Sleep Medicine (Adult Medicine)

Curriculum standards



RACP
Specialists. Together

About this document

The new Advanced Training in Sleep Medicine (Adult Medicine) curriculum consists of curriculum standards and learning, teaching, and assessment (LTA) programs.

This document outlines the curriculum standards for Advanced Training in Sleep Medicine (Adult Medicine) for trainees and supervisors. The curriculum standards should be used in conjunction with the Advanced Training in Sleep Medicine (Adult Medicine) [LTA programs](#).

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Program overview

Purpose of Advanced Training

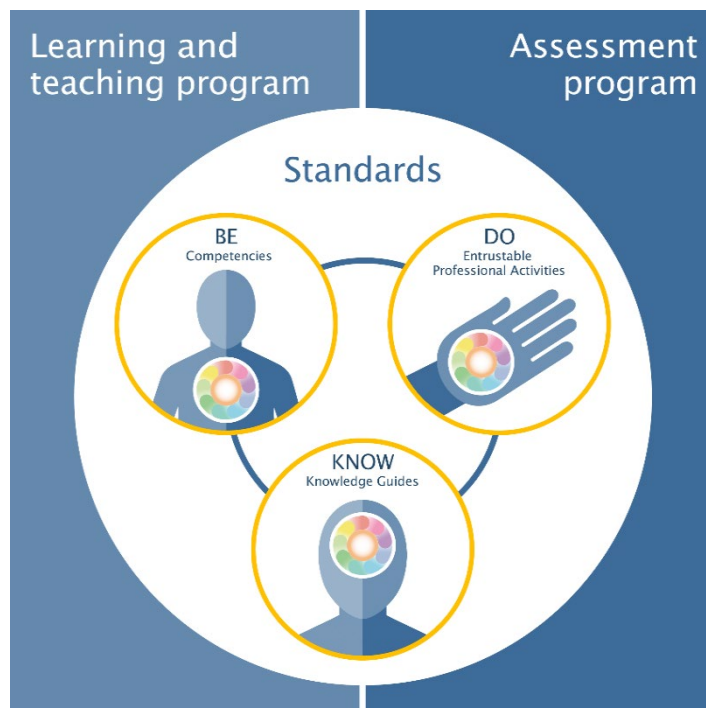
The RACP offers Advanced Training in 33 diverse medical specialties as part of Division, Chapter, or Faculty training programs.

The purpose of Advanced Training is to develop a workforce of physicians who:

- have received breadth and depth of focused specialist training, and experience with a wide variety of health problems and contexts
- are prepared for and committed to independent expert practice, lifelong learning, and continuous improvement
- provide safe, quality health care that meets the needs of the communities of Australia and Aotearoa New Zealand.



RACP curriculum model



The **RACP curriculum model** is made up of curricula standards supported by learning, teaching, and assessment programs.

Learning and teaching programs outline the strategies and methods to learn and teach curricula standards, including required and recommended learning activities.

Assessment programs outline the planned use of assessment methods to provide an overall picture of the trainee's competence over time.

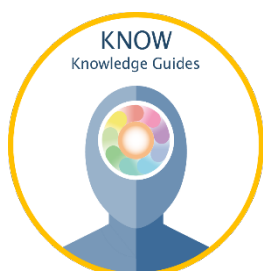
The **curricula standards** outline the educational objectives of the training program and the standard against which trainees' abilities are measured.



- **Competencies** outline the expected professional behaviours, values and practices of trainees in 10 domains of professional practice.



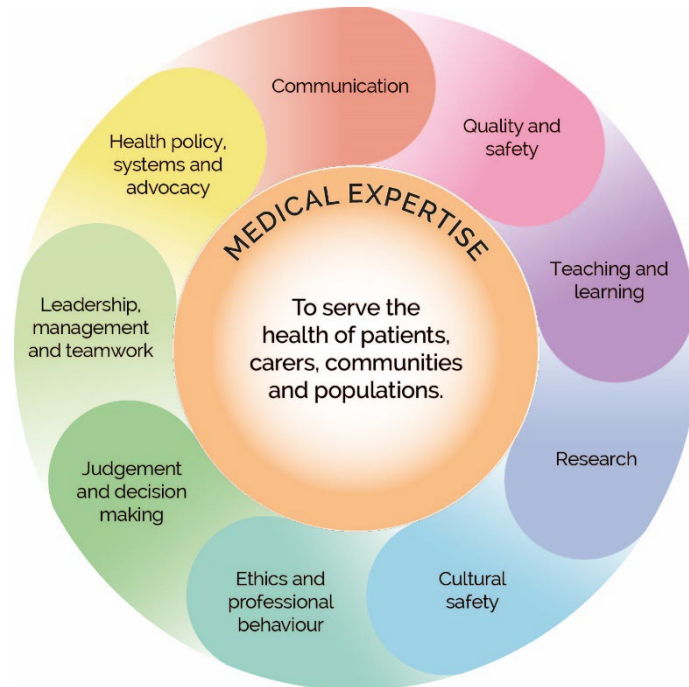
- **Entrustable Professional Activities (EPAs)** outline the essential work tasks trainees need to be able to perform in the workplace.



- **Knowledge guides** outline the expected baseline knowledge of trainees.

Professional Practice Framework

The Professional Practice Framework describes 10 domains of practice for all physicians.



Learning, teaching, and assessment (LTA) structure

The learning, teaching and assessment structure defines the framework for delivery and trainee achievement of the curriculum standards in the Advanced Training program.

Advanced Training is structured in three phases. These phases will establish clear checkpoints for trainee progression and completion.

- 1 Specialty foundation**
 - Orient trainees and confirm their readiness to progress in the Advanced Training program
- 2 Specialty consolidation**
 - Continue trainees' professional development in the specialty and support progress towards the learning goals
- 3 Transition to Fellowship**
 - Confirm trainees' achievement of the curriculum standards, completion of Advanced Training, and admission to Fellowship
 - Support trainees' transition to unsupervised practice



Figure 1: Advanced Training learning, teaching, and assessment structure

- An **entry decision** is made before entry into the program.
- A **progress decision**, based on competence, is made at the end of each phase of training.
- A **completion decision**, based on competence, is made at the end of the training program, resulting in eligibility for admission to Fellowship.



Advanced Training is a **hybrid time- and competency-based training program**. There is a minimum time requirement of full-time equivalent experience, and progression and completion decisions are based on evidence of trainees' competence.

Sleep Medicine (Adult Medicine) specialty overview

Sleep medicine incorporates the study of healthy sleep and the investigation and management of sleep disorders. Sleep medicine is a non-organ specific, cross-disciplinary specialty. It is underpinned by a substantial and rapidly expanding scientific knowledge base. The maintenance of health across the ages is critically dependent on obtaining adequate sleep. Acute and chronic sleep deprivation is associated with a range of adverse neurobehavioral, endocrine, and cardiovascular outcomes.

Sleep medicine specialists address the health care needs of the community by:

- promoting healthy sleep and sleep practices across the lifespan
- addressing and managing the burden of sleep disorders in a timely and cost-effective manner, utilising evidenced based approaches
- optimising sleep in the context of physical and mental health and comorbid conditions
- providing information for industry and governmental regulatory authorities on the impact of sleep deprivation and sleep disorders.

Sleep medicine specialists possess special clinical skills, such as:

- **Recognising how sleep affects health and daily functioning.** Sleep deprivation is endemic in western societies – health implications include mood disturbance, accidents / injuries, increased insulin resistance, and neuroendocrine disturbance.
- **Diagnosing, investigating, and managing individuals with sleep disorders.** Patients with sleep disorders undergo special assessments which include a combination of clinical evaluation and sleep monitoring, and the subsequent application of treatment modalities using various interventions, including medications, medical devices, surgical procedures, education, and behavioural techniques.
- **Honing expertise in sleep monitoring and physiological assessment of sleep and sleep disorders.**
- **Providing age-appropriate care.** Sleep disorders occur in a variety of patients, from children to the elderly. Effective treatments are available for most sleep disorders, but they rely on the accurate identification of the disorder and health professionals who are skilled in their application. Thus, sleep medicine physicians play a central role in delivery of health care to patients of all ages with primary and secondary sleep disorders.

Sleep medicine specialists have specific professional skills, including:

- **Applying a multidisciplinary approach.** Sleep medicine specialists work collaboratively with other health professionals and within a team.
- **Working sensitively with a variety of patients.** Sleep medicine specialists develop an ability to deal with patients from a diverse range of backgrounds, cognitive and physical function, in a professional and empathetic manner.
- **Strong communication skills.** Sleep medicine specialists must develop a personable interviewing technique and an ability to relate to patients from all walks of life. It is also essential that they appreciate when referral to a more appropriate or more qualified practitioner in a particular subspecialty is necessary.
- **Managing resources for the benefit of patients and communities.** Sleep medicine specialists apply a biopsychosocial approach to ensure the delivery of efficient, cost-effective, and safe care for the benefit of their patients and communities.
- **Applying a scholarly approach.** Sleep medicine specialists conduct academic research to discover better ways of understanding, diagnosing, treating, and preventing disease. They apply research to improve the management of patients.

Sleep Medicine (Adult Medicine) learning goals

The curriculum standards are summarised as 18 learning goals. The learning goals articulate what trainees need to be, do and know, and are assessed throughout training.

BE Competencies	1. Professional behaviours
DO EPAs	2. Team leadership 3. Supervision and teaching 4. Quality improvement 5. Clinical assessment and management 6. Management of transitions in care 7. Longitudinal care 8. Communication with patients 9. Prescribing 10. Investigations 11. Clinic management and procedures
KNOW Knowledge guides	12. Scientific foundations of sleep medicine (including investigations and measurements) 13. Sleep-related breathing disorders 14. Central disorders of hypersomnolence 15. Sleep-related movement disorders 16. Parasomnia 17. Insomnia 18. Circadian disorders of the sleep-wake cycle

Curriculum standards

Competencies

Competencies outline the expected professional behaviours, values and practices that trainees need to achieve by the end of training.

Competencies are grouped by the 10 domains of the professional practice framework.

Competencies will be common across training programs.

Learning goal 1: Professional behaviours



Medical expertise

Professional standard: Physicians apply knowledge and skills informed by best available current evidence in the delivery of high-quality, safe practice to facilitate agreed health outcomes for individual patients and populations.

Knowledge: Apply knowledge of the scientific basis of health and disease to the diagnosis and management of patients.

Synthesis: Gather relevant data via age- and context- appropriate means to develop reasonable differential diagnoses, recognising and considering interactions and impacts of comorbidities.

Diagnosis and management: Develop diagnostic and management plans that integrate an understanding of individual patient circumstances, including psychosocial factors and specific vulnerabilities, epidemiology, and population health factors in partnership with patients, families, or carers¹, and in collaboration with the health care team.

¹ References to patients in the remainder of this document may include their families and/or carers.



Communication

Professional standard: Physicians collate information, and share this information clearly, accurately, respectfully, responsibly, empathetically, and in a manner that is understandable.

Physicians share information responsibly with patients, families, carers, colleagues, community groups, the public, and other stakeholders to facilitate optimal health outcomes.

Effective communication: Use a range of effective and appropriate verbal, nonverbal, written and other communication techniques, including active listening.

Communication with patients, families, and carers: Use collaborative, effective, and empathetic communication with patients, families, and carers.

Communication with professionals and professional bodies: Use collaborative, respectful, and empathetic clinical communication with colleagues, other health professionals, professional bodies, and agencies.

Written communication: Document and share information about patients to optimise patient care and safety.

Privacy and confidentiality: Maintain appropriate privacy and confidentiality, and share information responsibly.



Quality and safety

Professional standard: Physicians practice in a safe, high-quality manner within the limits of their expertise.

Physicians regularly review and evaluate their own practice alongside peers and best practice standards, and conduct continuous improvement activities.

Patient safety: Demonstrate a safety focus and continuous improvement approach to own practice and health systems.

Harm prevention and management: Identify and report risks, adverse events, and errors to improve healthcare systems.

Quality improvement: Participate in quality improvement activities to improve quality of care and safety of the work environment.

Patient engagement: Enable patients to contribute to the safety of their care.



Teaching and learning

Professional standard: Physicians demonstrate a lifelong commitment to excellence in practice through continuous learning and evaluating evidence.

Physicians foster the learning of others in their profession through a commitment to mentoring, supervising, and teaching².

Lifelong learning: Undertake effective self-education and continuing professional development.

Self-evaluation: Evaluate and reflect on gaps in own knowledge and skills to inform self-directed learning.

Supervision: Provide supervision for junior colleagues and/or team members.

Teaching: Apply appropriate educational techniques to facilitate the learning of colleagues and other health professionals.

Patient education: Apply appropriate educational techniques to promote understanding of health and disease amongst patients and populations.



Research

Professional standard: Physicians support creation, dissemination and translation of knowledge and practices applicable to health³. They do this by engaging with and critically appraising research, and applying it in policy and practice to improve the health outcomes of patients and populations.

Evidence-based practice: Critically analyse relevant literature and refer to evidence-based clinical guidelines, and apply these in daily practice.

Research: Apply research methodology to add to the body of medical knowledge and improve practice and health outcomes.

² Adapted from Richardson D, Oswald A, Chan M-K, Lang ES, Harvey BJ. Scholar. In: Frank JR, Snell L, Sherbino J, editors. The Draft CanMEDS 2015 Physician Competency Framework – Series IV. Ottawa: The Royal College of Physicians and Surgeons of Canada; 2015 March.

Cultural safety



Professional standard. Physicians engage in iterative and critical self-reflection of their own cultural identity, power, biases, prejudices, and practising behaviours. Together with the requirement of understanding the cultural rights of the community they serve, this brings awareness and accountability for the impact of the physician's own culture on decision making and health care delivery. It also allows for an adaptive practice where power is shared between patients, family, whānau, and/or community and the physician, to improve health outcomes.

Physicians recognise the patient and population's rights for culturally safe care, including being an ally for patient, family, whānau, and/or community autonomy and agency over their decision making. This shift in the physician's perspective fosters collaborative and engaged therapeutic relationships, allows for strength-based (or mana-enhanced) decisions, and sharing of power with the recipient of the care, optimising health care outcomes.

Physicians critically analyse their environment to understand how colonialism, systemic racism, social determinants of health, and other sources of inequity have and continue to underpin the healthcare context. Consequently, physicians then can recognise their interfacing with, and contribution to, the environment in which they work to advocate for safe, more equitable and decolonised services, and create an inclusive and safe workplace for all colleagues and team members of all cultural backgrounds³.

Critical reflection. Engage in iterative and critical self-reflection and demonstrate cultural safety in the context of their own cultural identity, power, biases, prejudices and practising behaviours.

Allyship. Recognise the patient and population's rights to culturally-safe care, including being an ally for patient, family, whānau and/or community autonomy and agency over their decision-making.

Inclusive communication. Apply culturally-safe communication, acknowledging the sharing of power, and cultural and human rights to enable patients, families and whānau to engage in appropriate patient care decisions.

Culturally-safe environment. Contributes to a culturally-safe learning and practice environment for patients and team members. Respect patients may feel unsafe in the healthcare environment.

³ The RACP has adopted the Medical Council of New Zealand's definition of cultural safety (below): Cultural safety can be defined as:

- the need for doctors to examine themselves and the potential impact of their own culture on clinical interactions and healthcare service delivery
- the commitment by individual doctors to acknowledge and address any of their own biases, attitudes, assumptions, stereotypes, prejudices, structures, and characteristics that may affect the quality of care provided
- the awareness that cultural safety encompasses a critical consciousness where health professionals and health care organisations engage in ongoing self-reflection and self-awareness, and hold themselves accountable for providing culturally safe care, as defined by the patient and their communities.

Curtis et al. "Why cultural safety rather than cultural competency is required to achieve health equity". International Journal for Equity in Health (2019) 18:174



Ethics and professional behaviour

Professional standard. Physicians' practice is founded upon ethics, and physicians always treat patients, their families, communities, and populations in a caring and respectful manner. Physicians demonstrate their commitment and accountability to the health and well-being of individual patients, communities, populations, and society through ethical practice.

Physicians demonstrate their commitment and accountability to the health and wellbeing of individual patients, communities, populations, and society through ethical practice.

Physicians demonstrate high standards of personal behaviour.

Beliefs and attitudes: Reflect critically on personal beliefs and attitudes, including how these may impact on patient care.

Honesty and openness: Act honestly, including reporting accurately, and acknowledging their own errors.

Patient welfare: Prioritise patients' welfare and community benefit above self-interest.

Accountability: Be personally and socially accountable.

Personal limits: Practise within their own limits and according to ethical principles and professional guidelines.

Self-care: Implement strategies to maintain personal health and wellbeing.

Respect for peers: Recognise and respect the personal and professional integrity, roles, and contribution of peers.

Interaction with professionals: Interact equitably, collaboratively, and respectfully with other health professionals.

Respect and sensitivity: Respect patients, maintain appropriate relationships, and behave equitably.

Privacy and confidentiality: Protect and uphold patients' rights to privacy and confidentiality.

Compassion and empathy: Demonstrate a caring attitude towards patients and endeavour to understand patients' values and beliefs.

Health needs: Understand and address patients', families', carers', and colleagues' physical and emotional health needs.

Medical and health ethics and law: Practise according to current community and professional ethical standards and legal requirements.



Judgement and decision making

Professional standard: Physicians collect and interpret information, and evaluate and synthesise evidence, to make the best possible decisions in their practice.

Physicians negotiate, implement, and review their decisions and recommendations with patients, their families and carers, and other health professionals.

Diagnostic reasoning: Apply sound diagnostic reasoning to clinical problems to make logical and safe clinical decisions.

Resource allocation: Apply judicious and cost-effective use of health resources to their practice.

Task delegation: Apply good judgement and decision making to the delegation of tasks.

Limits of practice: Recognise their own scope of practice and consult others when required.

Shared decision making: Contribute effectively to team-based decision-making processes.



Leadership, management, and teamwork

Professional standard: Physicians recognise, respect, and aim to develop the skills of others, and engage collaboratively to achieve optimal outcomes for patients and populations.

Physicians contribute to and make decisions about policy, protocols, and resource allocation at personal, professional, organisational, and societal levels.

Physicians work effectively in diverse multidisciplinary teams and promote a safe, productive, and respectful work environment that is free from discrimination, bullying, and harassment.

Managing others: Lead teams, including setting directions, resolving conflicts, and managing individuals.

Wellbeing: Consider and work to ensure the health and safety of colleagues and other health professionals.

Leadership: Act as a role model and leader in professional practice.

Teamwork: Negotiate responsibilities within the healthcare team and function as an effective team member.



Health policy, systems, and advocacy

Professional standard: Physicians apply their knowledge of the nature and attributes of local, national, and global health systems to their own practices. They identify, evaluate, and influence health determinants through local, national, and international policy.

Physicians deliver and advocate for the best health outcomes for all patients and populations.

Health needs: Respond to the health needs of the local community and the broader health needs of the people of Australia and Aotearoa New Zealand.

Prevention and promotion: Incorporate disease prevention, health promotion, and health surveillance into interactions with individual patients and their social support networks.

Equity and access: Work with patients and social support networks to address determinants of health that affect them and their access to needed health services or resources.

Stakeholder engagement: Involve communities and patient groups in decisions that affect them to identify priority problems and solutions.

Advocacy: Advocate for prevention, promotion, equity, and access to support patient and population health needs within and outside the clinical environment.

Resource allocation: Understand the factors influencing resource allocation, promote efficiencies, and advocate to reduce inequities.

Sustainability: Manage the use of health care resources responsibly in everyday practice.

Entrustable Professional Activities

Entrustable Professional Activities (EPAs) outline the essential work tasks trainees need to be able to perform in the workplace.



#	Theme	Title
2	<u>Team leadership</u>	Lead a team of health professionals
3	<u>Supervision and teaching</u>	Supervise and teach professional colleagues
4	<u>Quality improvement</u>	Identify and address failures in health care delivery
5	<u>Clinical assessment and management</u>	Clinically assess and manage the ongoing care of patients
6	<u>Management of transitions in care</u>	Manage transition of patient care between health professionals, providers, and contexts
7	<u>Longitudinal care</u>	Manage and coordinate longitudinal care of patients with chronic illness, disability, and/or long-term health issues
8	<u>Communication with patients</u>	Discuss diagnoses and management plans with patients
9	<u>Prescribing</u>	Prescribe therapies tailored to patients' needs and conditions
10	<u>Investigations</u>	Select, organise, and interpret investigations
11	<u>Clinic management and procedures</u>	Manage an outpatient clinic and plan, prepare for, perform, and provide aftercare for important practical procedures

Learning goal 2: Team leadership

Theme	Team leadership	
Title	Lead a team of health professionals	
Description	<p>This activity requires the ability to:</p> <ul style="list-style-type: none">• prioritise workload• manage multiple concurrent tasks• articulate individual responsibilities, expertise, and accountability of team members• understand the range of team members' skills, expertise, and roles• acquire and apply leadership techniques in daily practice• collaborate with and motivate team members• encourage and adopt insights from team members• act as a role model.	
Behaviours		
<u>Professional practice framework domain</u>	Ready to perform without supervision	Requires some supervision
	<p>Expected behaviours of a trainee who can routinely perform this activity without needing supervision</p> <p>The trainee will:</p>	<p>Possible behaviours of a trainee who needs some supervision to perform this activity</p> <p>The trainee may:</p>
Medical expertise	<ul style="list-style-type: none">• synthesise information with other disciplines to develop optimal, goal-centred plans for patients• use evidence-based care to meet the needs of patients or populations• assess and effectively manage clinical risk in various scenarios• demonstrate clinical competence and skills by effectively supporting team members	<ul style="list-style-type: none">• demonstrate adequate knowledge of health care issues by interpreting complex information• assess the spectrum of problems to be addressed• apply medical knowledge to assess the impact and clinical outcomes of management decisions• provide coordinated and quality health care for populations or patients as a member of a multidisciplinary team
Communication	<ul style="list-style-type: none">• provide support and motivate patients or populations and health professionals by effective communication• demonstrate a transparent, consultative style by engaging patients, families, carers, relevant professionals, and/or the public in shared decision making• work with patients, families, carers, and other health professionals to resolve conflict that may arise when planning and aligning goals• demonstrate rapport with people at all levels by tailoring messages to different stakeholders	<ul style="list-style-type: none">• communicate adequately with colleagues• communicate adequately with patients, families, carers, and/or the public• respect the roles of team members

Quality and safety	<ul style="list-style-type: none"> • identify opportunities to improve care by participating in surveillance and monitoring of adverse events and 'near misses' • identify activities within systems to reduce errors, improve patient and population safety, and implement cost-effective change • place safety and quality of care first in all decision making 	<ul style="list-style-type: none"> • participate in audits and other activities that affect the quality and safety of patients' care • participate in interdisciplinary collaboration to provide effective health services and operational change • use information resources and electronic medical record technology where available
Teaching and learning	<ul style="list-style-type: none"> • regularly self-evaluate personal professional practice, and implement changes based on the results • actively seek feedback from supervisors and colleagues on their own performance • identify personal gaps in skills and knowledge, and engage in self-directed learning • maintain current knowledge of new technologies, health care priorities and changes of patients' expectations • teach competently by imparting professional knowledge • manage and monitor the progress of colleague learners, providing regular assessment and feedback 	<ul style="list-style-type: none"> • accept feedback constructively, and change behaviour in response • recognise the limits of personal expertise, and involve other health professionals as needed • demonstrate basic skills in facilitating colleagues' learning
Cultural safety	<ul style="list-style-type: none"> • demonstrate culturally competent relationships with professional colleagues and patients • demonstrate respect for diversity and difference • take steps to minimise unconscious bias, including the impact of gender, religion, cultural beliefs, and socioeconomic background on decision making 	<ul style="list-style-type: none"> • demonstrate awareness of cultural diversity and unconscious bias • work effectively and respectfully with people from different cultural backgrounds
Ethics and professional behaviour	<ul style="list-style-type: none"> • promote a team culture of shared accountability for decisions and outcomes • encourage open discussion of ethical and clinical concerns • respect differences of multidisciplinary team members • understand the ethics of resource allocation by aligning optimal patient and organisational care • effectively consult with stakeholders, achieving a balance of alternative views • acknowledge personal conflicts of interest and unconscious bias 	<ul style="list-style-type: none"> • support ethical principles in clinical decision making • maintain standards of medical practice by recognising the health interests of patients or populations as primary responsibilities • respect the roles and expertise of other health professionals • work effectively as a member of a team • promote team values of honesty, discipline and commitment to continuous improvement • demonstrate understanding of the negative impact of workplace conflict

	<ul style="list-style-type: none"> act collaboratively to resolve behavioural incidents and conflicts such as harassment and bullying 	
Judgement and decision making	<ul style="list-style-type: none"> evaluate health services and clarify expectations to support systematic, transparent decision making make decisions when faced with multiple and conflicting perspectives ensure medical input to organisational decision making adopt a systematic approach to analysing information from a variety of specialties to make decisions that benefit health care delivery 	<ul style="list-style-type: none"> monitor services and provide appropriate advice review new health care interventions and resources interpret appropriate data and evidence for decision making
Leadership, management, and teamwork	<ul style="list-style-type: none"> combine team members' skills and expertise in delivering patient care and/or population advice develop and lead effective multidisciplinary teams by developing and implementing strategies to motivate others build effective relationships with multidisciplinary team members to achieve optimal outcomes ensure all members of the team are accountable for their individual practice 	<ul style="list-style-type: none"> understand the range of personal and other team members' skills, expertise, and roles acknowledge and respect the contribution of all health professionals involved in patients' care participate effectively and appropriately in multidisciplinary teams seek out and respect the perspectives of multidisciplinary team members when making decisions
Health policy, systems, and advocacy	<ul style="list-style-type: none"> engage in appropriate consultation with stakeholders on the delivery of health care advocate for the resources and support for health care teams to achieve organisational priorities influence the development of organisational policies and procedures to optimise health outcomes identify the determinants of health of the population, and mitigate barriers to access to care remove self-interest from solutions to health advocacy issues 	<ul style="list-style-type: none"> understand methods used to allocate resources to provide high-quality care participate in the development and use of organisational policies and procedures

Learning goal 3: Supervision and teaching

Theme	Supervision and teaching	
Title	Supervise and teach professional colleagues	
Description	<p>This activity requires the ability to:</p> <ul style="list-style-type: none">• provide work-based teaching in a variety of settings• teach professional skills• create a safe and supportive learning environment• plan, deliver, and provide work-based assessments• encourage learners to be self-directed and identify learning experiences• supervise learners in day-to-day work, and provide feedback• support learners to prepare for assessments.	
Behaviours		
<u>Professional practice framework domain</u>	Ready to perform without supervision	Requires some supervision
	<p>Expected behaviours of a trainee who can routinely perform this activity without needing supervision</p> <p>The trainee will:</p>	<p>Possible behaviours of a trainee who needs some supervision to perform this activity</p> <p>The trainee may:</p>
Medical expertise	<ul style="list-style-type: none">• combine high-quality care with high-quality teaching• explain the rationale underpinning a structured approach to decision making• consider the patient-centric view during consultations• consider the population health effect when giving advice• encourage learners to consider the rationale and appropriateness of investigation and management options	<ul style="list-style-type: none">• teach learners using basic knowledge and skills
Communication	<ul style="list-style-type: none">• establish rapport and demonstrate respect for junior colleagues, medical students, and other health professionals• communicate effectively when teaching, assessing, and appraising learners• actively encourage a collaborative and safe learning environment with learners and other health professionals• encourage learners to tailor communication as appropriate for different patients, such as younger or older people, and different populations• support learners to deliver clear, concise, and relevant information in both verbal and written communication	<ul style="list-style-type: none">• demonstrate accessible, supportive, and compassionate behaviour

	<ul style="list-style-type: none"> listen and convey information clearly and considerately 	
Quality and safety	<ul style="list-style-type: none"> support learners to deliver quality care while maintaining their own wellbeing apply lessons learned about patient safety by identifying and discussing risks with learners assess learners' competence, and provide timely feedback to minimise risks to care maintain the safety of patients and organisations involved with education, and appropriately identify and action concerns 	<ul style="list-style-type: none"> observe learners to reduce risks and improve health outcomes
Teaching and learning	<ul style="list-style-type: none"> demonstrate knowledge of the principles, processes, and skills of supervision provide direct guidance to learners in day-to-day work work with learners to identify professional development and learning opportunities based on their individual learning needs offer feedback and role modelling participate in teaching and supervision professional development activities encourage self-directed learning and assessment develop a consistent and fair approach to assessing learners tailor feedback and assessments to learners' goals seek feedback and reflect on own teaching by developing goals and strategies to improve establish and maintain effective mentoring through open dialogue support learners to identify and attend formal and informal learning opportunities recognise the limits of personal expertise, and involve others appropriately 	<ul style="list-style-type: none"> demonstrate basic skills in the supervision of learners apply a standardised approach to teaching, assessment, and feedback without considering individual learner needs implement teaching and learning activities that are misaligned to learning goals adopt a teaching style that discourages learners' self-directedness
Research	<ul style="list-style-type: none"> clarify junior colleagues' research project goals and requirements, and provide feedback regarding the merits or challenges of proposed research monitor the progress of learners' research projects regularly, and may review research projects prior to submission 	<ul style="list-style-type: none"> guide learners with respect to the choice of research projects ensure that planned research projects are feasible and of suitable standards

	<ul style="list-style-type: none"> • support learners to find forums to present research projects • encourage and guide learners to seek out relevant research to support practice 	
Cultural safety	<ul style="list-style-type: none"> • role model a culturally appropriate approach to teaching • encourage learners to seek out opportunities to develop and improve their own cultural competence • encourage learners to consider culturally appropriate care of Aboriginal and Torres Strait Islander and Māori peoples into patients' management • consider cultural, ethical, and religious values and beliefs in teaching and learning 	<ul style="list-style-type: none"> • function effectively and respectfully when working with and teaching with people from different cultural backgrounds
Ethics and professional behaviour	<ul style="list-style-type: none"> • apply principles of ethical practice to teaching scenarios • act as a role model to promote professional responsibility and ethics among learners • respond appropriately to learners seeking professional guidance 	<ul style="list-style-type: none"> • demonstrate professional values, including commitment to high-quality clinical standards, compassion, empathy, and respect • provide learners with feedback to improve their experiences
Judgement and decision making	<ul style="list-style-type: none"> • prioritise workloads and manage learners with different levels of professional knowledge or experience • link theory and practice when explaining professional decisions • promote joint problem solving • support a learning environment that allows for independent decision making • use sound and evidence-based judgement during assessments and when giving feedback to learners • escalate concerns about learners appropriately 	<ul style="list-style-type: none"> • provide general advice and support to learners • use health data logically and effectively to investigate difficult diagnostic problems
Leadership, management, and teamwork	<ul style="list-style-type: none"> • maintain personal and learners' effective performance and continuing professional development • maintain professional, clinical, research, and/or administrative responsibilities while teaching • create an inclusive environment whereby the learner feels part of the team • help shape organisational culture to prioritise quality and work safety through openness, honesty, 	<ul style="list-style-type: none"> • demonstrate the principles and practice of professionalism and leadership in health care • participate in mentor programs, career advice, and general counselling

	shared learning, and continued improvement	
Health policy, systems, and advocacy	<ul style="list-style-type: none"> • advocate for suitable resources to provide quality supervision and maintain training standards • explain the value of health data in the care of patients or populations • support innovation in teaching and training 	<ul style="list-style-type: none"> • incompletely integrate public health principals into teaching and practice

Learning goal 4: Quality improvement

Theme	Quality improvement	
Title	Identify and address failures in health care delivery	
Description	<p>This activity requires the ability to:</p> <ul style="list-style-type: none">• identify and report actual and potential ('near miss') errors• conduct and evaluate system improvement activities• adhere to best practice guidelines• audit clinical guidelines and outcomes• contribute to the development of policies and protocols designed to protect patients and enhance health care• monitor one's own practice and develop individual improvement plans.	
Behaviours		
<u>Professional practice framework domain</u>	Ready to perform without supervision	Requires some supervision
	<p>Expected behaviours of a trainee who can routinely perform this activity without needing supervision</p> <p>The trainee will:</p>	<p>Possible behaviours of a trainee who needs some supervision to perform this activity</p> <p>The trainee may:</p>
Medical expertise	<ul style="list-style-type: none">• regularly review patients' or population health outcomes to identify opportunities for improvement in delivering appropriate care• evaluate environmental and lifestyle health risks, and advocate for healthy lifestyle choices• use standardised protocols to adhere to best practice and prevent the occurrence of wrong-site, wrong-patient procedures• regularly monitor personal professional performance and ensure that it aligns with current evidence and best practice guidelines	<ul style="list-style-type: none">• contribute to processes on identified opportunities for improvement• recognise the importance of prevention and early detection in clinical practice• use local guidelines to assist patient care decision making
Communication	<ul style="list-style-type: none">• support patients to have access to, and use, easy-to-understand, high-quality information about health care• support patients to share decision making about their own health care, to the extent they choose• assist patients' access to their health information, as well as complaint and feedback systems• discuss with patients any safety and quality concerns they have relating to their care• implement the organisation's open disclosure policy	<ul style="list-style-type: none">• demonstrate awareness of the evidence for consumer engagement and its contribution to quality improvement in health care• apply knowledge of how health literacy might affect the way patients or populations gain access to, understand, and use health information

Quality and safety	<ul style="list-style-type: none"> demonstrate safety skills, including infection control, adverse event reporting, and effective clinical handover participate in organisational quality and safety activities, including morbidity and mortality reviews, clinical incident reviews, root cause analyses, and corrective action preventative action plans participate in systems for surveillance and monitoring of adverse events and 'near misses', including reporting such events use clinical audits and registries of data on patients' experiences and outcomes, learnings from incidents, and complaints to improve health care 	<ul style="list-style-type: none"> demonstrate understanding of a systematic approach to improving the quality and safety of health care
Teaching and learning	<ul style="list-style-type: none"> translate quality improvement approaches and methods into practice participate in professional training in quality and safety to ensure a contemporary approach to safety system strategies supervise and manage the performance of junior colleagues in the delivery of high-quality, safe care 	<ul style="list-style-type: none"> work within organisational quality and safety systems for the delivery of clinical care use opportunities to learn about safety and quality theory and systems
Research	<ul style="list-style-type: none"> ensure that any protocol for human research is approved by a human research ethics committee, in accordance with the national statement on ethical conduct in human research 	<ul style="list-style-type: none"> understand that patient participation in research is voluntary and based on an appropriate understanding about the purpose, methods, demands, risks, and potential benefits of the research
Cultural safety	<ul style="list-style-type: none"> undertake professional development opportunities that address the impact of cultural bias on health outcomes 	<ul style="list-style-type: none"> communicate effectively with patients from culturally and linguistically diverse backgrounds
Ethics and professional behaviour	<ul style="list-style-type: none"> contribute to developing an organisational culture that enables and prioritises patients' safety and quality 	<ul style="list-style-type: none"> comply with professional regulatory requirements and codes of conduct
Judgement and decision making	<ul style="list-style-type: none"> use decision-making support tools, such as guidelines, protocols, pathways, and reminders analyse and evaluate current care processes to improve health care 	<ul style="list-style-type: none"> access information and advice from other health practitioners to identify, evaluate, and improve patients' care management
Leadership, management, and teamwork	<ul style="list-style-type: none"> support multidisciplinary team activities to lower patients' risk of harm, and promote interdisciplinary programs of education 	<ul style="list-style-type: none"> demonstrate attitudes of respect and cooperation among members of different professional teams partner with clinicians and managers to ensure patients receive appropriate care and information on their care

	<ul style="list-style-type: none"> actively involve clinical pharmacists in the medication-use process 	
Health policy, systems, and advocacy	<ul style="list-style-type: none"> support the development, implementation, evaluation, and monitoring of governance processes measure, analyse, and report a set of specialty-specific process of care and outcome clinical indicators, and a set of generic safety indicators take part in the design and implementation of the organisational systems for: <ul style="list-style-type: none"> clinical, and safety and quality education and training defining the scope of clinical practice performance monitoring and management 	<ul style="list-style-type: none"> maintain a dialogue with service managers about issues that affect patient care contribute to relevant organisational policies and procedures help shape an organisational culture that prioritises safety and quality through openness, honesty, learning, and quality improvement

Learning goal 5: Clinical assessment and management

Theme	Clinical assessment and management	
Title	Clinically assess and manage the ongoing care of patients	
Description	<p>This activity requires the ability to:</p> <ul style="list-style-type: none">• identify and access sources of relevant information about patients• obtain patient histories• examine patients• synthesise findings to develop provisional and differential diagnoses• discuss findings with patients, families, and/or carers• generate management plans• present findings to other health professionals.	
Behaviours		
<u>Professional practice framework domain</u>	Ready to perform without supervision	Requires some supervision
	<p>Expected behaviours of a trainee who can routinely perform this activity without needing supervision</p> <p>The trainee will:</p>	<p>Possible behaviours of a trainee who needs some supervision to perform this activity</p> <p>The trainee may:</p>
Medical expertise	<ul style="list-style-type: none">• elicit an accurate, organised, and problem-focused medical history (including collateral history) considering physical, psychosocial, and risk factors• perform a full physical examination to establish the nature and extent of problems• synthesise and interpret findings from the history and examination to devise the most likely provisional diagnoses via reasonable differential diagnoses• assess the severity of problems, the likelihood of complications, and clinical outcomes• develop management plans based on relevant guidelines, and consider the balance of benefit and harm by taking patients' medical comorbidities and personal sets of circumstances into account	<ul style="list-style-type: none">• take patient-centred histories, considering psychosocial factors• perform accurate physical examinations• recognise and correctly interpret abnormal findings• synthesise pertinent information to direct the clinical encounter and diagnostic categories• develop appropriate management plans
Communication	<ul style="list-style-type: none">• communicate openly, listen, and take patients' concerns seriously, giving them adequate opportunity to ask questions• communicate clearly, effectively, respectfully, and promptly with other health professionals involved in patients' care• provide information to patients and their family and/or carers to enable them to make a fully	<ul style="list-style-type: none">• anticipate, read, and respond to verbal and nonverbal cues• demonstrate active listening skills• communicate patients' situations to colleagues, including senior clinicians

	informed decision from various diagnostic, therapeutic, and management options	
Quality and safety	<ul style="list-style-type: none"> • demonstrate safety skills, including infection control, adverse event reporting, and effective clinical handover • recognise and effectively deal with aggressive and violent patient behaviours through appropriate training • obtain informed consent before undertaking any investigation or providing treatment (except in emergencies) • ensure patients are informed of the material risks associated with any part of proposed management plans 	<ul style="list-style-type: none"> • perform hand hygiene, and take infection control precautions at appropriate moments • take precaution against assaults from confused or agitated patients, ensuring appropriate care of patients • document history and physical examination findings, and synthesise with clarity and completeness
Teaching and learning	<ul style="list-style-type: none"> • set defined objectives for clinical teaching encounters, and solicit feedback on mutually agreed goals • regularly reflect upon and self-evaluate professional development • obtain informed consent before involving patients in teaching activities • turn clinical activities into an opportunity to teach, appropriate to the setting 	<ul style="list-style-type: none"> • set unclear goals and objectives for self-learning • self-reflect infrequently • deliver teaching considering learners' level of training
Research	<ul style="list-style-type: none"> • search for, find, compile, analyse, interpret, and evaluate information relevant to the research subject 	<ul style="list-style-type: none"> • refer to guidelines and medical literature to assist in clinical assessments when required • demonstrate an understanding of the limitations of evidence and the challenges of applying research in daily practice
Cultural safety	<ul style="list-style-type: none"> • acknowledge patient's beliefs and values, and how these might impact on health • demonstrate effective and culturally competent communication and care for Aboriginal and Torres Strait Islander and Māori peoples, and members of other cultural groups • use a professional interpreter, health advocate, or a family or community member to assist in communication with patients • use plain-language patient education materials, and demonstrate cultural and linguistic sensitivity 	<ul style="list-style-type: none"> • display respect for patients' cultures, and attentiveness to social determinants of health • display an understanding of at least the most prevalent cultures in society, and an appreciation of their sensitivities • appropriately access interpretive or culturally focused services

Ethics and professional behaviour	<ul style="list-style-type: none"> • demonstrate professional values, including compassion, empathy, respect for diversity, integrity, honesty, and partnership to all patients • hold information about patients in confidence, unless the release of information is required by law or public interest • assess patients' capacity for decision making, involving a proxy decision maker appropriately 	<ul style="list-style-type: none"> • demonstrate professional conduct, honesty, and integrity • consider patients' decision-making capacity • identify patients' preferences regarding management and the role of families in decision making • not advance personal interest or professional agendas at the expense of patient or social welfare
Judgement and decision making	<ul style="list-style-type: none"> • apply knowledge and experience to identify patients' problems, making logical, rational decisions, and acting to achieve positive outcomes for patients • adopt a holistic approach to patient care, considering patient preferences, comorbidity, uncertainty, and risk • use the best available evidence for the most effective therapies and interventions to ensure quality care 	<ul style="list-style-type: none"> • demonstrate clinical reasoning by gathering focused information relevant to patients' care • recognise personal limitations, and seek help in an appropriate way when required
Leadership, management, and teamwork	<ul style="list-style-type: none"> • work effectively as a member of multidisciplinary teams to achieve the best health outcome for patients • present and discuss complicated cases within a multidisciplinary team to help direct clinical management • demonstrate awareness of colleagues in difficulty, and work within the appropriate structural systems to support them while maintaining patient safety 	<ul style="list-style-type: none"> • share relevant information with members of the health care team
Health policy, systems, and advocacy	<ul style="list-style-type: none"> • participate in health promotion, disease prevention and control, screening, and reporting notifiable diseases • aim to achieve the optimal cost-effective patient care to allow maximum benefit from available resources 	<ul style="list-style-type: none"> • identify and navigate components of the healthcare system relevant to patients' care • identify and access relevant community resources to support patient care

Learning goal 6: Management of transitions in care

Theme	Management of transitions in care	
Title	Manage the transition of patient care between health professionals, providers, and contexts	
Description	<p>This activity requires the ability to:</p> <ul style="list-style-type: none">manage a transition of patient care to ensure the optimal continuation of care between providersidentify the appropriate health care providers and other stakeholders with whom to share patients' informationexchange pertinent, contextually appropriate, and relevant patient informationperform this activity in multiple settings (appropriate to the speciality), including inpatient, ambulatory, and critical care situationsrecognise clinical deterioration, and respond by following the local process for escalation of carerecognise and manage acutely unwell patients who require resuscitationidentify and manage the handover equipment or prescribing permits, where appropriate, to ensure uninterrupted care between providers.	
Behaviours		
<u>Professional practice framework domain</u>	Ready to perform without supervision	Requires some supervision
	<p>Expected behaviours of a trainee who can routinely perform this activity without needing supervision</p> <p>The trainee will:</p> <ul style="list-style-type: none">facilitate an optimal transition of care for patientsidentify and manage key risks for patients during transitionanticipate possible changes in patients' conditions, and provide recommendations on how to manage themidentify (where appropriate) current ventilation devices and machine settings, and hand over relevant information regarding ventilation devices, including funding source and requirement for machine servicing or replacementrecognise immediate life-threatening conditions and deteriorating and critically unwell patients, and respond appropriatelyperform advanced life support, according to resuscitation council guidelines, to a high level of advanced resuscitation skills	<p>Possible behaviours of a trainee who needs some supervision to perform this activity</p> <p>The trainee may:</p> <ul style="list-style-type: none">understand the details of patients' conditions, illness severity, and potential emerging issues with appropriate actionsprovide accurate summaries of patients' information, with accurate identification of problems or issuesrecognise seriously unwell patients requiring immediate careapply basic life support as indicated
Medical expertise		
Communication	<ul style="list-style-type: none">write relevant and detailed medical record entries, including clinical	<ul style="list-style-type: none">communicate clearly with clinicians and other caregivers

	<ul style="list-style-type: none"> assessments and management plans • write comprehensive and accurate summaries of care, including discharge summaries, clinic letters, and transfer documentation • initiate and maintain verbal communication with other health professionals, when required • communicate with patients, families, and/or carers about transitions of care, and engage and support these parties in decision making 	<ul style="list-style-type: none"> • use standardised verbal and written templates to improve the reliability of information transfer and prevent errors and omissions • communicate accurately and in a timely manner to ensure effective transitions between settings, and continuity and quality of care • determine patients' understanding of their diseases and what they perceive as the most desirable goals of care
Quality and safety	<ul style="list-style-type: none"> • identify patients at risk of poor transition of care, and mitigate this risk • use electronic tools (where available) to securely store and transfer patient information • use consent processes, including written consent if required, for the release and exchange of information • demonstrate an understanding of the medicolegal context of written communications • maintain up-to-date certification in advanced life support 	<ul style="list-style-type: none"> • ensure that handover is complete, or work to mitigate risks if the handover was incomplete • ensure all outstanding results or procedures are followed up by receiving units and clinicians • keep patients' information secure, adhering to relevant legislation regarding personal information and privacy • raise appropriate issues for review at morbidity and mortality meetings
Teaching and learning	<ul style="list-style-type: none"> • integrate clinical education in handover sessions and other transition of care meetings • tailor clinical education to the level of the professional parties involved 	<ul style="list-style-type: none"> • take opportunities to teach junior colleagues during handover, as necessary
Cultural safety	<ul style="list-style-type: none"> • communicate with careful consideration to health literacy, language barriers, and culture about patient preferences, and whether they are realistic and possible, respecting patient choices • recognise the timing, location, privacy, and appropriateness of sharing information with patients and their families or carers • negotiate health care decisions in a culturally appropriate way by considering variation in family structures, cultures, religion, or belief systems 	<ul style="list-style-type: none"> • include relevant information regarding patients' cultural or ethnic background in handovers, and whether an interpreter is required
Ethics and professional behaviour	<ul style="list-style-type: none"> • disclose and share only contextually appropriate medical and personal information • demonstrate an understanding of the clinical, ethical, and legal rationale for information disclosure 	<ul style="list-style-type: none"> • maintain respect for patients, families, carers, and other health professionals, including respecting privacy and confidentiality

	<ul style="list-style-type: none"> • share information about patients' health care in a manner consistent with privacy law and professional guidelines on confidentiality • demonstrate an understanding of the additional complexity related to some types of information, such as genetic information and blood-borne-virus status, and seek appropriate advice about disclosure of such information • interact in a collegiate and collaborative way with professional colleagues during transitions of care 	
Judgement and decision making	<ul style="list-style-type: none"> • ensure patients' care is in the most appropriate facility, setting, or provider • recognise the need for escalation of care, and escalate to appropriate staff or services 	<ul style="list-style-type: none"> • use a structured approach to consider and prioritise patients' issues • recognise personal limitations and seek help in an appropriate way when required
Leadership, management, and teamwork	<ul style="list-style-type: none"> • share the workload of transitions of care appropriately, including delegation • demonstrate understanding of the medical governance of patient care, and the differing roles of team members • show respect for the roles and expertise of other health professionals, and work effectively as a member of professional teams • ensure that multidisciplinary teams provide the opportunity for patients' engagement and participation when appropriate 	<ul style="list-style-type: none"> • recognise factors that impact on the transfer of care, and help subsequent health professionals understand the issues to continue care • work to overcome the potential barriers to continuity of care, appreciating the role of handover in overcoming these barriers
Health policy, systems, and advocacy	<ul style="list-style-type: none"> • contribute to processes for managing risks, and identify strategies for improvement in transition of care • engage in organisational processes to improve transitions of care, such as formal surveys or follow-up phone calls after hospital discharge • collaborate with emergency medicine staff and other colleagues to develop policies and protocols for the investigation and management of common acute medical problems 	<ul style="list-style-type: none"> • factor transport issues and costs to patients into arrangements for transferring patients to other settings • understand the systems for the escalation of care for deteriorating patients

Learning goal 7: Longitudinal care

Theme	Longitudinal care	
Title	Manage and coordinate the longitudinal care of patients with chronic illness, disability, and/or long-term health issues	
Description	<p>This activity requires the ability to:</p> <ul style="list-style-type: none">• develop management plans and goals in consultation with patients, families, and/or carers• manage chronic and advanced conditions, complications, disabilities, and comorbidities• collaborate with other health care providers• ensure continuity of care• facilitate patients’ and/or families’ and/or carers’ self-management and self-monitoring• engage with the broader health policy context.	
Behaviours		
<u>Professional practice framework domain</u>	Ready to perform without supervision	Requires some supervision
	<p>Expected behaviours of a trainee who can routinely perform this activity without needing supervision</p> <p>The trainee will:</p>	<p>Possible behaviours of a trainee who needs some supervision to perform this activity</p> <p>The trainee may:</p>
Medical expertise	<ul style="list-style-type: none">• regularly assess and review care plans for patients with chronic conditions and disabilities based on short- and long-term clinical and quality of life goals• provide documentation on patients' presentation, management, and progress, including key points of diagnosis and decision making to inform coordination of care• ensure patients contribute to their needs assessments and care planning• monitor treatment outcomes, effectiveness, and adverse events	<ul style="list-style-type: none">• assess patients’ knowledge, beliefs, concerns, and daily behaviours related to their chronic condition and/or disability and its management• contribute to medical record entries on histories, examinations, and management plans in a way that is accurate and sufficient as a member of multidisciplinary teams
Communication	<ul style="list-style-type: none">• encourage patients’ self-management through education to take greater responsibility for their care, and support problem solving• encourage patients’ access to self-monitoring devices and assistive technologies• communicate with multidisciplinary team members, and involve patients in that dialogue	<ul style="list-style-type: none">• provide healthy lifestyle advice and information to patients on the importance of self-management• work in partnership with patients, and motivate them to comply with agreed care plans
Quality and safety	<ul style="list-style-type: none">• use innovative models of chronic disease care, using telehealth and digitally integrated support services	<ul style="list-style-type: none">• participate in continuous quality improvement processes and clinical audits on chronic disease management

	<ul style="list-style-type: none"> review medicine use, and ensure patients understand safe medication administration to prevent errors support patients' self-management by balancing between minimising risk and helping patients to become more independent participate in quality improvement processes that impact on patients' abilities to undertake normal activities of daily living 	<ul style="list-style-type: none"> identify activities that may improve patients' quality of life
Teaching and learning	<ul style="list-style-type: none"> contribute to the development of clinical pathways for chronic diseases management based on current clinical guidelines educate patients to recognise and monitor their symptoms, and undertake strategies to assist their recovery 	<ul style="list-style-type: none"> use clinical practice guidelines for chronic diseases management
Research	<ul style="list-style-type: none"> prepare reviews of literature on patients' encounters to present at journal club meetings search for and critically appraise evidence to resolve clinical areas of uncertainty 	<ul style="list-style-type: none"> search literature using Problem / Intervention / Comparison / Outcome (PICO) format recognise appropriate use of review articles
Cultural safety	<ul style="list-style-type: none"> encourage patients from culturally and linguistically diverse backgrounds to join local networks to receive the support needed for long-term self-management 	<ul style="list-style-type: none"> provide culturally safe chronic disease management
Ethics and professional behaviour	<ul style="list-style-type: none"> share information about patients' health care, consistent with privacy laws and confidentiality and professional guidelines use consent processes for the release and exchange of health information assess patients' decision-making capacity, and appropriately identify and use alternative decision makers 	<ul style="list-style-type: none"> share information between relevant service providers acknowledge and respect the contribution of health professionals involved in patients' care
Judgement and decision making	<ul style="list-style-type: none"> implement stepped care pathways in the management of chronic diseases and disabilities recognise patients' needs in terms of both internal resources and external support on long-term health care journeys 	<ul style="list-style-type: none"> recognise personal limitations, and seek help in an appropriate way when required
Leadership, management, and teamwork	<ul style="list-style-type: none"> coordinate whole-person care through involvement in all stages of patients' care journeys use a multidisciplinary approach across services to manage patients with chronic diseases and disabilities 	<ul style="list-style-type: none"> participate in multidisciplinary care for patients with chronic diseases and disabilities, including organisational and community care on a continuing basis, appropriate to patients' context

	<ul style="list-style-type: none"> • develop collaborative relationships with patients, families, carers, and a range of health professionals 	
Health policy, systems, and advocacy	<ul style="list-style-type: none"> • use health screening for early intervention and chronic diseases management • assess alternative models of health care delivery to patients with chronic diseases and disabilities • participate in government initiatives for chronic diseases management to reduce hospital admissions and improve patients' quality of life • help patients access initiatives and services for patients with chronic diseases and disabilities 	<ul style="list-style-type: none"> • demonstrate awareness of government initiatives and services available for patients with chronic diseases and disabilities, and display knowledge of how to access them • demonstrate awareness of the requirements of the Pharmaceutical Benefits Scheme and Medicare Benefits Schedule

Learning goal 8: Communication with patients

Theme	Communication with patients	
Title	Discuss diagnoses and management plans with patients	
Description	<p>This activity requires the ability to:</p> <ul style="list-style-type: none">• select a suitable context, and include family and/or carers and other team members• adopt a patient-centred perspective, including adjusting for cognition and disabilities• select and use appropriate modalities and communication strategies• structure conversations intentionally• negotiate mutually agreed management plans• verify patients', family members', or carers' understanding of information conveyed• develop and implement plans for ensuring actions occur• ensure conversations are documented.	
Behaviours		
<u>Professional practice framework domain</u>	Ready to perform without supervision	Requires some supervision
	<p>Expected behaviours of a trainee who can routinely perform this activity without needing supervision</p> <p>The trainee will:</p>	<p>Possible behaviours of a trainee who needs some supervision to perform this activity</p> <p>The trainee may:</p>
Medical expertise	<ul style="list-style-type: none">• anticipate and be able to correct any misunderstandings patients may have about their conditions and/or risk factors• inform patients of all aspects of their clinical management, including assessments and investigations, and give them adequate opportunity to question or refuse interventions and treatments• seek to understand the concerns and goals of patients, and plan management in partnership with them• provide information to patients to enable them to make informed decisions about diagnostic, therapeutic, and management options• recognise when to refer patients to psychological support services	<ul style="list-style-type: none">• apply knowledge of the scientific basis of health and disease to the management of patients• demonstrate an understanding of clinical problems being discussed• formulate management plans in partnership with patients
	<ul style="list-style-type: none">• use an appropriate communication strategy and modalities for communication, such as emails, face-to-face, or phone calls• elicit patients' views, concerns, and preferences, promoting rapport	<ul style="list-style-type: none">• select appropriate modes of communication• engage patients in discussions, avoiding the use of jargon• check patients' understanding of information
Communication		

	<ul style="list-style-type: none"> • provide information to patients in plain language, avoiding jargon, acronyms, and complex medical terms • encourage questions, and answer them thoroughly • ask patients to share their thoughts or explain their management plan in their own words, to verify understanding • convey information considerately and sensitively to patients, seeking clarification if unsure of how best to proceed • treat children and young people respectfully, and listen to their views • recognise the role of family or carers and, when appropriate, encourage patients to involve their family or carers in decisions about their care 	<ul style="list-style-type: none"> • adapt communication style in response to patients' age, developmental level, and cognitive, physical, cultural, socioeconomic, and situational factors • collaborate with patient liaison officers as required
Quality and safety	<ul style="list-style-type: none"> • discuss with patients their condition and the available management options, including potential benefits and harms • provide information to patients in a way they can understand before asking for their consent • consider capacity for decision making and consent, including young people or patients with cognitive disability • recognise and take precautions where patients may be vulnerable, such as issues of child protection, self-harm, or elder abuse • participate in processes to manage patient complaints 	<ul style="list-style-type: none"> • inform patients of the material risks associated with proposed management plans • treat information about patients as confidential
Teaching and learning	<ul style="list-style-type: none"> • discuss the aetiology of diseases and explain the purpose, nature, and extent of the assessments to be conducted • obtain informed consent or other valid authority before involving patients in teaching 	<ul style="list-style-type: none"> • respond appropriately to information sourced by patients, and to patients' knowledge regarding their condition
Research	<ul style="list-style-type: none"> • provide information to patients that is based on guidelines issued by the National Health and Medical Research Council and/or Health Research Council of NZ • provide information to patients in a way they can understand before asking for their consent to participate in research 	<ul style="list-style-type: none"> • refer to evidence-based clinical guidelines • demonstrate an understanding of the limitations of the evidence and the challenges of applying research in daily practice

	<ul style="list-style-type: none"> • obtain an informed consent or other valid authority before involving patients in research 	
Cultural safety	<ul style="list-style-type: none"> • demonstrate effective and culturally competent communication with Aboriginal and Torres Strait Islander and Māori peoples • effectively communicate with members of other cultural groups by meeting patients' specific language, cultural, and communication needs • use qualified language interpreters or cultural interpreters to help meet patients' communication needs • provide plain language and culturally appropriate written materials to patients when possible 	<ul style="list-style-type: none"> • identify when to use interpreters • allow enough time for communication across linguistic and cultural barriers
Ethics and professional behaviour	<ul style="list-style-type: none"> • encourage and support patients to be well informed about their health, and to use this information wisely when they make decisions • encourage and support patients and, when relevant, their families or carers, in caring for themselves and managing their health • demonstrate respectful professional relationships with patients • prioritise honesty, patients' welfare, and community benefit above self-interest • develop a high standard of personal conduct, consistent with professional and community expectations • support patients' rights to seek second opinions 	<ul style="list-style-type: none"> • respect the preferences of patients • communicate appropriately, consistent with the context, and respect patients' needs and preferences • maximise patient autonomy, and support their decision making • avoid sexual, intimate, and/or financial relationships with patients • demonstrate a caring attitude towards patients • respect patients, including protecting their rights to privacy and confidentiality • behave equitably towards all, irrespective of gender, age, culture, socioeconomic status, sexual preferences, beliefs, contribution to society, illness-related behaviours, or the illness itself • use social media ethically and according to legal obligations to protect patients' confidentiality and privacy
Leadership, management, and teamwork	<ul style="list-style-type: none"> • communicate effectively with team members involved in patients' care, and with patients, families and carers • discuss patient care needs with health care team members to align them with the appropriate resources • facilitate an environment where all team members feel they can contribute and their opinion is valued 	<ul style="list-style-type: none"> • answer questions from team members • summarise, clarify, and communicate responsibilities of health care team members • keep health care team members focused on patient outcomes

	<ul style="list-style-type: none"> • discuss medical assessments, treatment plans, and investigations with patients and primary care teams, working collaboratively with all • communicate accurately and succinctly, and motivate others on the health care team 	
Health policy, systems, and advocacy	<ul style="list-style-type: none"> • collaborate with other services, such as community health centres and consumer organisations, to help patients navigate the healthcare system 	<ul style="list-style-type: none"> • communicate with and involve other health professionals as appropriate

Learning goal 9: Prescribing

Theme		Prescribing
Title		Prescribe therapies tailored to patients' needs and conditions
Description		<p>This activity requires the ability to:</p> <ul style="list-style-type: none"> take and interpret medication histories choose appropriate medicines based on an understanding of pharmacology, taking into consideration age, comorbidities, potential drug interactions, risks, and benefits communicate with patients, families, and/or carers about the benefits and risks of proposed therapies provide instructions on medication administration effects and side effects monitor medicines for efficacy and safety review medicines and interactions, and cease where appropriate collaborate with pharmacists understand regulatory requirements for prescribing, particularly for schedule 8 medications and schedule 4 drugs of dependence.
Behaviours		
<u>Professional practice framework domain</u>	Ready to perform without supervision	Requires some supervision
	Expected behaviours of a trainee who can routinely perform this activity without needing supervision	Possible behaviours of a trainee who needs some supervision to perform this activity
Medical expertise	<p>The trainee will:</p> <ul style="list-style-type: none"> identify the patients' disorders requiring pharmacotherapy consider non-pharmacologic therapies consider age, chronic disease status, lifestyle factors, allergies, potential drug interactions, and patients' preferences prior to prescribing a new medication plan for follow up and monitoring demonstrate awareness of different formulations of common medications, and consider appropriate formulation and/or strength recognise the impacts of age and metabolism on the absorption, distribution, and excretion of medicines 	<p>The trainee may:</p> <ul style="list-style-type: none"> be aware of potential side effects and practical prescription points, such as medication compatibility and monitoring in response to therapies select medicines for common conditions appropriately, safely, and accurately demonstrate understanding of the rationale, risks, benefits, side effects, contraindications, dosage, and drug interactions identify and manage adverse events
Communication	<ul style="list-style-type: none"> discuss and evaluate the risks, benefits, and rationale of treatment options, making decisions in partnership with patients write clear and legible prescriptions in plain language, and include specific indications for the anticipated duration of therapy 	<ul style="list-style-type: none"> discuss and explain the rationale for treatment options with patients, families, and/or carers explain the benefits and burdens of therapies, considering patients' individual circumstances write clearly legible scripts or charts using generic names of the required medication in full,

	<ul style="list-style-type: none"> educate patients about the intended use, expected outcomes, and potential side effects for each prescribed medication, addressing the common, rare, and serious effects at the time of prescribing to improve patients' adherence to pharmacotherapy describe how the medication should and should not be administered, including any important relationships to food, time of day, and other medicines being taken ensure patients' understanding by repeating back pertinent information, such as when to return for monitoring and whether therapy continues after this single prescription identify patients' concerns and expectations, and explain how medicines might affect their everyday lives 	<p>including mg / kg / dose information and all legally required information</p> <ul style="list-style-type: none"> seek further advice from experienced clinicians or pharmacists when appropriate
Quality and safety	<ul style="list-style-type: none"> review medicines regularly to reduce non-adherence, and monitor treatment effectiveness, possible side effects, and drug interactions, ceasing unnecessary medicines use electronic prescribing tools where available, and access electronic drug references to prevent errors caused by drug interactions and poor handwriting prescribe new medicines only when they have been demonstrated to be safer or more effective at improving patient-oriented outcomes than existing medicines participate in clinical audits to improve prescribing behaviour, including an approach to polypharmacy and prescribing cascade report suspected adverse events to the Advisory Committee on Medicines, and record them in patients' medical records 	<ul style="list-style-type: none"> check the dose before prescribing monitor side effects of medicines prescribed identify medication errors, and institute appropriate measures use electronic prescribing systems safely rationalise medicines to avoid polypharmacy
Teaching and learning	<ul style="list-style-type: none"> use continuously updated software for computers and electronic prescribing programs ensure patients understand management plans, including adherence issues use appropriate guidelines and evidence-based medicine 	<ul style="list-style-type: none"> undertake continuing professional development to maintain currency with prescribing guidelines reflect on prescribing, and seek feedback from a supervisor

	resources to maintain a working knowledge of current medicines, keeping up to date on new medicines	
Research	<ul style="list-style-type: none"> critically appraise research material to ensure any new medicine improves patient-oriented outcomes more than older medicines, and not just more than placebo use sources of independent information about medicines that provide accurate summaries of the available evidence on new medicines 	<ul style="list-style-type: none"> make therapeutic decisions according to the best evidence recognise where evidence is limited, compromised, or subject to bias or conflict of interest
Cultural safety	<ul style="list-style-type: none"> explore patients' understanding of and preferences for non-pharmacological and pharmacological management offer patients effective choices based on their expectations of treatment, health beliefs, and cost interpret and explain information to patients at the appropriate level of their health literacy anticipate queries to help enhance the likelihood of medicines being taken as advised ensure appropriate information is available at all steps of the medicine management pathway 	<ul style="list-style-type: none"> appreciate patients' cultural and religious backgrounds, attitudes, and beliefs, and how these might influence the acceptability of pharmacological and non-pharmacological management approaches
Ethics and professional behaviour	<ul style="list-style-type: none"> provide information to patients about: <ul style="list-style-type: none"> » how to take the medicine » potential side effects » what it does » what it is for » when it should be stopped make prescribing decisions based on good safety data when the benefits outweigh the risks involved demonstrate understanding of the ethical implications of pharmaceutical industry-funded research and marketing 	<ul style="list-style-type: none"> consider the efficacy of medicines in treating illnesses, including the relative merits of different non-pharmacological and pharmacological approaches follow regulatory and legal requirements and limitations regarding prescribing follow organisational policies regarding pharmaceutical representative visits and drug marketing
Judgement and decision making	<ul style="list-style-type: none"> use a systematic approach to select treatment options use medicines safely and effectively to get the best possible results choose suitable medicines only if medicines are considered necessary and will benefit patients prescribe medicines appropriately to patients' clinical needs, in doses that meet their individual 	<ul style="list-style-type: none"> recognise personal limitations, and seek help in an appropriate way when required consider the following factors for all medicines: <ul style="list-style-type: none"> » contraindications » cost to patients, families, and the community » funding and regulatory considerations » generic versus brand medicines

	<p>requirements, for a sufficient length of time, with the lowest cost to them</p> <ul style="list-style-type: none"> • evaluate new medicines in relation to their possible efficacy and safety profile for individual patients 	<ul style="list-style-type: none"> » interactions » risk-benefit analysis
Leadership, management, and teamwork	<ul style="list-style-type: none"> • interact with medical, pharmacy, and nursing staff to ensure safe and effective medicine use • work collaboratively in a multidisciplinary team for non-pharmacologic treatments for sleep disorders 	<ul style="list-style-type: none"> • work collaboratively with pharmacists • participate in medication safety and morbidity and mortality meetings
Health policy, systems, and advocacy	<ul style="list-style-type: none"> • choose medicines in relation to comparative efficacy, safety, and cost-effectiveness against medicines already on the market • prescribe for individual patients, considering history, current medicines, allergies, and preferences, ensuring that health care resources are used wisely for the benefit of patients • prescribe in compliance with state and federal legislation, particularly with regards to schedule 8 medications and schedule 4 drugs of dependence 	<ul style="list-style-type: none"> • prescribe in accordance with the organisational policy

Learning goal 10: Investigations

Theme	Investigations	
Title	Select, organise, and interpret investigations	
Description	<p>This activity requires the ability to:</p> <ul style="list-style-type: none">• select, plan, and use evidence-based clinically appropriate investigations• prioritise patients receiving investigations (if there is a waiting list)• evaluate the anticipated value of the investigation• work in partnership with patients, their families, and/or carers to facilitate choices that are right for them• provide aftercare for patients (if needed)• interpret the results and outcomes of investigations• communicate the outcome of investigations to patients.	
Behaviours		
Professional practice framework Domain	Ready to perform without supervision	Requires some supervision
	<p>Expected behaviours of a trainee who can routinely perform this activity without needing supervision</p> <p>The trainee will:</p>	<p>Possible behaviours of a trainee who needs some supervision to perform this activity</p> <p>The trainee may:</p>
Medical expertise	<ul style="list-style-type: none">• choose evidence-based investigations, and frame them as an adjunct to comprehensive clinical assessments• assess patients’ concerns, and determine the need for specific tests that are likely to result in overall benefit• develop plans for investigations, identifying their roles and timing• recognise and correctly interpret abnormal findings, considering patients’ specific circumstances, and act accordingly	<ul style="list-style-type: none">• provide rationale for investigations• understand the significance of abnormal test results, and act on these• consider patient factors and comorbidities• consider age-specific reference ranges
Communication	<ul style="list-style-type: none">• explain to patients the potential benefits, risks, costs, burdens, and side effects of each option, including the option to have no investigations• use clear and simple language, and check that patients understand the terms used and agree to proceed with proposed investigations• identify patients’ concerns and expectations, providing adequate explanations on the rationale for individual test ordering• confirm whether patients have understood the information they have been given and the need for more information before deciding	<ul style="list-style-type: none">• discuss the indications, risks, benefits, and complications of investigations with patients before ordering investigations• explain the results of investigations to patients• arrange investigations, providing accurate and informative referrals, and liaise with other services where appropriate

	<ul style="list-style-type: none"> • use written or visual material or other aids that are accurate and up to date to support discussions with patients • explain findings or possible outcomes of investigations to patients, families, and/or carers • give information that patients may find distressing in a considerate way 	
Quality and safety	<ul style="list-style-type: none"> • identify adverse outcomes that may result from proposed investigations, focusing on patients' individual situations • ensure quality control of the investigations performed are up to current standards 	<ul style="list-style-type: none"> • consider safety aspects of investigations when planning them • seek help with interpretation of test results for less common tests or indications or unexpected results
Teaching and learning	<ul style="list-style-type: none"> • use appropriate guidelines, evidence sources, and decision support tools • participate in clinical audits to improve test ordering strategies for diagnoses and screening 	<ul style="list-style-type: none"> • undertake professional development to maintain currency with investigation guidelines
Research	<ul style="list-style-type: none"> • provide patients with relevant information if a proposed investigation is part of a research program • obtain written consent from patients if the investigation is part of a research program 	<ul style="list-style-type: none"> • refer to evidence-based clinical guidelines • consult current research on investigations
Cultural safety	<ul style="list-style-type: none"> • understand patients' views and preferences about any proposed investigation and the adverse outcomes they are most concerned about 	<ul style="list-style-type: none"> • consider patients' cultural and religious backgrounds, attitudes, and beliefs, and how these might influence the acceptability of proposed investigations
Ethics and professional behaviour	<ul style="list-style-type: none"> • practice within the scope of the authority given by patients (with the exception of emergencies) • discuss with patients how decisions will be made once the investigation has started and the patient is not able to participate in decision making • respect patients' decisions to refuse investigations, even if their decisions may not be appropriate or evidence based • advise patients there may be additional costs, which patients may wish to clarify before proceeding • explain the expected benefits, as well as the potential burdens and risks of any proposed investigation before obtaining informed consent or other valid authority 	<ul style="list-style-type: none"> • identify appropriate proxy decision makers when required • choose not to investigate in situations where it is not appropriate for ethical reasons • practise within current ethical and professional frameworks • practise within own limits, and seek help when needed • involve patients in decision making regarding investigations, obtaining the appropriate informed consent, including financial consent, if necessary

	<ul style="list-style-type: none"> demonstrate awareness of complex issues related to genetic information obtained from investigations, and subsequent disclosure of such information 	
Judgement and decision making	<ul style="list-style-type: none"> evaluate the costs, benefits, and potential risks of each investigation in a clinical situation adjust the investigative path depending on test results received consider whether patients' conditions may get worse or better if no tests are selected 	<ul style="list-style-type: none"> choose the most appropriate investigation for the clinical scenario, in discussion with patients recognise personal limitations, and seek help in an appropriate way when required
Leadership, management, and teamwork	<ul style="list-style-type: none"> consider the role other members of the health care team might play, and what other sources of information and support are available ensure results are checked in a timely manner, taking responsibility for following up results 	<ul style="list-style-type: none"> demonstrate an understanding of what parts of an investigation are provided by different doctors or health professionals
Health policy, systems, and advocacy	<ul style="list-style-type: none"> select and justify investigations regarding the pathological basis of disease, appropriateness, utility, safety, and cost effectiveness consider resource utilisation through peer review of testing behaviours 	

Learning goal 11: Clinic management and procedures

Theme	Clinic management	
Title	Manage an outpatient clinic and plan, prepare for, perform, and provide aftercare for important practical procedures	
Description	<p>This activity requires the ability to:</p> <ul style="list-style-type: none">• manage medical procedures and treatments• ensure appropriate procedures are selected in partnership with patients, their families, and/or carers• obtain informed consent• manage clinic services• oversee quality improvement activities• communicate with patients, their families, and/or carers• liaise with other health professionals and team members• demonstrate problem-solving skills• responsibly use public resources.	
Behaviours		
<u>Professional practice framework domain</u>	Ready to perform without supervision	Requires some supervision
	<p>Expected behaviours of a trainee who can routinely perform this activity without needing supervision</p> <p>The trainee will:</p>	<p>Possible behaviours of a trainee who needs some supervision to perform this activity</p> <p>The trainee may:</p>
Medical expertise	<ul style="list-style-type: none">• effectively identify and address current clinical concerns, as well as longer-term clinical objectives, as appropriate to patients' context• evaluate environmental and lifestyle health risks, and advocate for healthy lifestyle choices• create an accurate and appropriately prioritised problem list in the clinical notes or as part of an ambulatory care review• update documentation in a timeframe appropriate to the clinical situation of patients• select procedures by assessing patient-specific factors, risks, benefits, and alternatives• confidently and consistently perform a range of common procedures	<ul style="list-style-type: none">• demonstrate understanding of the importance of prevention, early detection, health maintenance, and chronic condition management• assess patients and identify indications for procedures• perform a range of common procedures• check for allergies and adverse reactions• consider risks and complications of procedures
Communication	<ul style="list-style-type: none">• help patients navigate the healthcare system to improve access to care by collaboration with other services, such as community health centres and consumer organisations• link patients to specific community-based health programs and group education programs	<ul style="list-style-type: none">• wherever practical, meet patients' specific communication and language needs• facilitate appropriate use of interpreter services and translated materials

	<ul style="list-style-type: none"> accurately document procedures in clinical notes, including informed consent, procedures requested and performed, reasons for procedures, medicines given, aseptic technique, and aftercare explain procedures clearly to patients, families or carers, including reasons for procedures, potential alternatives, and possible risks, to facilitate informed choices 	
Quality and safety	<ul style="list-style-type: none"> practice health care that maximises patient safety adopt a systematic approach to the review and improvement of professional practice in the outpatient clinic setting identify aspects of service provision that may be a risk to patients' safety ensure that patients are informed about fees and charges 	<ul style="list-style-type: none"> take reasonable steps to address issues if patients' safety may be compromised understand a systematic approach to improving the quality and safety of health care participate in organisational quality and safety activities, including clinical incident reviews
Teaching and learning	<ul style="list-style-type: none"> evaluate their own professional practice demonstrate learning behaviour and skills in educating junior colleagues contribute to the generation of knowledge maintain professional continuing education standards refer to and/or be familiar with relevant published procedural guidelines prior to undertaking procedures organise or participate in in-service training on new technology 	<ul style="list-style-type: none"> recognise the limits of personal expertise, and involve other professionals as needed to contribute to patients' care use information technology appropriately as a resource for modern medical practice participate in continued professional development
Research	<ul style="list-style-type: none"> obtain informed consent or other valid authority before involving patients in research inform patients about their rights, the purpose of the research, the procedures to be undergone, and the potential risks and benefits of participation before obtaining consent 	<ul style="list-style-type: none"> allow patients to make informed and voluntary decisions to participate in research
Cultural safety	<ul style="list-style-type: none"> apply knowledge of the cultural needs of the community serving, and how to shape service to those people mitigate the influence of own culture and beliefs on interactions with patients and decision making adapt practice to improve patient engagement and health outcomes 	<ul style="list-style-type: none"> acknowledge the social, economic, cultural, and behavioural factors influencing health, both at individual and population levels

Ethics and professional behaviour	<ul style="list-style-type: none"> • identify and respect the boundaries that define professional and therapeutic relationships • respect the roles and expertise of other health professionals • comply with the legal requirements of preparing and managing documentation • demonstrate awareness of financial and other conflicts of interest • understand institution / department protocols and ethical practices and guidelines around performing procedures • if required to perform procedures, do so in accordance with institution / department protocols and ethical practices and guidelines 	<ul style="list-style-type: none"> • understand the responsibility to protect and advance the health and wellbeing of individuals and communities • maintain the confidentiality of documentation, and store clinical notes appropriately • ensure that the use of social media is consistent with ethical and legal obligations
Judgement and decision making	<ul style="list-style-type: none"> • integrate prevention, early detection, health maintenance, and chronic condition management, where relevant, into clinical practice • work to achieve optimal and cost-effective patient care that allows maximum benefit from the available resources • understand institution / department protocols and ethical practices and guidelines around performing procedures • identify roles and optimal timings for diagnostic procedures • critically appraise information from assessments and evaluations of risks and benefits to prioritise patients on a waiting list 	<ul style="list-style-type: none"> • understand the appropriate use of human resources, diagnostic interventions, therapeutic modalities, and health care facilities • prioritise which patients receive procedures first (if there is a waiting list) • assess personal skill level, and seek help with procedures when appropriate • use tools and guidelines to support decision making
Leadership, management, and teamwork	<ul style="list-style-type: none"> • prepare for and conduct clinical encounters in a well-organised and time-efficient manner • work effectively as a member of multidisciplinary teams or other professional groups • ensure that all important discussions with colleagues, multidisciplinary team members, and patients are appropriately documented • review discharge summaries, notes, and other communications written by junior colleagues • support colleagues who raise concerns about patients' safety • explain critical steps, anticipated events, and equipment requirements to teams on planned procedures 	<ul style="list-style-type: none"> • attend relevant clinical meetings regularly • ensure all relevant team members are aware that a procedure is occurring

	<ul style="list-style-type: none"> • provide staff with clear aftercare instructions, and explain how to recognise possible complications 	
Health policy, systems, and advocacy	<ul style="list-style-type: none"> • demonstrate the capacity to engage in the surveillance and monitoring of the health status of populations in the outpatient setting • maintain good relationships with health agencies and services • apply the principles of efficient and equitable allocation of resources to meet individual, community, and national health needs 	<ul style="list-style-type: none"> • understand common population health screening and prevention approaches

Knowledge guides



Knowledge guides provide detailed guidance to trainees on the important topics and concepts trainees need to understand to become experts in their chosen specialty.

Trainees are not expected to be experts in all areas or have experience related to all items in these guides.

#	Title
12	Scientific foundations of sleep medicine (including investigations and measurements)
13	Sleep-related breathing disorders
14	Central disorders of hypersomnolence
15	Sleep-related movement disorders
16	Parasomnia
17	Insomnia
18	Circadian disorders of the sleep-wake cycle

Learning goal 12 – Scientific foundations of sleep medicine (including investigations and measurements)

Advanced Training in Sleep Medicine
(Adult Medicine)

EPIDEMIOLOGY, PATHOPHYSIOLOGY, AND CLINICAL SCIENCES

Advanced Trainees will have in-depth knowledge of the topics listed under each clinical sciences heading.

For the statistical and epidemiological concepts listed, trainees should be able to describe the underlying rationale, the indications for using one test or method over another, and the calculations required to generate descriptive statistics.

Pathophysiology of normal and abnormal sleep

- Anatomy and physiology of upper airway:
 - » concept of the pharyngeal airway as a collapsible tube
 - » dynamic behaviour of the pharynx during breathing, when awake and asleep, and the concept of critical pressure
 - » effects of craniofacial structure, obesity, upper airway muscle function, and ventilatory control on upper airway patency
 - » effects of nasal resistance on pharyngeal collapsibility
 - » role of upper airway muscles in the control of breathing when asleep and awake
 - » structure and function of the upper airway
- Physiology of sleep and breathing:
 - » breathing changes during sleep – REM versus NREM sleep
 - » control of breathing during sleep:
 - central and peripheral chemoreceptors, and hypoxic and hypercapnic ventilatory responses
 - central pattern generator as the basis for respiratory control
 - effect of sleep on respiratory neurons
 - neuroanatomical and neurophysiologic basis of control of breathing
 - peripheral and central afferents and inputs
 - » effect of sleep on breathing in respiratory and neuromuscular diseases
 - » explain the mechanics of breathing in an adult
- Recommended sleep duration for adults, and consequences of sleep loss on physical and mental health and daytime functioning:
 - » circulating hormones and inflammatory cytokines impact on sleep-wake patterns, and influence of pregnancy and menopause on sleep
 - » impact of circadian and homeostatic systems on sleep-wake cycles, and propensity to daytime sleepiness
 - » influence of NREM and REM sleep and sleep arousal on respiratory, cardiovascular, endocrine, and gastrointestinal physiology
 - » influence of NREM and REM sleep and sleep arousal on the autonomic nervous system
 - » interactions between sleep and wakefulness and the sensory nervous system, perception and cognition, the cardiovascular system, temperature regulation, and the endocrine system
 - » psychophysiology of the drowsy state
- Sleep and circadian neurophysiology:
 - » anatomy and physiology of the circadian system
 - » circadian, ultradian, and homeostatic processes that underpin sleep
 - » cultural, social, and physical environmental factors impact on sleep
 - » distinctions between REM and NREM
 - » molecular and neural basis of the circadian system
 - » neuroanatomical and neurophysiological basis for arousal from sleep

- » neuroanatomical, neurobiological, and neurophysiological basis for sleep and wakefulness, and for REM versus NREM sleep
- » normal sleep architecture, including the current classification of normal arousal patterns, normal sleep movements, and sleep stages
- » ontogeny of sleep and of breathing irregularities in sleep
- » sleep stages
- » sleep structure and sleep architecture changes with age

INVESTIGATIONS, PROCEDURES, AND CLINICAL ASSESSMENT TOOLS

Advanced Trainees will know the scientific foundation of each investigation and procedure, including relevant anatomy and physiology. They will be able to interpret the reported results of each investigation or procedure.

Advanced Trainees will know how to explain the investigation or procedure to patients, families, and carers, and be able to explain procedural risk and obtain informed consent where applicable.

Assessment tools

- Actigraphy
- Computerised polysomnography (PSG) systems
- Hardware and software of the computerised equipment used in a sleep service
- Scoring of:
 - » arousals
 - » cardiac events
 - » movements
 - » respiratory events
 - » sleep
- Sensor devices used to measure physiological variables as part of sleep studies
- Sleep diaries
- Sleep monitoring equipment
- Wearables and new technology

Procedures

- Application of chin strap
- Mask fitting and troubleshooting for positive airway pressure (PAP) therapy
- Type 2 study set up

Sleep measurement and investigations

- Brain CT
- Cephalometry
- Chest x-ray
- Completing sleep investigation reports for different types of sleep studies
- Diaphragm testing, such as:
 - » maximal expiratory pressures (MEP)
 - » maximal inspiratory pressures (MIP)
 - » sniff nasal inspiratory pressure (SNIP)
- Diaphragmatic electromyography monitoring
- Indications for repeat investigations
- Indications for sleep investigations:
 - » awareness of the key professional documents outlining the performance of sleep investigations in Australia and Aotearoa New Zealand
 - » circumstances when sleep investigations are not indicated
 - » clinical features, mechanisms, and specific measurements of common sleep disorders
 - » common questionnaire measurements of sleepiness and quality of life scores, and know the limitations of these measurements
 - » definition of level 1 to 4 sleep studies and devices, the strength and weaknesses of each, and the role of in-laboratory versus ambulatory testing

-
- » effects of medications, comorbidities (such as psychiatric and medical conditions), and lifestyle on sleep wake patterns, and how these factors can affect measurements of sleep propensity
 - » indications and use of tests for sleep propensity / vigilance
 - » indications for investigation with level 1 to 4 sleep studies
 - » wearable devices and new technology for measuring sleep and sleep disorders, and their strengths and limitations
 - » what measurements are possible and appropriate for disorders listed in the International Classification of Sleep Disorders (ICSD-3)
 - Limited channel sleep studies, including normal and abnormal patterns and interpretation of raw data, and the ability to discuss the strengths and limitations of:
 - » cardio-respiratory sleep studies
 - » limited channel PSG studies
 - » overnight oximetry
 - Methods of measuring respiration during sleep
 - MRI scan
 - Oesophageal pressure monitoring
 - Positive airway pressure titration and review studies – continuous positive airway pressure (CPAP) and bilevel non-invasive ventilation
 - Principles of measurement parameters:
 - » measurements across the range of sleep studies, and determine adequacy of recording techniques
 - » measurements indicated for further evaluation in the event of a non-diagnostic sleep study
 - PSG recording:
 - » age-appropriate normal sleep stage distribution and proportions
 - » arousals
 - » period limb movement (PLM), PLM-I
 - » raw data from sleep studies, including:
 - airflow parameters
 - airway pressures
 - body position
 - chin electromyography
 - EEG
 - effort parameters
 - electrocardiography (ECG)
 - electro-oculogram (EOG)
 - leg electromyography derivations
 - measures of CO₂
 - oxygen saturation
 - video recordings
 - » REM sleep without atonia (RSWA)
 - » respiratory events:
 - apnoeas – central, mixed, and obstructive
 - hypopnoeas
 - respiratory effort-related arousals
 - » scoring criteria, and recognising how different scoring criteria may alter results and therefore interpretation of severity
 - Questionnaire measurements for sleepiness and sleep disorders
 - Respiratory function tests to assess sleep breathing disorders:
 - » arterial blood gases (role of capillary and venous blood gas measurements)
 - » gas transfer
 - » lung volumes
 - » oximetry
 - » spirometry
 - » tests of respiratory muscle strength

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- Sensitivity of the different measurements of respiration
 - Sleep propensity tests:
 - » multiple sleep latency test (MSLT)
 - » maintenance of wakefulness test (MWT)
-

IMPORTANT SPECIFIC ISSUES

Advanced Trainees will identify important specialty-specific issues and the impact of these on diagnosis, management and outcomes.

- Educate patients, their families, health professionals and the public about the nature and importance of normal sleep, and the detrimental effects of sleep loss
- Infection control and prevention of cross-infection
- Influence of other disease processes on common measurement parameters:
 - » cardiovascular disease (e.g. heart failure)
 - » chronic obstructive pulmonary disease (COPD)
 - » obesity
 - » respiratory muscle weakness
 - » stroke
- Limitations and common parameters in sleep investigation

Learning goal 13 – Sleep-related breathing disorders

Advanced Training in Sleep Medicine
(Adult Medicine)

KEY PRESENTATIONS AND CONDITIONS

Advanced Trainees will have a comprehensive depth of knowledge of these presentations and conditions.

Presentations

- Awakening gasping or choking
- Cognitive impairment
- Driving or occupational risk
- Early morning headaches
- Excessive daytime sleepiness
- Impaired sleep quality
- Loud snoring
- Mood changes
- Poor concentration
- Witnessed apnoea

Conditions

- Familiarity with the International Classification of Sleep Disorders (ICSD-3)
- Isolated snoring
- Sleep apnoea:
 - » central
 - » obstructive
 - » treatment-emergent central sleep apnoea
- Sleep hypoventilation disorders, such as obesity hypoventilation)
- Sleep-related hypoxemia disorders

For each presentation and condition, Advanced Trainees will **know how to:**

Synthesise

- » recognise the clinical presentation
- » identify relevant epidemiology, prevalence, pathophysiology, and clinical science
- » take a comprehensive clinical history
- » conduct an appropriate examination
- » establish a differential diagnosis
- » plan and arrange appropriate investigations
- » consider the impact of illness and disease on patients and their quality of life when developing a management plan

Manage

- » provide evidence-based management
- » prescribe therapies tailored to patients' needs and conditions
- » recognise potential complications of disease and its management, and initiate preventative strategies
- » involve multidisciplinary teams

Consider other factors

- » identify individual and social factors and the impact of these on diagnosis and management

LESS COMMON OR MORE COMPLEX PRESENTATIONS AND CONDITIONS

Advanced Trainees will understand these presentations and conditions.

Advanced Trainees will understand the resources that should be used to help manage patients with these presentations and conditions.

Conditions

- Central sleep apnoea due to high-altitude periodic breathing
- Congenital central alveolar hypoventilation syndrome
- Idiopathic central alveolar hypoventilation
- Primary central sleep apnoea

EPIDEMIOLOGY, PATHOPHYSIOLOGY, AND CLINICAL SCIENCES

Advanced Trainees will have a comprehensive depth of knowledge of the principles of the foundational sciences.

Hypoventilation

- Indications and application of non-invasive ventilation (NIV) versus invasive ventilation for hypercapnic respiratory failure
- Physiology of ventilatory drive and gas exchange
- Role and pathophysiology of sleep-related hypoventilation in acute and chronic hypercapnic respiratory failure, including obesity, neuromuscular / chest wall disease, reduced central drive, and diseases that chronically increase respiratory load, such as chronic obstructive pulmonary disease (COPD)
- Role of cough assist devices and sputum clearance in patients with neuromuscular weakness
- Role of tracheostomy in airway management
- Use of bilevel non-invasive positive pressure ventilation in managing both acute and chronic hypercapnic respiratory failure

Oxygen therapy

- Assessment process for oxygen therapy
- Delivery systems and use of oxygen therapy in continuous positive airway pressure (CPAP) and NIV
- Indications and guidelines for use of oxygen therapy related to sleep breathing disorders
- Potential adverse effects of oxygen therapy

Sleep apnoea

- Awareness of new technologies in the management of obstructive sleep apnoea (OSA)
- Central role of CPAP in treating OSA, including side effects, factors affecting compliance, and strategies for improving compliance with treatment
- Clinical diagnosis and management of OSA complicated by respiratory failure and/or right heart failure, such as where sleep-disordered breathing (SDB) overlaps with other diseases, such as gross obesity or chronic obstructive pulmonary disease (COPD)
- Clinical features of OSA and the differential diagnoses of OSA symptoms
- Epidemiology of SDB and effects of age, gender, obesity, and race on prevalence of SDB, and recognise lesser-known associations
- Occupational and lifestyle implications of SDB

- Pathophysiology of central sleep apnoea and the different types, such as:
 - » Cheyne–Stokes respiration
 - » hypercapnic
 - » non-hypercapnic
- Pathophysiology of obstructive sleep apnoea and the different phenotypes, as well as its impact upon treatment choice
- Public health implications of SDB, including impact on:
 - » cardiovascular morbidity and mortality
 - » diabetes, metabolic syndrome, obesity, and other comorbid medical conditions
 - » driving, work performance, and emotional / psychological health
- Role of upper airway surgery in the management of snoring and OSA
- Understand the concept of loop gain

INVESTIGATIONS, PROCEDURES, AND CLINICAL ASSESSMENT TOOLS

Advanced Trainees will know the scientific foundation of each investigation and procedure, including relevant anatomy and physiology. They will be able to interpret the reported results of each investigation or procedure.

Advanced Trainees will know how to explain the investigation or procedure to patients, families, and carers, and be able to explain procedural risk and obtain informed consent where applicable.

Investigations

- Evaluate clinical investigations and circumstances to formulate patients' individual treatment strategies
- Interpret polysomnography (PSG) findings in patients on ventilatory support, and make recommendations about treatment settings
- Interpret PSG raw data, including:
 - » scoring respiratory events
 - » sleep staging and arousals
 - » oximetry and PTtCO₂ monitoring
- Recommend participation in PSG reporting concordance program at training site
- Select and interpret appropriate respiratory function tests and radiology investigations
- Understand the definition of hypoventilation during wakefulness and sleep (including NREM and REM), how to distinguish the different types of hypoventilation, and how to assess with PSG
- Understand new technology for measuring sleep, such as wearables and nearables, and their strengths and weaknesses
- Understand the different types of sleep studies (level 1 to 4), and the strengths and weaknesses of each
- Understand the role of PSG and limited sleep studies in optimising NIV settings, patient-machine synchrony, and triggering and mask interface
- Understand the role of telemonitoring and remote monitoring of NIV in patients with hypercapnic respiratory failure

Procedures

- Assist with weaning from invasive to NIV
- Apply oxygen delivery systems, such as nasal prongs, masks, and high-flow circuits
- CPAP and auto-titrating positive airway pressure (APAP):
 - » adjustment of device settings
 - » interpretation of machine data
 - » prescribe CPAP based on ambulatory APAP titration
 - » selection and application of nasal and full-face masks
 - » troubleshooting treatment problems
 - » use of chin straps
 - » use of humidification circuits

-
- Non-invasive bilevel positive-pressure ventilation:
 - » adjustment of device settings
 - » interpretation of machine data
 - » monitoring patient progress
 - » selection and application of masks
 - » troubleshooting treatment problems
 - » use of humidification circuits
 - Oral appliance therapy
-

IMPORTANT SPECIFIC ISSUES

Advanced Trainees will identify important specialty-specific issues and the impact of these on diagnosis and management and integrate these into care.

- Apply a multidisciplinary approach in the management of sleep-related breathing disorders, recognising the roles of other medical, nursing, and allied health professionals
- Assess the contribution of SDB to respiratory failure, with particular reference to nocturnal hypoventilation
- Explain the public health implications of the high prevalence of SDB in a local context (hospital / local community) and on a national / international scale
- Identify Australian and Aotearoa New Zealand 'Fitness to Drive' guidelines and local driver licensing requirements, and assess and advise patients with SDB regarding fitness to drive
- Manage basic tracheostomy care, and refer for specialist assistance when indicated
- Manage complications from hypercapnic respiratory failure and/or heart failure
- Manage the transition from in-hospital to home care, applying knowledge of available support services and home care teams
- Recognise the role of community, rehabilitation, and palliative care services in the management of patients with chronic respiratory failure
- Recognise when referral to another specialist is indicated
- Synthesise history and examination to produce provisional and differential diagnosis, and formulate and undertake management plans
- Understand current available weight loss strategies

Learning goal 14 – Central disorders of hypersomnolence

Advanced Training in Sleep Medicine
(Adult Medicine)

KEY PRESENTATIONS AND CONDITIONS

Advanced Trainees will have a comprehensive depth of knowledge of these presentations and conditions.

Presentations

- Cataplexy
- Decreased energy
- Difficulty concentrating
- Difficulty waking up from sleep
- Excessive daytime sleepiness (EDS)
- Memory and speech difficulties
- Mood changes, such as anxiety and irritation
- Sleeping more than average

Conditions

- Hypersomnia associated with a psychiatric condition
- Hypersomnia due to a medical condition or substance
- Idiopathic hypersomnia
- Insufficient sleep syndrome
- Narcolepsy type 1
- Narcolepsy type 2

LESS COMMON OR MORE COMPLEX PRESENTATIONS AND CONDITIONS

Advanced Trainees will understand these presentations and conditions.

Advanced Trainees will understand the resources that should be used to help manage patients with these presentations and conditions.

Presentations

- Disinhibited behaviours
- Hallucinations
- Isolated sleep paralysis

Conditions

- Kleine–Levin Syndrome, and other variants of recurrent hypersomnia

For each presentation and condition, Advanced Trainees will **know how to**:

Synthesise

- » recognise the clinical presentation
- » identify relevant epidemiology, prevalence, pathophysiology, and clinical science
- » take a comprehensive clinical history
- » conduct an appropriate examination
- » establish a differential diagnosis
- » plan and arrange appropriate investigations
- » consider the impact of illness and disease on patients and their quality of life when developing a management plan

Manage

- » provide evidence-based management
- » prescribe therapies tailored to patients' needs and conditions
- » recognise potential complications of disease and its management, and initiate preventative strategies
- » involve multidisciplinary teams

Consider other factors

- » identify individual and social factors and the impact of these on diagnosis and management

EPIDEMIOLOGY, PATHOPHYSIOLOGY, AND CLINICAL SCIENCES

Advanced Trainees will have a comprehensive depth of knowledge of the principles of the foundational sciences.

Assessment of hypersomnolence disorders

- Common causes of hypersomnia, including:
 - » behavioural and environmental factors
 - » medical
 - » medication use
 - » primary sleep disorders
 - » psychiatric conditions
- Common causes of persistent EDS in patients with treated obstructive sleep apnoea (OSA)
- Genetics, presentation, and treatment of narcolepsy
- Important behavioural factors that influence subjective and objective sleepiness and neurocognitive function, such as chronic sleep restriction

Diagnostic categories

- Contents of the International Classification of Sleep Disorders (ICSD-3)
- Other medical conditions that are associated with EDS, recognising the actions of centrally acting pharmacological agents and their interactions with sleep
- Primary hypersomnias of central origin that are associated with EDS, including:
 - » idiopathic hypersomnolence
 - » narcolepsy

Impact of hypersomnolence disorders

- Daytime neurocognitive consequences of abnormalities of sleep-wake regulation
- Impact of drowsiness / sleepiness on road and work safety
- Impact of sleep disorders on quality of life and behaviour
- Occupational and lifestyle implications of EDS and other sleep disorders

Pathophysiology

- How disease states and medication use can affect sleep-wake regulation and EDS
- Models of sleep deprivation and sleep disruption, and the effects on daytime function
- Normal neurobiology and neuropharmacology of sleep-wake regulation

INVESTIGATIONS, PROCEDURES, AND CLINICAL ASSESSMENT TOOLS

Advanced Trainees will know the scientific foundation of each investigation and procedure, including relevant anatomy and physiology. They will be able to interpret the reported results of each investigation or procedure.

Investigations

- Assess severity of daytime consequences of sleep disorders
- Discuss the range of limited channel sleep studies available
- Identify EDS or inability to maintain wakefulness based on tests of sleep propensity
- Interpret raw data from sleep studies, including:
 - » airflow parameters
 - » airway pressures
 - » body position
 - » ECG
 - » effort parameters
 - » electroencephalography (EEG)
 - » electromyography (EMG)
 - » electro-oculogram (EOG)
 - » measures of CO₂
 - » oxygen saturation

Advanced Trainees will know how to explain the investigation or procedure to patients, families, and carers, and be able to explain procedural risk and obtain informed consent where applicable.

- » video of motor activity, including cataplexy
- Interpret results of investigations regarding EDS and daytime consequences of sleep disorders in the clinical context of the patient
- Perform a thorough history, examination, and sleep specific assessment
- Perform the relevant neurological, respiratory, neurological and general physical examinations
- Synthesise patient symptoms and signs into a comprehensive differential diagnosis, and plan further investigation if needed
- Take a thorough sleep history from the patient, bed partner, and other relevant persons
- Understand essential features of a sleep study report used in clinical decision making

Procedures

- Clinical context in which vigilance studies are indicated:
 - » criteria for defining the severity of daytime sleepiness or inability to maintain wakefulness
 - » essential features of reports on tests of sleep propensity used in clinical decision making
 - » limitations of current available tests for assessment of EDS and daytime consequences of sleep disorders, and identify current research developments
 - » maintenance of wakefulness test (MWT)
 - » multiple sleep latency test (MSLT)
 - » normative data for sleep architecture and tests of sleep propensity
- Indications for CSF orexin testing – key indications, limitations, and precautions
- Polysomnography (PSG)
- Sleep diary and/or actigraphy
- Urine drug screen

IMPORTANT SPECIFIC ISSUES

Advanced Trainees will identify important specialty-specific issues and the impact of these on diagnosis and management and integrate these into care.

- Assess and advise patients with EDS regarding fitness to drive
- Determine optimal treatment settings from treatment sleep study parameters
- Determine the requirement for further evaluation in the event of an indeterminate limited channel sleep study
- Determine when a MSLT and MWT might be appropriate
- Explain and manage drug misuse and withdrawal
- Explain behavioural strategies to reduce the symptoms of EDS and the daytime consequences of sleep disorders, such as schedule modification and sleep education
- Explain occupational and lifestyle implications of EDS and daytime consequences of sleep disorders
- Generate reports for diagnostic and treatment sleep studies
- Identify pathological hypersomnolence or inability to maintain wakefulness based on tests of hypersomnolence
- Interpret results and formulate a management plan
- Monitor the pharmacotherapies for central nervous system disorders of hypersomnolence, including recognition and management of adverse effects, especially the impact on mental health, such as anxiety
- Prescribe pharmacotherapy for REM intrusion symptoms, such as cataplexy
- Prescribe pharmacotherapy to reduce symptoms of EDS and daytime consequences of sleep disorders in accordance with

state and national legislation (e.g., use of schedule 8 medications in Australia)

- Recognise the indications for completion of a sleep diary:
 - » explain the completion of a sleep diary to patients
 - » interpret sleep diaries, applying knowledge of normal sleep duration and timing according to age
 - » use sleep diary information to inform treatment decisions
- Recognise the limitations and clinical applicability of various types of limited channel sleep studies, including:
 - » cardiorespiratory sleep studies
 - » limited channel PSG studies
 - » overnight oximetry
- Understand and advise patients on use of medications during pregnancy and while breastfeeding

Learning goal 15 – Sleep-related movement disorders

Advanced Training in Sleep Medicine
(Adult Medicine)

<p>KEY PRESENTATIONS AND CONDITIONS</p> <p>Advanced Trainees will have a comprehensive depth of knowledge of these presentations and conditions.</p>	<p>Presentations</p> <ul style="list-style-type: none"> • Hypnic jerks • Jaw pain • Leg cramps • Periodic limb movements in sleep • Uncomfortable sensations in legs • Urge to move legs when at rest <p>Conditions</p> <ul style="list-style-type: none"> • Periodic limb movement disorder (PLMD) • Restless leg syndrome (RLS) • Sleep bruxism • Sleep-related leg cramps 	<p>For each presentation and condition, Advanced Trainees will know how to:</p> <p>Synthesise</p> <ul style="list-style-type: none"> » recognise the clinical presentation » identify relevant epidemiology, prevalence, pathophysiology, and clinical science » take a comprehensive clinical history » conduct an appropriate examination » establish a differential diagnosis » plan and arrange appropriate investigations » consider the impact of illness and disease on patients and their quality of life when developing a management plan <p>Manage</p> <ul style="list-style-type: none"> » provide evidence-based management » prescribe therapies tailored to patients' needs and conditions » assess response to treatment, adherence, side-effects and drug interactions » recognise potential complications of disease and its management, and initiate preventative strategies » involve multidisciplinary teams <p>Consider other factors</p> <ul style="list-style-type: none"> » identify individual and social factors and the impact of these on diagnosis and management
<p>LESS COMMON OR MORE COMPLEX PRESENTATIONS AND CONDITIONS</p> <p>Advanced Trainees will understand these presentations and conditions.</p> <p>Advanced Trainees will understand the resources that should be used to help manage patients with these presentations and conditions.</p>	<p>Presentations</p> <ul style="list-style-type: none"> • Humming / Groaning • Repetitive rhythmic movements, such as body rocking and head rolling <p>Conditions</p> <ul style="list-style-type: none"> • Propriospinal myoclonus at sleep onset (PSM) • Rhythmic movement disorder • Sleep-related hypermotor epilepsy (SHE) • Sleep-related movement disorder due to a medical disorder, medicine, or substance 	
<p>EPIDEMIOLOGY, PATHOPHYSIOLOGY, AND CLINICAL SCIENCES</p> <p>Advanced Trainees will have a comprehensive depth of knowledge of the principles of the foundational sciences.</p>	<ul style="list-style-type: none"> • Abnormalities in sleep architecture, respiration, or body movements, including period limb movements (PLMs) • Actions of centrally acting pharmacological agents and their interactions with sleep and PLMs • Bruxism, hypnic jerks, rhythmic movement, and sleep talking • Clinical context in which limited channel sleep studies might be useful, including tests performed in the home, and the range of limited channel sleep studies available • Clinical features and differential diagnosis of RLS and PLMD 	

- Clinical features and differential diagnosis of sleep-related movement disorders
- Essential features of sleep study reports used in clinical decision making, and on tests of sleep propensity used in clinical decision making
- How PLMs are measured
- Psychiatric disorders with sleep movements, behaviours, and experiences as symptoms
- Range of tests available to diagnose and manage sleep movement disorders, including polysomnography (PSG)
- Secondary causes and other precipitating factors that may cause RLS

INVESTIGATIONS, PROCEDURES, AND CLINICAL ASSESSMENT TOOLS

Advanced Trainees will know the scientific foundation of each investigation and procedure, including relevant anatomy and physiology. They will be able to interpret the reported results of each investigation or procedure.

Advanced Trainees will know how to explain the investigation or procedure to patients, families, and carers, and be able to explain procedural risk and obtain informed consent where applicable.

Investigations

- Apply an investigation plan for suspected RLS / PLMD, especially looking for secondary causes
- Assess severity of daytime consequences of sleep disorders
- Interpret and report on typical PSG findings in PLMD, including seizure disorders
- Interpret raw data from sleep studies, including:
 - » airflow parameters
 - » airway pressures
 - » body position
 - » chin electromyography
 - » effort parameters
 - » ECG
 - » electroencephalogram (EEG)
 - » electromyography (EMG)
 - » electro-oculogram (EOG)
 - » measures of carbon dioxide (CO₂)
 - » oxygen saturation
- Perform the relevant neurological, respiratory, upper airway, and general physical examinations
- Synthesise patient symptoms and signs into a comprehensive differential diagnosis, and plan further investigation if needed
- Take a thorough sleep history from the patient, bed partner, and other relevant persons

Procedures

- EEG
- Multiple sleep latency test (MSLT)
- PSG

IMPORTANT SPECIFIC ISSUES

Advanced Trainees will identify important specialty-specific issues and the impact of these on diagnosis and management and integrate these into care.

- Apply and locate sensors for monitoring sleep disorders
- Determine optimal treatment settings from treatment sleep study parameters
- Determine the requirement for further evaluation in the event of an indeterminate limited channel sleep study
- Explain dopaminergic augmentation, and outline strategies for prevention, monitoring, and management
- Explain sensors, filters, gain, sampling times (frequencies), and linearity of the equipment used in the sleep laboratory to technical and other staff

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- Explain the role of video PSG and home video for diagnosis to patients
 - Generate reports for diagnostic and treatment sleep studies
 - Interpret results and formulate a management plan
 - Monitor for efficacy and side effects from RLS / PLMD pharmacotherapy
 - Prescribe and supervise drug management of RLS / PLMD, including in complex patients who may require second line or combination therapy
 - Recognise the limitations and clinical applicability of various types of limited channel sleep studies, including:
 - » cardiorespiratory sleep studies,
 - » limited channel PSG studies
 - » overnight oximetry
 - Recognise when referral to another specialist is indicated
 - Understand the role of non-pharmacological therapy for RLS / PLMD
 - Understand treatment options for RLS / PLMD
 - Weigh and synthesise history and examination information to produce provisional and differential diagnoses, and formulate and undertake management plans

Learning goal 16 – Parasomnia

Advanced Training in Sleep Medicine
(Adult Medicine)

KEY PRESENTATIONS AND CONDITIONS

Advanced Trainees will have a comprehensive depth of knowledge of these presentations and conditions.

Presentations

- Bedwetting
- Confusion when waking
- Daytime sleepiness
- Difficulty sleeping
- Eating / Drinking with limited awareness or responsiveness
- Episodes of incomplete awakening and limited responsiveness
- Exploding sensation in head upon waking
- Inability to move upon falling asleep or waking
- Movement during sleep, such as punching or kicking
- Screaming / Crying when waking
- Sexual behaviours during sleep
- Sleepwalking
- Vivid dreams that cause feelings of intense fear / anxiety
- Vocalisations during sleep

Conditions

- Catathrenia (sleep-related groaning)
- NREM disorders:
 - » confusional arousal
 - » night terrors
 - » sleep-related eating disorder
 - » sleepwalking
- REM disorders:
 - » nightmare disorder
 - » REM sleep behaviour disorder (RBD)
 - » sleep paralysis
- Sexsomnia (sleep-related sexual behaviours)
- Sleep enuresis (bedwetting)
- Somniloquy

For each presentation and condition, Advanced Trainees will **know how to:**

Synthesise

- » recognise the clinical presentation
- » identify relevant epidemiology, prevalence, pathophysiology, and clinical science
- » take a comprehensive clinical history
- » conduct an appropriate examination
- » establish a differential diagnosis
- » plan and arrange appropriate investigations
- » consider the impact of illness and disease on patients and their quality of life when developing a management plan

Manage

- » provide evidence-based management
- » prescribe therapies tailored to patients' needs and conditions
- » recognise potential complications of disease and its management, and initiate preventative strategies
- » involve multidisciplinary teams

Consider other factors

- » identify individual and social factors and the impact of these on diagnosis and management

LESS COMMON OR MORE COMPLEX PRESENTATIONS AND CONDITIONS

Advanced Trainees will understand these presentations and conditions.

Advanced Trainees will understand the resources that should be used to help manage patients with these presentations and conditions.

- Exploding head syndrome
- Sleep-related hallucinations

EPIDEMIOLOGY, PATHOPHYSIOLOGY, AND CLINICAL SCIENCES

Advanced Trainees will have a comprehensive depth of knowledge of the principles of the foundational sciences.

- Actions of pharmacological agents and their interactions with sleep that may exacerbate parasomnias
- Clinical context in which limited channel sleep studies might be useful, including tests performed in the home, and the range of limited channel sleep studies available
- Clinical features for NREM arousal disorders and their variants, such as confusional arousals, sleep terrors, and sleepwalking
- Clinical features of REM sleep behaviour disorder and its variants
- Compare the differences between nightmares and sleep terrors
- Contents of the International Classification of Sleep Disorders (ICSD-3)
- Differential diagnoses of parasomnias, including nocturnal frontal lobe epilepsy and psychiatric disorders
- Essential features of sleep study reports used in clinical decision making and on tests of sleep propensity used in clinical decision making
- Impact of medications on propensity for parasomnias, such as selective serotonin reuptake inhibitors (SSRIs) and REM behaviour disorder
- Impact of sleep test findings on fitness to drive
- Mental health conditions that can cause or mimic parasomnias, such as PTSD
- Neurological conditions which can cause and are associated with parasomnias, such as Parkinson disease
- Principles of pharmacological and non-pharmacological management of parasomnias
- Recognise coexisting sleep pathology which can exacerbate parasomnias, such as obstructive sleep apnoea
- Review the predisposing factors that may trigger episodes of parasomnias
- Spectrum of parasomnias and the basic features of:
 - » confusional arousals
 - » REM sleep behaviour disorder
 - » sleep terrors
 - » sleepwalking

INVESTIGATIONS, PROCEDURES, AND CLINICAL ASSESSMENT TOOLS**Investigations**

- Assess severity of daytime consequences of sleep disorders
- Interpret and report on typical polysomnography (PSG) findings in NREM arousal disorders, REM sleep behaviour disorder, and seizure disorders

Advanced Trainees will know the scientific foundation of each investigation and procedure, including relevant anatomy and physiology. They will be able to interpret the reported results of each investigation or procedure.

Advanced Trainees will know how to explain the investigation or procedure to patients, families, and carers, and be able to explain procedural risk and obtain informed consent where applicable

- Interpret raw data from sleep studies, including:
 - » airflow parameters
 - » airway pressures
 - » body position
 - » effort parameters
 - » ECG
 - » electroencephalography (EEG)
 - » electromyography (EMG)
 - » electro-oculogram (EOG)
 - » measures of CO₂
 - » oxygen saturation
 - » video
- Interpret the clinical implications of cerebral CT and MRI scans
- Interpret video and EEGs during a paroxysmal event at night, and report differential diagnosis
- Perform a thorough history, examination, and sleep specific assessment
- Perform the relevant neurological, respiratory, and general physical examinations
- Recognise features which may suggest parasomnia or seizure
- Synthesise patient symptoms and signs into a comprehensive differential diagnosis, and plan further investigation if needed
- Take a thorough sleep history from patients, their bed partner, and other relevant persons

Procedures

- EEG, including full EEG
- Neurologic exams, such as CT scan or MRI
- PSG, including video

IMPORTANT SPECIFIC ISSUES

Advanced Trainees will identify important specialty-specific issues and the impact of these on diagnosis and management and integrate these into care.

- Apply and locate sensors for monitoring sleep disorders
- Deliver comprehensive sleep education to patients, and understand the clinical and ethical implications of diagnosis of RBD and neurodegenerative disorders
- Determine optimal treatment settings from treatment sleep study parameters
- Determine the requirement for further evaluation in the event of an indeterminate limited channel sleep study
- Explain and manage drug misuse, side effects, and withdrawal
- Explain non-pharmacological and pharmacological measures for management of NREM parasomnias and REM sleep behaviour disorder
- Explain sensors, filters, gain, sampling times (frequencies), and linearity of the equipment used in the sleep laboratory to technical and other staff
- Explain the role of video PSG and home video for diagnosis to patients
- Generate reports for diagnostic and treatment sleep studies
- Interpret results and formulate a management plan
- Prescribe and monitor drug management
- Recognise the indications for completion of a sleep diary:
 - » explain the completion of a sleep diary to patients
 - » interpret sleep diaries, applying knowledge of normal sleep duration and timing according to age
 - » use sleep diary information to inform treatment decisions

-
- Recognise when referral to another specialist is indicated, such as a psychologist and neurologists, especially in the context of REM sleep behaviour disorder and its associations with neurodegenerative diseases
 - Weigh and synthesise history and examination information to produce provisional and differential diagnoses, and formulate and undertake management plans

Learning goal 17 – Insomnia

Advanced Training in Sleep Medicine
(Adult Medicine)

<p>KEY PRESENTATIONS AND CONDITIONS</p> <p>Advanced Trainees will have a comprehensive depth of knowledge of these presentations and conditions.</p>	<p>Presentations</p> <ul style="list-style-type: none">• Daytime sleepiness• Difficulty initiating and/or maintaining sleep at night• Fatigue• Mood changes <p>Conditions</p> <ul style="list-style-type: none">• Insomnia:<ul style="list-style-type: none">» acute» chronic• Insomnia due to irregular sleep schedules• Paradoxical insomnia (sleep state misperception)• Psychophysiological insomnia	<p>For each presentation and condition, Advanced Trainees will know how to:</p> <p>Synthesise</p> <ul style="list-style-type: none">» recognise the clinical presentation» identify relevant epidemiology, prevalence, pathophysiology, and clinical science» take a comprehensive clinical history» conduct an appropriate examination» establish a differential diagnosis» plan and arrange appropriate investigations» consider the impact of illness and disease on patients and their quality of life when developing a management plan <p>Manage</p> <ul style="list-style-type: none">» provide evidence-based management» prescribe therapies tailored to patients' needs and conditions» recognise potential complications of disease and its management, and initiate preventative strategies» involve multidisciplinary teams <p>Consider other factors</p> <ul style="list-style-type: none">» identify individual and social factors and the impact of these on diagnosis and management
<p>LESS COMMON OR MORE COMPLEX PRESENTATIONS AND CONDITIONS</p> <p>Advanced Trainees will understand these presentations and conditions.</p> <p>Advanced Trainees will understand the resources that should be used to help manage patients with these presentations and conditions.</p>	<p>Presentations</p> <ul style="list-style-type: none">• Difficulty concentrating <p>Conditions</p> <ul style="list-style-type: none">• Insomnia associated with drug and alcohol use• Insomnia due to underlying physical conditions, such as neurological or respiratory conditions• Insomnia with comorbid circadian rhythm disorder• Insomnia with comorbid mental health disorder	
<p>EPIDEMIOLOGY, PATHOPHYSIOLOGY, AND CLINICAL SCIENCES</p> <p>Advanced Trainees will have a comprehensive depth of knowledge of the principles of the foundational sciences.</p>	<ul style="list-style-type: none">• Definition of insomnia, including within the International Classification of Sleep Disorders (ICSD-3), and the daytime consequences• Discuss the interaction between other sleep disorders, such as sleep apnoea and restless leg syndrome (RLS), and the development of insomnia• Identify circadian factors, such as shift work and advanced and delayed sleep, which may produce apparent insomnia symptoms• Identify different types of insomnia and their clinical features• Indications and limitations of assessment tools for insomnia, including actigraphy, sleep diaries and polysomnography (PSG)• Interaction, overlap, and interrelationship of medical disorders with sleep disorders• Interaction, overlap, and interrelationship of psychiatric disorders with sleep disorders	

- How pregnancy and menopause influence sleep
- Principles of pharmacological treatment options for insomnia
- Recognise comorbid insomnia and obstructive sleep apnoea (COMISA), and implications for assessment and management
- Relevant sections in the ICSD-3
- The theory underlying management strategies for insomnia

INVESTIGATIONS, PROCEDURES, AND CLINICAL ASSESSMENT TOOLS

Advanced Trainees will know the scientific foundation of each investigation and procedure, including relevant anatomy and physiology. They will be able to interpret the reported results of each investigation or procedure.

Advanced Trainees will know how to explain the investigation or procedure to patients, families, and carers, and be able to explain procedural risk and obtain informed consent where applicable.

Investigations

- Familiarity with validated insomnia questionnaires, such as insomnia severity index
- Perform relevant neurological, respiratory, and general physical examinations
- Psychiatric assessment with a focus on mood disorders
- Take a thorough sleep history from patients, their bed partner, and other relevant persons, and ask about medications, including OTC medications and recreational drug use

Procedures

- Actigraphy:
 - » explain the role to patients
 - » identify indications
 - » interpret results
- Sleep diary:
 - » explain usage to patients
 - » interpret results

IMPORTANT SPECIFIC ISSUES

Advanced Trainees will identify important specialty-specific issues and the impact of these on diagnosis and management and integrate these into care.

- Assess the role of online delivered cognitive behavioural therapy (CBT), especially as access to psychologists is limited
- Deliver comprehensive sleep education to patients, including the importance of sleep hygiene
- Explain and manage drug misuse and withdrawal
- Explain the implementation of treatment strategies for insomnia, including sleep education and behavioural measures, such as bedtime restriction, CBT, relaxation therapies, and stimulus control
- Pharmacological treatment of short-term insomnia
- Prescribe and monitor pharmacological treatment for insomnia
- Recognise when referral to another specialist is indicated, particularly specialist sleep psychologists and psychiatrists
- Synthesise history and examination information to produce provisional and differential diagnoses, and formulate and undertake management plans
- Understand the components of cognitive (e.g., cognitive restructuring) behavioural (e.g., sleep restriction) therapy for insomnia (CBT-I), and the evidence supporting this treatment as first line therapy for chronic insomnia
- Understand the mechanisms of action of major drug classes, including the evidence for effect and potential side effects

Learning goal 18 – Circadian disorders of the sleep-wake cycle

Advanced Training in Sleep Medicine
(Adult Medicine)

KEY PRESENTATIONS AND CONDITIONS

Advanced Trainees will have a comprehensive depth of knowledge of these presentations and conditions.

Presentations

- Chronic sleep disturbances
- Difficulty falling asleep
- Difficulty waking
- Excessive daytime sleepiness
- Insomnia symptoms
- Mood changes, such as depression and irritability
- Reduced concentration
- Reduced performance in work and/or social spheres
- Waking up excessively early

Conditions

- Delayed and advanced sleep-wake phase disorders
- Irregular sleep-wake rhythm disorder
- Jet lag
- Non-24-hour sleep-wake rhythm disorder
- Shift work sleep-wake rhythm disorder

LESS COMMON OR MORE COMPLEX PRESENTATIONS AND CONDITIONS

Advanced Trainees will understand these presentations and conditions.

Advanced Trainees will understand the resources that should be used to help manage patients with these presentations and conditions.

Presentation

- Sleep-wake cycle disturbances related to:
 - » medications
 - » neurodevelopmental disorders
 - » psychiatric conditions

For each presentation and condition, Advanced Trainees will **know how to**:

Synthesise

- » recognise the clinical presentation
- » identify relevant epidemiology, prevalence, pathophysiology, and clinical science
- » take a comprehensive clinical history
- » conduct an appropriate examination
- » establish a differential diagnosis
- » plan and arrange appropriate investigations
- » consider the impact of illness and disease on patients and their quality of life when developing a management plan

Manage

- » provide evidence-based management
- » prescribe therapies tailored to patients' needs and conditions
- » recognise potential complications of disease and its management, and initiate preventative strategies
- » involve multidisciplinary teams

Consider other factors

- » identify individual and social factors and the impact of these on diagnosis and management

EPIDEMIOLOGY, PATHOPHYSIOLOGY, AND CLINICAL SCIENCES

Advanced Trainees will have a comprehensive depth of knowledge of the principles of the foundational sciences.

- Actions of pharmacological agents and their interactions with sleep
- Circadian effects on sleep duration and timing
- Clinical features, evaluation, and management associated with jet lag and shift work-related circadian rhythm disorders, and how they may produce apparent insomnia symptoms
- Clinical features, evaluation, and management of delayed and advanced sleep phase syndrome
- Contents of the International Classification of Sleep Disorders (ICSD-3)
- Effect of physical impairments, such as blindness, on circadian disorders
- Identify and discuss common comorbidities (e.g., normal aging, mental health disorders, and underlying neurological disorders) and their effect on circadian disorders, with an awareness of underlying neurobiological changes that occur
- Normal sleep and circadian physiology
- Occupational / driving / health risks of shift work associated with circadian rhythm disturbances
- Principles of pharmacological management of sleep disorders
- Psychosocial impact of circadian disorders, such as difficulties with employment and family life
- Relationship between circadian rhythm disturbances and psychiatric disease

INVESTIGATIONS, PROCEDURES, AND CLINICAL ASSESSMENT TOOLS

Advanced Trainees will know the scientific foundation of each investigation and procedure, including relevant anatomy and physiology. They will be able to interpret the reported results of each investigation or procedure.

Advanced Trainees will know how to explain the investigation or procedure to patients, families, and carers, and be able to explain procedural risk and obtain informed consent where applicable

Investigations

- Assess severity of daytime consequences of sleep disorders
- Interpret subjective and objective measures of circadian rhythm
- Perform a thorough history, examination, and sleep specific assessment
- Perform the relevant general physical, neurological, and respiratory examinations
- Recognise the indications for actigraphy in the clinical context:
 - » explain carrying out actigraphy to patients
 - » interpret actigraphy results, applying knowledge of normal sleep duration and timing
 - » use actigraphy information to inform treatment decisions
- Synthesise patients' symptoms and signs into comprehensive differential diagnoses, and plan further investigations if needed
- Take a thorough sleep history from patients, their bed partner, and other relevant persons

Procedures

- Actigraphy:
 - » explain to patients
 - » indications
 - » interpretation
 - » reporting
- Polysomnography (PSG)
- Sleep diary:
 - » explain to patients
 - » indications
 - » interpretation
 - » reporting

**IMPORTANT
SPECIFIC ISSUES**

Advanced Trainees will identify important specialty-specific issues and the impact of these on diagnosis and management and integrate these into care.

- Apply and locate sensors for monitoring sleep disorders
- Consideration of lifestyle modifications
- Deliver comprehensive sleep education to patients
- Determine optimal treatment settings from treatment sleep study parameters:
 - » determine the requirement for further evaluation in the event of an indeterminate limited channel sleep study
 - » generate reports for diagnostic and treatment sleep studies
 - » interpret results, and formulate management plans
- Explain and manage drug misuse and withdrawal
- Explain sensors, filters, gain, sampling times (frequencies), and linearity of the equipment used in the sleep laboratory to technical and other staff
- Explain strategies for rapid adjustment to new schedules or time zones
- Explain the management of altered sleep phase, such as bedtime scheduling, light therapy, and melatonin administration
- Explain the role of video PSG and home video for diagnosis to patients
- Prescribe and give advice about use of pharmacotherapy, in particular melatonin and melatonin agonists
- Recognise the indications for completion of a sleep diary:
 - » explain the completion of a sleep diary to patients
 - » interpret sleep diaries, applying knowledge of normal sleep duration and timing according to age
 - » use sleep diary information to inform treatment decisions
- Recognise when referral to another specialist is indicated