

NEW CURRICULA

Advanced Training in Respiratory Medicine (Paediatrics & Child Health)

Curriculum standards



About this document

The new Advanced Training in Respiratory Medicine (Paediatrics & Child Health) curriculum consists of curriculum standards and learning, teaching, and assessment (LTA) programs.

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

Contents

Program overview	3
Purpose of Advanced Training	3
RACP curriculum model.....	4
Professional Practice Framework.....	5
Learning, teaching, and assessment (LTA) structure	6
Respiratory Medicine (Paediatrics & Child Health) specialty overview	7
Respiratory Medicine (Paediatrics & Child Health) learning goals.....	9
Curriculum standards.....	10
Competencies.....	10
Entrustable Professional Activities	17
Knowledge guides	60

Program overview

Purpose of Advanced Training

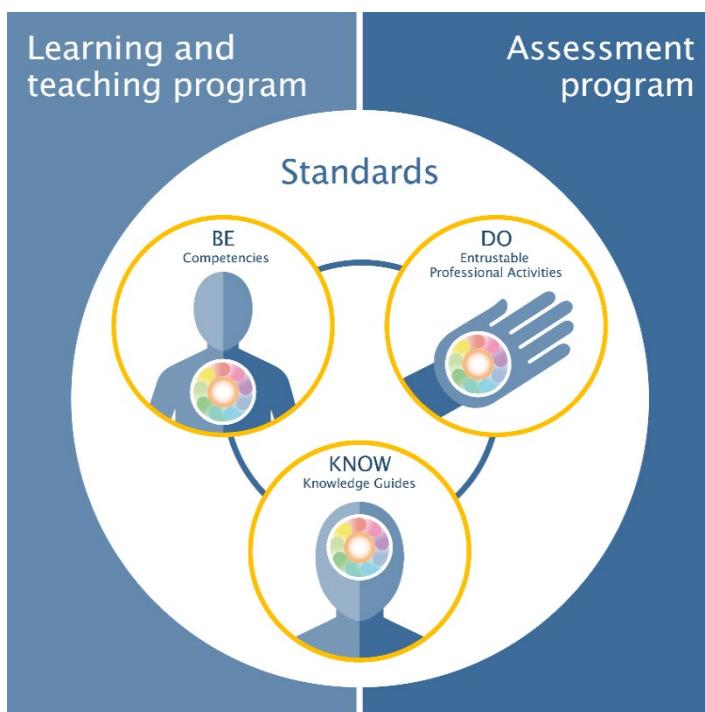
The RACP offers Advanced Training in 33 diverse medical specialties as part of Division, Chapter, or Faculty training programs.

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 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.



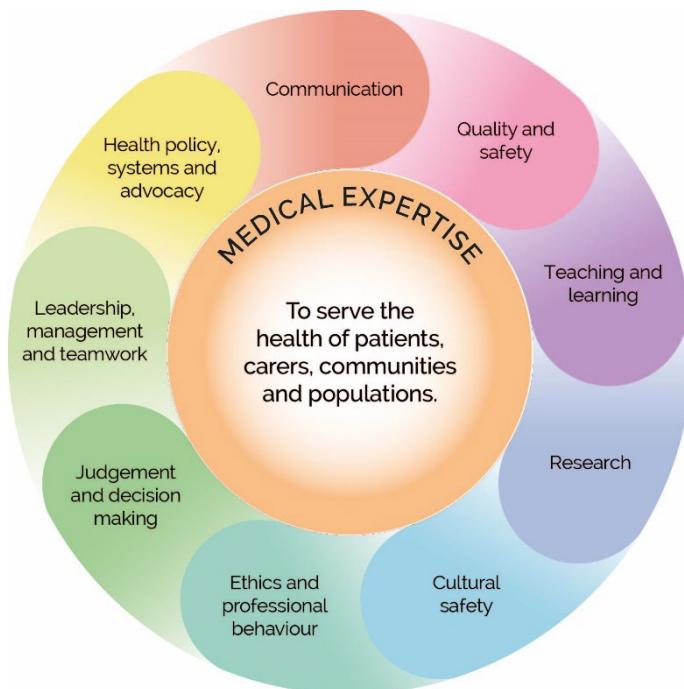
- **Entrustable Professional Activities** (EPAs) outline the essential work tasks trainees need to be able to perform in the workplace.



- **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.

Respiratory Medicine (Paediatrics & Child Health) specialty overview

Paediatric respiratory medicine encompasses diseases of the respiratory system in children (from babies and children, to young people), including the upper and lower airways, lung parenchyma, pleura, mediastinum, pulmonary circulation, chest wall, and ventilatory control system (awake and asleep). It incorporates knowledge of lung development and developmental physiology, normal and disordered respiratory structure and function, clinical respiratory diseases, and the specialised diagnostic techniques, tests, and procedures employed in clinical assessment and management.

Paediatric respiratory physicians are involved in the diagnosis and management of acute and chronic, uncomplicated, and complex respiratory conditions in children and young people. This includes children with difficult-to-treat asthma, complicated pneumonia and other respiratory infections, cystic fibrosis and bronchiectasis, and rare lung diseases. Paediatric respiratory physicians promote and advocate on public health issues at the individual, local, and national level to promote lung health. This includes the promotion of hygiene and health practices such as immunisation to reduce the transmission and severity of respiratory infections, practicing culturally safe care, and promoting and supporting nicotine and vaping cessation.

Paediatric respiratory physicians:

- **Conduct and interpret clinical, radiological, and laboratory investigations** for children presenting with a variety of respiratory issues and symptoms of sleep-disordered breathing, including lung function testing, polysomnography, and radiological imaging.
- **Diagnose and manage children in a variety of settings.** Paediatric respiratory physicians see patients with a wide range of respiratory diseases and conditions while working across several settings (including academic, public clinics and hospital, private clinics and hospital, and pulmonary function and scientific laboratories), situated in metropolitan and/or outreach communities, including telehealth environments.
- **Perform interventions** including oxygen therapy, non-invasive ventilation, aerosol therapy, and bronchoscopy.
- **Provide acute, longitudinal, transition, and end-of-life care.** Paediatric respiratory physicians establish long-term therapeutic relationships with children and their families, utilising a multidisciplinary approach. They work to manage and ease patient discomfort both acutely and in the practice of end-of-life care, and support young people in their transitions to adult care.
- **Apply a multidisciplinary approach.** Paediatric respiratory physicians are required to work effectively as part of a multidisciplinary team, including sharing care within a clinical care network for individual children. They may be called upon to be the team leader and have a collaborative approach focused on building caring networks and relationships.
- **Work sensitively with a variety of patients.** Paediatric respiratory physicians work with children and their carers to address determinants of health that affect them (including social and cultural determinants of health) and their access to needed health services or resources, providing education and support in a professional, empathic, and non-judgemental manner.
- **Demonstrate strong communication skills.** Paediatric respiratory physicians must develop a personable interviewing technique and an ability to relate to children, young people, and their carers. It is also essential that they appreciate when referral

to a more appropriate or more qualified practitioner in general paediatric and/or a particular subspecialty is necessary.

- **Manage resources for the benefit of patients and communities.** Paediatric respiratory physicians apply a biopsychosocial approach to ensure the delivery of efficient, cost-effective, and safe care for the benefit of their patients and communities (metro and regional).
- **Apply a scholarly approach.** Paediatric respiratory physicians conduct academic research to discover better ways of understanding, diagnosing, treating, and preventing disease in children and young people. They apply research to improve the treatment and management of children and young people.

Respiratory Medicine (Paediatrics & Child Health) 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 from paediatric to adult care 7. Acute paediatric respiratory care 8. Longitudinal care of patients with chronic respiratory conditions, from birth to the adolescent and young adult 9. Communication with patients and their parents / caregivers, and other health professionals 10. Prescribing 11. Procedures 12. Investigations
KNOW Knowledge guides	13. Scientific foundations of respiratory medicine 14. Acute respiratory care 15. Chronic respiratory care 16. Airways, chest wall, and breathing 17. Pulmonary and pleural disease 18. Interstitial and diffuse lung disease, vasculitides and systemic diseases

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 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 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 from paediatric to adult care</u>	Manage transitions of patient care from paediatric to adult medicine
7	<u>Acute paediatric respiratory care</u>	Assess and manage the care of acutely unwell paediatric respiratory patients
8	<u>Longitudinal care of patients with chronic respiratory conditions, from birth to the adolescent and young adult</u>	Manage and coordinate the longitudinal care of patients with complex respiratory conditions, including end-of-life
9	<u>Communication with patients and their parents / caregivers, and other health professionals</u>	Discuss diagnoses and management plans with patients, carers, families, health professionals, and other community members engaging with the health service
10	<u>Prescribing</u>	Prescribe therapies tailored to patients' needs and conditions
11	<u>Procedures</u>	Plan, prepare for, perform, and provide aftercare for important practical procedures
12	<u>Investigations</u>	Select, organise, and interpret respiratory investigations

Learning goal 2: Team leadership

Theme	Team leadership	
Title	Lead and/or work collaboratively with 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 teams across multiple health care settings • encourage and adopt insights from team members • act as a role model • conduct multidisciplinary case conferences 	
Behaviours		
Professional practice framework domain Medical expertise Communication Quality and safety	<p>Ready to perform without supervision</p> <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"> • 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 • 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 • demonstrate rapport with people at all levels by tailoring messages to different stakeholders • 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 • supervise team members in the development and conduct of clinical 	<p>Requires some supervision</p> <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"> • 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 • communicate adequately with colleagues • communicate adequately with patients, families, carers, and/or the public • respect the roles of team members • participate in audits and other activities that affect the quality and safety of patients' care • participate in multidisciplinary collaboration to provide effective health services and operational change • use information resources and electronic medical record technology where available

	<ul style="list-style-type: none"> audits, up to implementing changes based on findings and measuring the effect of such changes place patient and staff safety and quality of care first in all decision making 	
Teaching and learning	<ul style="list-style-type: none"> promote commitment to high quality teaching within the team and with learners that are attached to the team regularly self-evaluate personal professional development 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 learners' progress, providing regular assessments 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
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 demonstrate the ability to conduct a basic research project 	<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"> demonstrate culturally safe relationships with professional colleagues and patients promote and advocate 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 work effectively and respectfully with people from different cultural backgrounds
Ethics and professional behaviour	<ul style="list-style-type: none"> demonstrate ability to effectively manage own workload and prioritise concurrent tasks promote a team culture of shared accountability for decisions and outcomes encourage open discussions of ethical and clinical concerns respect differences of multidisciplinary team members 	<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

	<ul style="list-style-type: none"> understand the ethics of resource allocation by aligning optimal patient and organisational care effectively consult with stakeholders, and respect alternative views acknowledge personal conflicts of interest and unconscious bias act collaboratively to resolve behavioural incidents and conflicts such as harassment and bullying 	<ul style="list-style-type: none"> demonstrate understanding of the negative impact of workplace conflict
Judgement and decision making	<ul style="list-style-type: none"> evaluate health services and clarify expectations to support systematic and transparent decision making make decisions when faced with multiple and conflicting perspectives contribute 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 recognise limits of practice 	<ul style="list-style-type: none"> 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 centred care and/or population advice develop and lead effective multidisciplinary teams build effective relationships with multidisciplinary team members to achieve optimal outcomes ensure all members of the team are accountable for their individual practice actively promote, support, and advocate for improved wellbeing of colleagues and other health professionals 	<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 patient 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 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 lead the development and use of organisational policies and procedures 	<ul style="list-style-type: none"> understand methods used to allocate resources to provide high quality care demonstrate awareness of organisational policies and procedures

Learning goal 3: Supervision and teaching

Theme	Supervision and teaching	
Title	Demonstrate commitment to ongoing professional development and education of other health care practitioners	
Description	<p>This activity requires the ability to:</p> <ul style="list-style-type: none"> • demonstrate commitment to health professional education opportunities • provide work-based teaching in a variety of settings • teach and role model 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, such as trainees and medical students, in day-to-day work, providing timely and constructive feedback • support learners to prepare for assessments • role model commitment to lifelong learning and continuous professional development • reflect on and evaluate own teaching and supervision skills 	
Behaviours		
Professional practice framework domain	<p>Ready to perform without supervision</p> <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"> • combine high-quality care with high-quality teaching • explain the rationale underpinning a structured approach to decision making by participating in teaching on the run / bedside teaching • consider the views of patients, their family members, and/or carers during health consultations • consider the population health effect when giving advice • encourage learners to consider the rationale and appropriateness of investigations and management options • identify and support learners' strengths and areas for development and facilitate improvement, including learners' self-reflection 	<p>Requires some supervision</p> <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"> • teach learners using basic knowledge and skills • demonstrate accessible, supportive, and compassionate behaviour
Medical expertise		
Communication		

	<ul style="list-style-type: none"> actively encourage a collaborative and safe learning environment with learners and other health professionals provide learners with timely, clear, and constructive feedback, with suggestions on how to improve encourage learners to tailor communication as appropriate for different patients, such as younger or older people, and/or different populations support learners to deliver clear, concise, and relevant information in both verbal and written communication
Quality and safety	<ul style="list-style-type: none"> support learners to deliver quality care while maintaining their own wellbeing apply lessons learnt 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 (including obtaining informed consent and maintaining patient confidentiality) and organisations involved with education, and appropriately identify and action concerns
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 supervise professional development activities encourage self-directed learning and assessment for oneself and other learners 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

	<ul style="list-style-type: none"> support learners to identify and contribute to formal and informal learning opportunities recognise the limits of personal expertise, and involve others appropriately
Research	<ul style="list-style-type: none"> clarify junior colleagues' research projects' goals and requirements, and provide feedback on the merits or challenges of proposed research monitor the progress of learners' research projects regularly, and may review research projects prior to submission 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 in patients' management consider cultural, ethical, and religious values and beliefs in teaching and learning
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
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 communicating feedback to learners escalate concerns about learners appropriately, and keep appropriate documentation
	<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"> function effectively and respectfully when working with and teaching people from different cultural backgrounds
	<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
	<ul style="list-style-type: none"> provide general advice and support to learners use health data logically and effectively to investigate complex and/or uncertain diagnostic dilemmas

Leadership, management, and teamwork	<ul style="list-style-type: none"> ● maintain and encourage effective performances and continuing professional development ● maintain professional, clinical, research, and/or administrative responsibilities while teaching ● help to shape organisational culture to prioritise quality and work safety through openness, honesty, shared learning, and continued improvement ● create an inclusive environment in which learners feel part of the team 	<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
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 ● support collaboration and share resources in health professionals' education 	<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
Behaviours	
Professional practice framework domain	<p>Ready to perform without supervision 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"> regularly review patients or population health outcomes to identify opportunities for improvement in delivering appropriate care use standardised protocols / standard of care guidelines to adhere to best practice and ensure optimal outcomes where applicable demonstrate the ability to critically analyse relevant literature, and refer to evidence-based guidelines, and apply this to daily practice regularly monitor personal professional performance <p>The trainee may:</p> <ul style="list-style-type: none"> contribute to processes on identified opportunities for practice improvement use local guidelines to assist patient care decision making
Medical expertise	<p>Requires some supervision Possible behaviours of a trainee who needs some supervision to perform this activity</p> <ul style="list-style-type: none"> support patients to have access to, and use, high-quality, easy-to-understand information about health care obtain informed consent before undertaking any investigation, procedure, or therapy 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 organisations' open disclosure policy engage consumers in quality improvement activities
Communication	<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 during escalation and between transitions of care • participate in organisational quality and safety activities, including morbidity and mortality reviews, antimicrobial stewardship, review of clinical guidelines / action plans and protocols, root cause analysis, and clinical incident reviews • use clinical audits and registries of data on patients' experiences and outcomes, and learn from incidents and complaints to improve health care 	<ul style="list-style-type: none"> • demonstrate an understanding of a systematic approach to improving the quality and safety of health care • participate in systems for surveillance and monitoring of adverse events and 'near misses', including reporting such events • ensure that identified opportunities for improvement are raised and reported appropriately
Teaching and learning	<ul style="list-style-type: none"> • translate quality improvement approaches and methods into practice • supervise and manage the performance of junior colleagues in the delivery of safe, high-quality care 	<ul style="list-style-type: none"> • work within organisational quality and safety systems for the delivery of clinical care • participate in professional training in quality and safety to ensure a contemporary approach to safety system strategies
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 • participate in clinical research that aims to improve patient outcomes, where applicable 	<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 • demonstrate an understanding of the limitations of evidence and the challenges of applying research in daily practice • present critical analysis of relevant literature at departmental journal club meetings
Cultural safety	<ul style="list-style-type: none"> • undertake professional development opportunities that address the impact of cultural bias on health outcomes • apply frameworks and policies related to improving health care for Aboriginal and Torres Strait Islander and Māori peoples 	<ul style="list-style-type: none"> • communicate in a manner that is appropriate to patients' language and cultural needs • demonstrate commitment to improving cultural safety in your practice
Ethics and professional behaviour	<ul style="list-style-type: none"> • contribute to developing an organisational culture that enables and prioritises patients' safety and quality of care • demonstrate professional values, including compassion, empathy, respect for diversity, integrity, honesty, and partnership to all patients and health professionals 	<ul style="list-style-type: none"> • comply with professional regulatory requirements and codes of conduct • consider patients' (including young people's) / carers' capacity for decision making and consent, involving a proxy decision maker appropriately
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 minimise risk of harm, and promote multidisciplinary and interdisciplinary education programs actively involve clinical pharmacists in the medication-use process 	<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 that patients receive appropriate care and information on their care
Health policy, systems, and advocacy	<ul style="list-style-type: none"> support the development, implementation, evaluation, and monitoring of governance processes maintain a dialogue with service managers about issues that affect patient care help shape an organisational culture that prioritises safety and quality through openness, honesty, learning, and quality improvement contribute to the development of policies and protocols designed to protect patients and enhance health care (including health promotion policies and protocols), such as the development of resources and interventions to support smoking and vaping cessation for young people and carers in hospital and in the community 	<ul style="list-style-type: none"> contribute and adhere to relevant organisational policies and procedures

Learning goal 5: Clinical assessment and management

Theme	Clinical assessment and management	
Title	Clinically assess and manage the ongoing care of patients across multiple settings	
Description	<p>This activity requires the ability to:</p> <ul style="list-style-type: none"> identify and access sources of relevant information about patients across the range of ages, from birth to young people, in inpatient and outpatient tertiary hospitals, community settings, metropolitan and outreach, as well as telehealth methods obtain patient histories examine patients synthesise findings to develop provisional and differential diagnoses generate a management plan (including selecting, organising, undertaking, and interpreting relevant investigations) discuss findings with patients, families and/or carers present findings to other health professionals 	
Behaviours		
Professional practice framework domain	Ready to perform without supervision Expected behaviours of a trainee who can routinely perform this activity without needing supervision	Requires some 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"> elicit an accurate, organised, and problem-focused medical 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, including common and uncommon presentations, acute and chronic / complex conditions assess the severity of problems, the likelihood of complications, and clinical outcomes develop evidence-based management plans, and consider the balance of benefit and harm by taking patients' personal circumstances into account decide on the most appropriate investigations based on available evidence, minimising unnecessary and potentially harmful investigations where possible use the most appropriate methods to monitor chronic respiratory disease longitudinally 	<p>The trainee may:</p> <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

	<ul style="list-style-type: none"> oversee the perioperative care of patients having surgical procedures / interventions (e.g., bronchoscopy, insertion and management of pleural drains, insertion and management of IV access) manage patients where there are concerns for child maltreatment (in conjunction with other relevant agencies) 	
Communication	<ul style="list-style-type: none"> communicate openly, listen, and respond to patients, parents and carers' concerns seriously, and give them adequate opportunity to ask questions provide information to patients, family, or carers to enable them to make informed decisions from various diagnostic, therapeutic, and management options communicate clearly, effectively, respectfully, and promptly with other health professionals involved in patients' care communicate sensitively regarding diagnoses and management plans, such as genetic family disorders prepare timely and accurate communication in the form of letters and reports to disseminate relevant medical information to children and families, other health professionals, and other relevant agencies 	<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 accurately and thoroughly document clinical histories, examinations, investigations, impressions, and management plans in medical records
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 when not feasible (e.g., in some emergency / lifesaving situations) 	<ul style="list-style-type: none"> perform hand hygiene and take infection control precautions at appropriate moments take precautions against assaults from agitated patients, and ensure appropriate care of patients document history and physical examination findings, and synthesise with clarity and completeness ensure that patients are informed of the potential risks associated with any part of proposed management plans
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 and self-evaluate professional development 	<ul style="list-style-type: none"> deliver teaching considering learners' level of training where appropriate, obtain informed consent before turning clinical activities into teaching opportunities
Research	<ul style="list-style-type: none"> search for, find, compile, analyse, interpret, and evaluate information relevant to the research subject / clinical question 	<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 the evidence and

		the challenges of applying research in daily practice
Cultural safety	<ul style="list-style-type: none"> acknowledge patients' beliefs and values, and how these might impact on health demonstrate effective and culturally safe communication and care for Aboriginal and Torres Strait Islander and Māori peoples, and members of other cultural groups use health information resources that are culturally safe 	<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 (including young people's) and/or carers' capacity for decision making, and involve a proxy decision maker when appropriate 	<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, make logical and rational decisions, and act to achieve optimal patient outcomes consider comorbidity, uncertainty, and risk when making decisions about patient care use the best available evidence for the most appropriate 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 determine the need for referrals
Leadership, management, and teamwork	<ul style="list-style-type: none"> present and discuss complicated patients' cases with local medical and surgical teams and other members of the multidisciplinary team to determine clinical management work effectively as a member of multidisciplinary teams to achieve patients' best health outcomes 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"> demonstrate appropriate utilisation of local, regional, and national health services and systems participate in health promotion, disease prevention and control, screening, and reporting of notifiable diseases 	<ul style="list-style-type: none"> identify and navigate components of the health system relevant to patients' care identify and access relevant community resources to support patient care

- evaluate the cost versus benefit of investigations
- support and utilise innovations to ensure the delivery of equitable and quality health care, such as telehealth digitally integrated support services
- participate in health promotion and primary prevention activities and strategies to improve lung health in communities

Learning goal 6: Management of transitions from paediatric to adult care

Theme	Management of transitions from paediatric to adult care	
Title	Manage transitions of patient care from paediatric to adult medicine	
Description	<p>This activity requires the ability to:</p> <ul style="list-style-type: none"> assess the timing and risks in transition from paediatric to adult care assess patient, family, and/or carer readiness for transfer to adult care create goals of transition in care specific to patients and their care needs develop a transition plan in collaboration with patients, family, and/or carers, and the medical team summarise and document the clinical case for handover to the adult respiratory physician 	
Behaviours		
Professional practice framework domain	Ready to perform without supervision Expected behaviours of a trainee who can routinely perform this activity without needing supervision	Requires some 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"> assist patients from early adolescence to prepare for transfer to adult care at an appropriate age assess patients' health literacy and developmental readiness for the demands of the adult care setting assess adherence to treatment and monitoring plans outline the key components of a transitional care program and the differences between the cultures of paediatric and adult care services, including the role of the adult physician / GP evaluate environmental and lifestyle health risks, and advocate for healthy lifestyle choices anticipate, prevent, and manage changes in health status at the time of transfer adapt transition to meet individual patients' needs (e.g., if a patient has an intellectual disability) 	<p>The trainee may:</p> <ul style="list-style-type: none"> assess psychosocial issues that may affect health and/or access to adult health services identify the ways in which chronic respiratory conditions may impact on patients' lifestyles, such as contraception, pregnancy, employment, sport / leisure activities, and smoking / vaping / risk taking activities establish plans for ongoing care that include monitoring health status and managing adherence
Communication		<ul style="list-style-type: none"> assess patients' understanding of their illness and health care needs, and work with them to increase their understanding use communication skills and strategies to help patients make informed decisions recognise and explore the worries and concerns of adolescent and adult patients with chronic respiratory disease identify the need to shift responsibility for decision making from parents to

		<p>patients, and work with patients and their carer on planning this</p> <ul style="list-style-type: none"> communicate sensitively with adolescents and young adults recognise when it is appropriate to communicate with patients individually versus when it is appropriate to communicate with patients and their family members and/or carers discuss with patients the differences between paediatric and adult care, such as the involvement of the parent or carer in decisions for adult patients versus paediatric patients
Quality and safety		<ul style="list-style-type: none"> ensure patients are informed of risks associated with any part of proposed management plans use consent processes, including written consent if required, for the release and exchange of information <ul style="list-style-type: none"> document and provide handover of patient history with clarity and completeness
Teaching and learning		<ul style="list-style-type: none"> educate adolescents and young adults about their conditions and their impacts on their lives explain how patient education can empower young adults to take responsibility for their health
Cultural safety		<ul style="list-style-type: none"> use culturally safe health information resources to assist with the provision of health information to Aboriginal and Torres Strait Islander and Māori peoples discuss topics including sexuality and contraception sensitively and in line with the cultural and religious beliefs of patients
Ethics and professional behaviour		<ul style="list-style-type: none"> explain the role of GPs in patients' care
Judgement and decision making		<ul style="list-style-type: none"> identify the right time to start facilitating transition by considering the needs of individual patients and their family members or carers select the appropriate specialist to transition the patient to (e.g., GP, respiratory physician, metro versus outreach / regional) consider whether a paediatric or adult setting may be more appropriate to conduct procedures and/or investigations in young people
Leadership, management, and teamwork		<ul style="list-style-type: none"> recognise and work collaboratively with other health care providers, including allied health workers and psychologists ensure sufficient handover to all care providers (including primary care and community care providers), including robust notes to convey complex history and/or rationale for past decisions recognise the importance of the multidisciplinary team in the management of young people consider how to transition other specialties in which the patient is receiving care into adult care

**Health policy,
systems, and
advocacy**

- connect patients with local or online peer support groups
- contribute to the development of a written transition policy, which is a document that sets out principles, standards, and practices of how transitions are managed at the centre
- advocate for resources to support efficient and more effective transitions
- apply local and international guidelines around transitions in chronic respiratory disease

Learning goal 7: Acute paediatric respiratory care

Theme	Acute paediatric respiratory care	
Title	Assess and manage the care of acutely unwell paediatric respiratory patients	
Description	<p>This activity requires the ability to:</p> <ul style="list-style-type: none"> • recognise instability and medical acuity in clinical presentations • provide assessment and initial stabilisation of airways, breathing, and circulation • elicit histories, including relevant history, and perform relevant physical examinations • select and/or interpret appropriate investigations • develop and implement management plans • liaise with paediatric intensive care or neonatal intensive care units, retrieval services, and referral centres when appropriate • safely prepare and handover acutely unwell patients at change of shift or change in patient status or location • communicate with family and carers regarding acute situations and plans 	
Behaviours		
Professional practice framework domain	<p>Ready to perform without supervision 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"> • recognise and manage typical and atypical respiratory presentations • integrate and synthesise clinical information and results of investigations to assess clinical status • initiate and manage respiratory support, including oxygen therapy, high flow, and non-invasive and invasive ventilation (with the support of ICU physicians as required) • monitor respiratory status in the acute setting, including clinical observations, oximetry, capnography, and blood gases • manage patients with central venous access devices, PICCs, gastrostomy tubes, and other in situ medical devices, in liaison with other subspecialty teams 	<p>Requires some supervision 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"> • recognise deterioration, and know how to escalate treatment • perform the sequence of resuscitation as per established protocols • use appropriate tools for monitoring acutely unwell patients • develop management plans for immediate treatment • select and use diagnostic techniques to differentiate the underlying causes and precipitating factors of respiratory disease, and to evaluate respiratory status
Medical expertise		
Communication		<ul style="list-style-type: none"> • document information to outline the rationale for clinical decisions and action plans • convey information to families about diagnosis and prognosis clearly, compassionately, and in a timely manner • demonstrate communication skills to sufficiently support the function of multidisciplinary teams

	<p>and resuscitation to allow shared decision making</p> <ul style="list-style-type: none"> • explain procedures clearly to patients, families, and carers, including reasons for procedures, potential alternatives, and possible risks, to facilitate informed choices • accurately document procedures in the clinical notes, including informed consent, indication for procedures, medicines given, aseptic technique, difficulties encountered, and aftercare • support health professionals in remote settings to manage acutely unwell patients • support multidisciplinary teams to achieve the best health outcomes for acutely unwell patients 	
Quality and safety	<ul style="list-style-type: none"> • consider alternative strategies if complications arise or treatment is ineffective • participate in organisational quality and safety activities, including morbidity and mortality reviews and clinical incident reviews • document treatment given without consent in an emergency according to local guidelines 	<ul style="list-style-type: none"> • review and reassess acute management plans • comply with safety requirements of the health service
Teaching and learning	<ul style="list-style-type: none"> • demonstrate learning behaviour and skills when educating junior colleagues, and organise education and learning opportunities for colleagues and students • regularly reflect upon and self-evaluate professional development • where appropriate, obtain informed consent before turning clinical activities into teaching opportunities 	<ul style="list-style-type: none"> • self-reflect infrequently • set unclear goals and objectives for self-learning • participate in in-service training on new technology
Research	<ul style="list-style-type: none"> • lead and/or participate in clinical research that aims to improve patient outcomes, where applicable 	<ul style="list-style-type: none"> • refer to evidence-based clinical guidelines • search for and critically appraise the evidence to resolve clinical areas of uncertainty • demonstrate an understanding of the limitations of the evidence and the challenges of applying research in daily practice
Cultural safety	<ul style="list-style-type: none"> • take steps to help support Aboriginal and Torres Strait Islander and Māori peoples in a culturally safe way • negotiate health care decisions in a culturally appropriate way by considering variation in family 	<ul style="list-style-type: none"> • understand the impact of cultural and psychosocial perspectives of the family • practice cultural competency

		<ul style="list-style-type: none"> structures, cultures, religion, or belief systems consider cultural, ethical, and religious values and beliefs in leading multidisciplinary teams
	Ethics and professional behaviour	<ul style="list-style-type: none"> apply ethical principles to lifesaving treatments and patients' and families' rights to decide on care management, including withdrawal of care engage appropriate colleagues in decision making (e.g., when withdrawing care or continuing to provide care despite patient or parent wishes) hold information about patients in confidence, unless the release of information is required by law or public interest establish, where possible, patients' wishes and preferences about care consider discrepancies between parents' or carers' wishes and decisions around what is best for patients based on their personal comfort and life expectancy
	Judgement and decision making	<ul style="list-style-type: none"> determine the setting of care appropriate for patients' current care needs balance risk, effectiveness, and priority of intervention in the presence of multiple comorbidities and/or other features of case complexity reconcile conflicting advice from other specialties, and support shared clinical decisions in the presence of uncertainty use care pathways effectively, including identifying reasons for variations in care integrate best evidence and clinical expertise into decision making participate in decisions to admit, discharge, or transfer patients from the ICU recognise personal limitations, and seek help when required (including escalation of care) assess personal skill levels, and seek help with procedures when appropriate
	Leadership, management, and teamwork	<ul style="list-style-type: none"> collaborate effectively with staff in the emergency department, paediatric, and neonatal intensive care units, and other subspecialty inpatient units in the acute care of patients, as appropriate determine the need and timing of referrals to other physicians and surgeons check in and support team members' wellbeing and, where necessary, support psychological first aid and formal debriefing present patient cases to health care teams, and understand the respiratory management plans encourage an environment of openness and respect to lead effective teams determine the need and timing of referrals to other specialists (including general paediatricians and relevant adult health services)
	Health policy, systems, and advocacy	<ul style="list-style-type: none"> apply the principles of efficient and equitable allocation of resources to meet individual, community, and national health needs, balancing costs against outcomes collaborate with emergency medicine staff, general paediatric teams, and other colleagues to develop policies and protocols for the investigation and management of common acute presentations understand systems for the escalation of care for deteriorating patients understand the role of clinician leadership and advocacy in appraising and redesigning systems of care that lead to better patient outcomes apply knowledge of local protocols and resources

(including acute complications of chronic respiratory conditions)

- advocate for public health policies and strategies to promote lung health, such as climate change mitigation strategies and air pollution reduction policies, and education and interventions targeted at tobacco-free and nicotine-free environments

Learning goal 8: Longitudinal care of patients with chronic respiratory conditions, from birth to the adolescent and young adult

Theme	Management of respiratory conditions from birth to adolescence, including end-of-life care	
Title	Manage and coordinate the longitudinal care of patients with complex respiratory conditions, including transition and end-of-life care	
Description	<p>This activity requires the ability to:</p> <ul style="list-style-type: none"> • develop management plans in consultation with patients, their families, and/or carers • facilitate patients', families' and/or carers' self-management and self-monitoring • demonstrate problem-solving skills to manage chronic conditions, complications, disabilities, and comorbidities • liaise with other health professionals and team members to ensure continuity of care and smooth transition of care • engage with the broader health policy context, and responsibly use public resources • manage end-of-life care plans 	
Behaviours		
Professional practice framework domain	<p>Ready to perform without supervision 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"> • identify and address current clinical concerns as well as longer-term clinical objectives, as appropriate to patients' contexts • collaborate with other clinicians (such as general paediatric, other subspecialty, and/or adult clinicians) to optimise the care of patients from birth through to adolescence and young adult • create accurate and appropriately prioritised problem lists in clinical notes, or as part of ambulatory care reviews • provide documentation on patients' presentations, management, and progress, including key points of diagnosis and decision making • ensure that patients, families, and/or carers contribute to their need assessments and care planning • recognise and appropriately utilise all available modalities (including health innovations) to monitor disease status, health trajectories, treatment outcomes, effectiveness, and adverse events • review care goals and treatment plans with patients, family, and/or carers in a timely manner if significant changes in patients' 	<p>Requires some supervision 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"> • assess patients' knowledge, beliefs, concerns, and daily behaviours related to their chronic condition / disability and its management • contribute to medical record entries on histories, examinations, and management plans in an accurate and sufficient manner as a member of multidisciplinary teams
Medical expertise		

	<ul style="list-style-type: none"> conditions or circumstances occur (including consideration of end-of-life care plans) outline the key components of a transitional care program and the differences between the cultures of paediatric and adult care services, including the role of the adult physician / GP
Communication	<ul style="list-style-type: none"> encourage patients' access to self-monitoring devices and assistive technologies communicate with multidisciplinary team members, and involve patients in that dialogue help patients navigate the healthcare system by collaborating with other services, such as community health centres and consumer organisations, to improve access to care link patients to specific community-based health programs and group education programs identify opportunities to discuss end-of-life care, aligning it with patients', families' and/or carers' values and preferences identify appropriate timing of palliative care involvement
Quality and safety	<ul style="list-style-type: none"> maintain up-to-date certification using innovative models of chronic disease care (e.g., telehealth and digitally integrated support services) participate in quality improvement processes impacting on patients' ability to undertake normal activities of daily living 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 review all clinical incidents / deaths to determine the safety and quality of patients' care (including end-of-life care where relevant) and how it could be improved participate or support benchmarking through chronic disease registries
Teaching and learning	<ul style="list-style-type: none"> contribute to the development of clinical pathways for chronic diseases management based
	<ul style="list-style-type: none"> work in partnership with patients, and motivate them to comply with agreed care plans wherever practical, meet patients' specific language and communication needs facilitate appropriate use of interpreter services and translated materials recognise when it is appropriate to communicate with young people individually versus when it is appropriate to communicate with patients and their family members and/or carers discuss appropriate support and bereavement care with family or carers
	<ul style="list-style-type: none"> participate in continuous quality improvement processes and clinical audits on chronic disease management identify activities that may improve patients' quality of life address issues if patients' safety may be compromised employ a systematic approach to improving the quality and safety of health care participate in organisational quality and safety activities, including clinical incident reviews
	<ul style="list-style-type: none"> use clinical practice guidelines for chronic diseases management recognise the limits of personal expertise, and involve other

	<ul style="list-style-type: none"> on current clinical guidelines (national and international) educate patients to recognise and monitor their symptoms, and undertake strategies to assist their recovery evaluate own professional practice role model effective clinical care demonstrate learning behaviour and skills in educating junior colleagues contribute to the generation of knowledge maintain professional continuing education standards relevant to the profession recognise and support feelings of moral distress and burnout in self and colleagues 	<ul style="list-style-type: none"> professionals as needed to contribute to patients' care use information technology appropriately as a resource for modern medical practice encourage junior colleagues to participate in multidisciplinary case reviews, mortality and morbidity meetings and adverse event reviews
Research	<ul style="list-style-type: none"> prepare critical analysis of current literature on the management of chronic conditions to present at journal club meetings search for and critically appraise the evidence to resolve clinical areas of uncertainty 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"> search literature using Problem / Intervention / Comparison / Outcome (PICO) format recognise appropriate use of review articles refer to evidence-based clinical guidelines consult current research on clinical practice, including investigations and management
Cultural safety	<ul style="list-style-type: none"> apply knowledge of the cultural needs of the community serving and how to shape service to target the needs of the community provide culturally sensitive chronic disease management, and practice strengths-based holistic care mitigate the influence of own culture and beliefs on interactions with patients and decision making adapt practice to improve patient engagement and healthcare outcomes 	<ul style="list-style-type: none"> practice cultural competency identify when to use interpreters allow enough time for communication across linguistic and cultural barriers acknowledge the social, economic, cultural, and behavioural factors influencing health, both at individual and population levels

	<ul style="list-style-type: none"> encourage and support patients and, when relevant, their families or carers, in caring for themselves and managing their health in a respectful professional relationship share information about patients' health care, consistent with privacy laws and professional guidelines about confidentiality use consent processes for the release and exchange of health information 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 recognise the complexity of ethical issues related to human life and death, when considering the allocation of scarce resources 	<ul style="list-style-type: none"> share information between relevant service providers acknowledge and respect the contribution of health professionals involved in patients' care understand the responsibility to protect and advance the health and wellbeing of individuals and communities behave equitably towards all, irrespective of gender, age, culture, socioeconomic status, sexual preferences, beliefs, contribution to society, illness-related behaviours, or the illness itself maintain the confidentiality of documentation, and store clinical notes appropriately ensure that the use of social media is consistent with ethical and legal obligations respond appropriately to patients', family members', carers' or colleagues' distress or concerns
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 care journeys 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 available resources 	<ul style="list-style-type: none"> recognise personal limitations, and seek help in an appropriate way when required understand the appropriate use of human resources, diagnostic interventions, therapeutic modalities, and health care facilities
Leadership, management, and teamwork	<ul style="list-style-type: none"> use a multidisciplinary approach across services to manage patients with chronic diseases and disabilities develop collaborative relationships with patients, families, and/or carers, and a range of health professionals coordinate whole-person care through involvement in all stages of the patients' care journey prepare for and conduct clinical encounters in an organised and efficient manner work effectively as a member and/or a leader of multidisciplinary teams or other professional groups formulate strategies to respectfully negotiate plans in the best interest 	<ul style="list-style-type: none"> participate in multidisciplinary team care for patients with chronic diseases and disabilities, including organisational and community care, on a continuing basis appropriate to patient context attend relevant clinical meetings regularly ensure all important discussions with colleagues, multidisciplinary team members, and patients are appropriately documented communicate effectively with local service providers, primary care and other community organisations in planning and management of care, including referring and receiving health services

Health policy, systems, and advocacy

of the patient at times when there are differences in opinions between health professionals

- review discharge summaries, notes, and other communications written by junior colleagues
- support colleagues who raise concerns about patient safety
- facilitate an environment where all team members feel they can contribute and their opinion is valued
- support the wellbeing of team members

- assess alternative models of health care delivery to patients with chronic diseases and disabilities
- participate in initiatives for chronic diseases management to reduce hospital admissions, prevent deterioration, and improve patients' quality of life
- help patients access initiatives and services for patients with chronic diseases and disabilities
- 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
- consider location and urgency of care / treatment to ensure that, when feasible, it is provided as close as possible to home, and that travel to and within the networked services only occurs when essential, ensuring timely care access and the best possible outcomes
- effectively and safely utilise appropriate / approved digital technologies and systems to facilitate improved communication and access to care
- for the care of young people with cystic fibrosis, recommend and advocate for transition of care to specialised adult cystic fibrosis multidisciplinary clinics
- demonstrate awareness of initiatives and services available for patients with chronic diseases and disabilities, and knowledge of how to access these support
- identify common population health screening and prevention approaches

Learning goal 9: Communication with patients and their parents / caregivers, and other health professionals

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 for discussions, and include family or carers and other team members adopt a patient-centred perspective, including adjusting for age, cognition and disabilities select and use appropriate modalities and communication strategies structure conversations intentionally negotiate mutually agreed management plans verify patients', families' or carers' understanding of information conveyed develop and implement plans for ensuring actions occur deliver education to patients, families, carers, and health professionals at appropriate levels of understanding ensure conversations are documented 	
Behaviours		
<u>Professional practice framework</u> domain	Ready to perform without supervision Expected behaviours of a trainee who can routinely perform this activity without needing supervision	Requires some 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"> anticipate and be able to correct any misunderstandings patients may have about their conditions, care, and/or risk factors inform patients of all aspects of their clinical management and possible alternate approaches, including assessments and investigations, and give 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 provide safe and supportive expert advice for colleagues seeking tertiary respiratory paediatric opinions, (e.g., during phone consultations) 	<p>The trainee may:</p> <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 present a working diagnosis to colleagues, and a rationale for management plans formulate management plans in partnership with patients
Communication	<ul style="list-style-type: none"> use appropriate communication strategies and modalities for 	<ul style="list-style-type: none"> select appropriate modes of communication

Quality and safety	<ul style="list-style-type: none"> communication, such as face-to-face, email, phone calls, and digital health platforms elicit patients' views, concerns, and preferences, promoting rapport 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 management plans in their own words, to verify understanding convey information considerately and sensitively to patients, and seek 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 the young person to involve their family or carers in decisions about their care explain diagnoses, incidental findings, management, and long-term impacts to parents and carers utilise appropriate defusing and de-escalation strategies for angry patients / carers, prioritising safety for self and team members ensure appropriate documentation in medical records or other appropriate means of record keeping 	<ul style="list-style-type: none"> engage patients in discussions, avoiding the use of jargon check patients' understandings of information adapt communication styles in response to patients' age, developmental level, and cognitive, physical, cultural, socioeconomic, and situational factors see adolescents and young adults by themselves during part of the consultation utilise professional interpreters and other communication assistance means during every clinical encounter with patients who cannot communicate confidently or verbally in English at a level required for health understanding, and document this in medical records collaborate with patient liaison officers as required provide timely updates to patients and care providers when there is a change in plan or new result demonstrate active listening skills communicate patients' situations to colleagues, including senior clinicians
	<ul style="list-style-type: none"> discuss with patients their condition and available management options, including their potential benefits and harms apply the principles of informed consent, including the provision of information to patients in a way they can understand before asking for their consent consider capacity for decision making and consent, including children, young people or patients with cognitive disability recognise and take precautions where patients may be vulnerable, such as issues of child protection or self-harm participate in processes to manage patient complaints 	<ul style="list-style-type: none"> inform patients of the risks associated with proposed management plans treat information about patients as confidential

	<ul style="list-style-type: none"> provide education to peers, junior colleagues, and students, using appropriate language tailored to their level of knowledge and current learning needs obtain informed consent or other valid authority before involving patients in teaching provide appropriate and ongoing education for patients and carers, including verbal, written, and digital information reflect on communication interactions that did not go as expected, and demonstrate openness to feedback, continuous learning, and improvement 	<ul style="list-style-type: none"> respond appropriately to information sourced by patients, and to patients' knowledge regarding their condition
Teaching and learning	<ul style="list-style-type: none"> provide information to patients that is based on evidence-based clinical guidelines provide research information to patients that is based on guidelines issued by the National Health and Medical Research Council and/or Health Research Council of NZ apply the principles of informed consent by providing information to patients in a way they can understand before asking for their consent to participate in research understand when young people can consent for participation in research obtain informed consent or other valid authority before involving patients in research communicate any research findings to appropriate stakeholders, including patients' communities 	<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
Research		
Cultural safety	<ul style="list-style-type: none"> demonstrate effective and culturally safe 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 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 when necessary, use qualified language interpreters or cultural interpreters to help meet patients' communication needs
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 	<ul style="list-style-type: none"> respect the preferences of patients communicate appropriately, consistent with the context, and respect patients' needs and preferences

	<ul style="list-style-type: none"> 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 identify when it is appropriate to communicate with the patient versus their family or carer prioritise honesty, patient 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"> maximise patient autonomy, and support their decision making apply appropriate boundaries (e.g., 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, social and economic 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
<p>Leadership, management, and teamwork</p>	<ul style="list-style-type: none"> role model excellent communication with other health professionals and students communicate effectively with team members involved in patients' care, and with patients, families or carers, and other clinicians involved in patients' care in the community discuss medical assessments, treatment plans, and investigations with patients and primary care teams, and work collaboratively with them discuss patients' care needs with team members to align them with appropriate resources facilitate an environment in which all team members feel they can contribute and their opinion is valued formulate strategies to respectfully negotiate plans in the best interest of the patient at times when there are differences in opinions between health professionals 	<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
<p>Health policy, systems, and advocacy</p>	<ul style="list-style-type: none"> help patients navigate the healthcare system by working in collaboration with other services, such as community health centres and consumer organisations advocate for appropriate immunisations and vaccines while maintaining respect for the views and wishes of individual patients advocate for and support smoking and vaping cessation (in both young people and carers) through education and intervention where possible 	<ul style="list-style-type: none"> communicate with and involve other health professionals as appropriate

- effectively and safely utilise appropriate and approved digital technologies and systems to facilitate improved communication

Learning goal 10: 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, including immunisation history choose appropriate medicines based on an understanding of pharmacology, taking into consideration age, weight, comorbidities, potential drug interactions, risks, and benefits determine appropriate treatment regimens while weighing up risks versus benefits communicate with patients, families, and/or carers about the indications, benefits, and risks of proposed therapies provide instructions on treatment administration effects and side effects monitor medicines for efficacy and safety review medicines and interactions, and cease where appropriate collaborate with pharmacists apply knowledge and competency in prescribing new therapies
Behaviours	
Professional practice framework domain	<p>Ready to perform without supervision 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"> identify the patients' disorder requiring pharmacotherapy identify medicines that may cause a high risk of harm to children (including young women at child-bearing age) consider non-pharmacological therapies consider age, gestation, weight, chronic disease status, allergies, and potential drug interactions when prescribing demonstrate an awareness of, and mitigate, calculation errors optimise the use of antimicrobials with involvement with antimicrobial stewardship plan for follow up and monitoring demonstrate awareness of different formulations of common medications, and consider appropriate formulations and/or strengths for individual patients recognise the impacts of age and metabolism on the absorption, distribution, and excretion of medicines apply knowledge and competency in prescribing new drug therapies, changes in line with updates in guidelines and protocols, and <p>Requires some supervision 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"> be aware of potential side effects and practical prescription points, such as medication compatibility and monitoring in response to therapies appropriately, safely, and accurately select medicines for common conditions demonstrate an understanding of the rationale, risks and benefits, side effects, contraindications, dosage, and drug interactions identify and manage adverse events
Medical expertise	

	rationalising therapies with regular medication reviews	
Communication	<ul style="list-style-type: none"> discuss and evaluate the risk and benefits of treatment options, making decisions in partnership with patients and their parents and/or carers write clear, legible prescriptions in plain language, and include specific indications for the anticipated duration of therapy demonstrate dosing / drug delivery techniques and include written instructions / plans, and ask the parent or carer to demonstrate to confirm knowledge educate patients about the intended use, expected outcomes, and potential side effects for each prescribed medication, addressing the common and the rare but serious side effects at the time of prescribing, to improve patients' adherence to pharmacotherapy outline strategies to assist with children taking unpalatable medicines 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 	<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, including mg / kg / dose information and all legally required information seek further advice from experienced clinicians, pharmacists, or physiotherapists (for nebulised therapy) when appropriate
Quality and safety	<ul style="list-style-type: none"> review medicines regularly to improve compliance, 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, miscalculation, and poor handwriting consider available evidence and experience prior to prescribing new medications participate in clinical audits to improve prescribing behaviour, including an approach to 	<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 and reduce care burden exhibit awareness of potential financial support to assist patient access to medication (e.g., Health Care Card and Close The Gap scheme in Australia)

	<p>polypharmacy and prescribing cascade</p> <ul style="list-style-type: none"> report suspected adverse events to the Advisory Committee on Medicines, and record it in patients' medical records educate patients and families on nature and type of adverse events, including misconception of allergic reaction 	
Teaching and learning	<ul style="list-style-type: none"> use continuously updated software for computers and electronic prescribing programs role model how to ensure patients understand management plans, including adherence issues use appropriate guidelines and evidence-based medicine resources to maintain a working knowledge of current medicines, and keep up to date on new medicines, changes in the use of existing medications, and updates in guidelines 	<ul style="list-style-type: none"> undertake continuing professional development to maintain currency with prescribing guidelines and innovations in drug therapies reflect on prescribing and seek feedback from a supervisor
Research	<ul style="list-style-type: none"> critically appraise research material to understand the benefits and risks (including financial cost) of new medicines relative to medicines that have been on the market for longer 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"> use culturally safe health information resources to facilitate patient understanding of the benefits and risks of specific medications 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 	<ul style="list-style-type: none"> consider the efficacy of medicines in treating illnesses, including the relative

	<ul style="list-style-type: none"> » potential side effects » what it does » what it is for » when it should be stopped <ul style="list-style-type: none"> • make prescribing decisions based on good safety data when the benefits outweigh the risks involved • demonstrate understanding of the ethical implications of pharmaceutical industry marketing and funded research 	<ul style="list-style-type: none"> merits of different pharmacological and non-pharmacological options • follow regulatory and legal requirements and limitations regarding prescribing • follow organisational policies on 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 benefit patients • prescribe medicines appropriately to patients' clinical needs, in doses that meet their individual requirements, for a sufficient length of time, with the lowest cost to them • evaluate new medicines in relation to their possible efficacy, financial cost, and safety profile for individual patients 	<ul style="list-style-type: none"> • 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 » interactions » risk-benefit analysis • recognise personal limitations, and seek help in an appropriate way when required
Leadership, management, and teamwork	<ul style="list-style-type: none"> • interact with medical, pharmacy, and nursing staff to ensure safe and effective medicine use 	<ul style="list-style-type: none"> • work collaboratively with pharmacists and other relevant medical experts (e.g., infectious disease physicians in antibiotic stewardship) • 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 resources are used wisely for the benefit of patients • advocate for appropriate immunisations and vaccines while maintaining respect for the views and wishes of individual patients • advocate for and support smoking and vaping cessation interventions, including nicotine withdrawal therapies for young people and carers • advocate for equitable access to effective treatment available overseas or not currently subsidised by the government 	<ul style="list-style-type: none"> • prescribe in accordance with the organisational policy

Learning goal 11: Procedures

Theme	Procedures
Title	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"> ensure appropriate procedures are selected in partnership with patients, their families, and/or carers obtain informed consent set up equipment, maintaining an aseptic field (if required) perform procedures (if required) manage unexpected events and complications during and after procedures (if required) provide perioperative and aftercare for patients communicate aftercare protocols and instructions to patients and medical and nursing staff interpret results and outcomes of procedures, including bronchoscopy and reports communicate the outcome of procedures and associated investigations to patients, their families, or carers
Behaviours	
Professional practice framework domain	<p>Ready to perform without supervision Expected behaviours of a trainee who can routinely perform this activity without needing supervision</p> <p>Requires some supervision Possible behaviours of a trainee who needs some supervision to perform this activity</p>
Medical expertise	<p>The trainee will:</p> <ul style="list-style-type: none"> select procedures by assessing patient-specific factors, risks, benefits, and alternatives ensure team members are aware of all identified allergies / adverse reactions, and take precautions to avoid allergies / adverse reactions during procedures ensure patients have complied with pre-procedure preparations recognise and effectively manage complications arising during or after procedures recognise and correctly interpret normal and abnormal findings of diagnostic procedures consistently perform a range of procedures common to paediatric respiratory medicine, including flexible bronchoscopy establish the use of respiratory support, such as oxygen therapy and non-invasive ventilation (including high flow nasal cannulae oxygen)
Communication	<p>The trainee may:</p> <ul style="list-style-type: none"> assess patients and identify indications for procedures check for allergies and adverse reactions consider risks and complications of procedures interpret results of common diagnostic procedures organise and document postprocedure review of patients

	<ul style="list-style-type: none"> performed, reasons for procedures, medicines given, aseptic technique (if required), and aftercare explain procedures clearly to patients, families, and/or carers, including reasons for procedures, potential alternatives, and possible risks, to facilitate informed choices counsel patients sensitively and effectively, and support them to make informed choices address patients' and family or carers' concerns relating to procedures, providing opportunities to ask questions tailor language according to patients' age and capacity to understand communicate effectively with team members, patients, families, or carers prior to, during, and after procedures 	<ul style="list-style-type: none"> help patients, families, and/or carers to choose procedures communicate with members of procedural teams so all team members understand who each member is discuss postprocedural care with patients, families, or carers complete relevant patients' documentation, and conduct an appropriate clinical handover
Quality and safety	<ul style="list-style-type: none"> obtain informed consent or other valid authority before undertaking any procedure set up all necessary equipment for bronchoscopy, and consistently use universal precautions and aseptic technique confirm patients' identification and verify the procedure and, where appropriate, the correct site / side / level for the procedure ensure that information on patients' consent forms match procedures to be performed identify, document, and appropriately notify of any adverse event or equipment malfunction demonstrate principles of physician safety, such as infection control when performing bronchoscopies 	<ul style="list-style-type: none"> provide information in a manner so that patients, families, or carers are fully informed when consenting to procedures demonstrate an inconsistent application of aseptic technique identify patients using approved patients' identifiers before any treatment or intervention is initiated attempt to perform a procedure in an unsafe environment
Teaching and learning	<ul style="list-style-type: none"> refer to and/or be familiar with relevant published procedural guidelines prior to undertaking procedures provide specific and constructive feedback and comments to junior colleagues initiate and conduct skills training for junior staff 	<ul style="list-style-type: none"> participate in continued professional development help junior colleagues develop new skills actively seek feedback on personal technique until competent organise or participate in in-service training on new technology
Cultural safety	<ul style="list-style-type: none"> consider individual patients' cultural perceptions of health and illness, and adapt practice accordingly 	<ul style="list-style-type: none"> respect religious, cultural, linguistic, and family values and differences involve patient liaison officers where appropriate
Ethics and professional behaviour	<ul style="list-style-type: none"> understand institution / department protocols and ethical practices and guidelines around performing procedures 	<ul style="list-style-type: none"> perform procedures when adequately supervised follow procedures to ensure safe practice

	<ul style="list-style-type: none"> if required to perform procedures, do so in accordance with institution / department protocols and ethical practices and guidelines demonstrate knowledge of how respiratory-related procedures are performed in their institution identify appropriate proxy decision makers when required show respect for knowledge and expertise of colleagues maximise patient autonomy (for both young people and carers) in decision making
Judgement and decision making	<ul style="list-style-type: none"> 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 make clinical judgements and decisions based on available evidence select the most appropriate and cost-effective diagnostic procedures adapt procedures in response to assessments of risks to individual patients select appropriate investigations on the samples obtained in diagnostic procedures
Leadership, management, and teamwork	<ul style="list-style-type: none"> explain critical steps, anticipated events, and equipment requirements to teams on planned procedures provide staff with clear aftercare instructions, and explain how to recognise possible complications identify relevant management options with colleagues according to their level of training and experience to reduce error, prevent complications, and support efficient teamwork coordinate efforts, encourage others, and accept responsibility for work done
Health policy, systems, and advocacy	<ul style="list-style-type: none"> discuss serious incidents at appropriate clinical review meetings initiate local improvement strategies in response to serious incidents use resources efficiently when performing procedures

Learning goal 12: 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	<p>Ready to perform without supervision 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"> choose evidence-based investigations, and frame them as an adjunct to comprehensive clinical assessments weigh up the cost, risks, and potential benefits of investigations assess patients' and carers' concerns, and determine the need for tests that are likely to result in overall benefits develop plans for investigations, identifying their roles and timings assess additional needs and impacts of sedation or general anaesthesia needed for procedures or investigations for paediatric patients recognise and correctly interpret abnormal findings considering patients' specific circumstances, and act accordingly <p>The trainee may:</p> <ul style="list-style-type: none"> provide rationale for investigations understand the significance of abnormal test results and act on these consider patients' factors and comorbidities consider age-specific reference ranges for lung function interpretation
Medical expertise	
Communication	

	<ul style="list-style-type: none"> identify patients' and carers' concerns and expectations, and provide adequate explanations on the rationale for individual test ordering use written material, visual aids or other aids that are accurate and up to date to support discussions with patients and carers explain findings or possible outcomes of investigations to patients, families, or carers give information that patients and carers may find distressing in a considerate and culturally safe way 	
Quality and safety	<ul style="list-style-type: none"> identify adverse outcomes that may result from a proposed investigation, focusing on patients' individual situations 	<ul style="list-style-type: none"> consider safety aspects of investigations in planning seek help with interpretation of test results for less common tests or indications, or for unexpected results, when required
Teaching and learning	<ul style="list-style-type: none"> use appropriate guidelines, evidence sources, and decision-making support tools when selecting and interpreting investigations participate in clinical audits to improve test ordering strategies for diagnoses and screening provide education to peers, junior doctors, medical students, and/or other health professionals that is tailored to their level of knowledge and current learning needs 	<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 informed 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 and mitigate patients' and their families' 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 involve patient liaison officers where relevant
Ethics and professional behaviour	<ul style="list-style-type: none"> remain within the scope of the authority given by patients and carers, except in emergencies advise patients and carers when there may be additional costs, which patients may wish to clarify before proceeding discuss with patients and carers how decisions will be made once the investigation has started and 	<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 practice within current ethical and professional frameworks practice within own limits, and seek help when needed

	<ul style="list-style-type: none"> the patient is not able to participate in decision making respect patients' and carers' decisions to refuse investigations, even if their decisions may not be appropriate or evidence based demonstrate awareness of escalation mechanisms if decisions made by parents or carers pose the risk of harm to a minor (e.g., legal entities) explain expected benefits as well as potential burdens and risks of any proposed investigation before obtaining informed consent or other valid authority demonstrate awareness of complex issues related to genetic information obtained from investigations, and subsequent disclosure of such information 	<ul style="list-style-type: none"> involve patients in decision making regarding investigations, and obtain appropriate informed consent, including financial consent if necessary collaborate with other subspecialties, where appropriate, to ensure informed consent is provided to patients and their carers
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 or alternative tests are selected 	<ul style="list-style-type: none"> choose the most appropriate investigations 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 consistently communicate effectively, collaboratively, and respectfully with team members and other relevant health professionals involved in the investigation process ensure results are checked in a timely manner, and take responsibility for following up on results and communicating them to other clinicians, patients, family members, or carers 	<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, utility, safety, appropriateness, and cost consider resource utilisation through peer review of testing behaviours 	

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
13	<u>Scientific foundations of paediatric respiratory medicine</u>
14	<u>Acute respiratory care</u>
15	<u>Chronic respiratory care</u>
16	<u>Airways, chest wall, and breathing</u>
17	<u>Pulmonary and pleural disease</u>
18	<u>Interstitial and diffuse lung disease, vasculitides, and systemic diseases</u>

**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.

- Abnormal lung development:
 - » congenital lung disease
- Aerosol drug delivery:
 - » aerosol delivery through different interfaces, such as:
 - endotracheal tubes
 - facemasks
 - spacers
 - tracheostomies
 - » aerosol delivery through high flow, positive pressure (CPAP and BIPAP), and ventilator circuits
 - » mechanisms and adverse effects of aerosol treatments
 - » principles of aerosol delivery to the lungs
 - » principles of infection control in aerosol therapy
 - » principles of pressurised metered dose inhalers, dry powder inhalers, and nebulisers
- Air pollution, including active and passive smoking / vaping
- Biochemical abnormalities relevant to respiratory disease (e.g., pleural disease)
- Cellular and molecular biology as it pertains to respiratory disease
- Developmental immunology, immunology, and host defence mechanisms:
 - » acquired immunity
 - » antibody classes and function
 - » atopy
 - » cell mediated immunity
 - » humoral immunity
 - » hypersensitivity reactions
 - » innate immunity
 - » pulmonary defence mechanisms, particularly the role, makeup, and function of cilia, cough, and mucus
 - » vaccines and vaccine responses
- Developmental physiology of the respiratory system:
 - » infant pulmonary physiology
 - » physiology and development of the lung in the pre-term infant
 - » pulmonary physiology and pathophysiology
 - » the effects of early life lung disease on long term health
- Effect of altitude on lung disease
- Environment / Air quality and its impact on respiratory health outcomes
- Fluid and caloric requirements, including alternative types of feed (e.g., Monogen)
- Genetics of both common and rare but important respiratory conditions, such as cystic fibrosis and interstitial lung disease (ILD), and conditions that have comorbidities with respiratory disease, such as spinal muscular atrophy and Trisomy 21
- Influence of upper airway disease on the lower airway
- Methods for screening for exposure to environmental tobacco smoke, including urinary / salivary cotinine
- Microbiology and infectious disease as it pertains to respiratory disease
- Normal lung development:
 - » alveolisation, airspace septation, and microvascular maturation
 - » braking, grunting and lung protection strategies, airway closure and determination of end-expiratory level
 - » developmental changes in chest wall compliance

- » developmental strategies, including the Hering–Breuer inflation reflex and preferential nasal breathing
- » dysynaptic lung growth
- » embryologic development
- » growth factors
- » maturation of control of breathing
- » mechanics of breathing in an infant
- » ongoing developmental changes throughout childhood, including the effect of puberty and ageing
- » vasculogenesis
- Nutrition / Fluid management:
 - » normal growth
- Pharmacology:
 - » biologics in respiratory disease
 - » dosing and side effects
 - » drug-drug interactions / contraindications of medications
 - » effects of non-respiratory medications on the respiratory system
 - » formulations of medications
 - » mechanisms of action, including antibiotics, and recent therapeutic advances in respiratory health, such as biologics and CFTR modulators
 - » monitoring of drug levels
 - » pharmacodynamics
 - » screening for adverse effects
- Smoking and vaping:
 - » adverse effects on health
 - » specific effects on respiratory health
- Structure and function of the respiratory system
- The normal and abnormal structure and function of the components of the respiratory system:
 - » airways (upper and lower)
 - » alveoli (including type 2, Clara and goblet cells)
 - » chemoreceptors
 - » chest wall
 - » interpretation of oxygen saturation and blood gases
 - » interstitium
 - » physiology of ventilatory drive and gas exchange
 - » pulmonary vasculature
 - » respiratory control centres
 - » neural pathways (upper motor neuron and lower motor neuron)
 - » respiratory muscles
 - » smooth muscle and receptors
 - » the oxygen-haemoglobin dissociation curve

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

- Altitude simulation tests and assessment of fitness to fly
- Basic lung function tests, such as DLCO, lung volumes, and spirometry:
 - » clinical implications of test results
 - » clinical versus research role of the above investigations
 - » operator-dependant and patient-related issues
 - » reference values, including impact of reference values used on interpretation of results
 - » role of sedation in infant lung function testing
 - » technical aspects of tests, including limitations and data
- Blood gas and measures of gas exchange
- Cilia investigations, including:
 - » ciliary function testing
 - » electron microscopy for ciliary ultrastructure
 - » nasal nitric oxide
 - » primary ciliary dyskinesia (PCD) genotype

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.

- » newborn screening test
- Lung function tests that can be used in younger patients, such as multiple breath washout and forced oscillation testing
- More complex lung function tests, such as bronchial challenge tests and cardiopulmonary exercise tests
- Other tests:
 - » allergy and delayed hypersensitivity tests (in conjunction with allergy team)
 - » genetic investigations as pertains to respiratory conditions such as bronchiectasis, cystic fibrosis, ILD, and PCD
 - » immunological investigations
 - » sweat test and other functional tests for cystic fibrosis, such as faecal elastase
- Polysomnography, including diagnostic and pressure titration studies:
 - » the nature and limitations of abbreviated or limited channel sleep studies / gas exchange monitoring
- Radiological tests:
 - » bronchography
 - » chest CT scan
 - » chest x-ray
 - » contrast swallow tests
 - » echocardiography
 - » fluoroscopy
 - » MRI of the chest / dynamic imaging
 - » oesophageal manometry and pH monitoring
 - » scintigraphy / nuclear medicine tests
 - » ultrasonography, including point of care ultrasound
- Tests of respiratory muscle function (including maximal inspiratory and expiratory pressures, cough peak flow, and sniff nasal inspiratory pressure)

Procedures

- Bronchoscopy (flexible):
 - » anatomy of the lower airway
 - » anatomy of the upper airway
 - » bronchial anatomy, including lobar
 - » cytology and microbiology from bronchoalveolar lavage fluid
 - » management of intra- and postoperative complications
 - » normal anatomical variants of airway anatomy
 - » process of bronchoscopic intubation
 - » segmental anatomy including 3D anatomy
 - » the anaesthetic process and drugs used during bronchoscopy
 - » the processes for sterilisation and maintenance of bronchoscopic equipment
 - » visual appearance of congenital upper and lower airway lesions, such as bronchitis, haemangiomas, and tumours
- Pleural:
 - » diagnostic and therapeutic indications for pleural procedures
 - » indications for pleural procedures
 - » normal and abnormal anatomy of the pleura
 - » physiology and biochemistry of pleural fluid
 - » pleural anatomy and physiology
 - » potential complications
 - » procedural skills required
 - » procedure risks and benefits
 - » risks and benefits of each of the diagnostic / therapeutic interventions
 - » sedation, topical anaesthesia, and analgesia
 - » selection and assessment of patients for procedural intervention

IMPORTANT SPECIFIC ISSUES

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

- Consideration of research / education opportunities
- Critical analyses of literature relating to scientific foundations of paediatric respiratory medicine
- Keeping up to date with current literature and guidelines and advanced technology (including potential implementation of AI, recent advances in imaging and microbiomes as pertains to respiratory health) in paediatric respiratory medicine

KEY PRESENTATIONS AND CONDITIONS

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

Presentations

- Apnoeas and apparent life-threatening events (ALTEs)
- Chest pain
- Concerns about breathing during sleep
- Cough
- Dyspnoea
- Fatigue
- Fever
- Haemoptysis
- Hypoxia
- Respiratory distress (including in the newborn)
- Stertor
- Stridor
- Tachypnoea
- Wheeze

Conditions

- Acute aspiration lung disease
- Acute exacerbation of chronic lung conditions such as bronchiectasis, cystic fibrosis, neuromuscular disease / neuro-disability
- Acute respiratory distress syndrome
- Asthma flare-up
- Atelectasis
- Chylothorax
- Foreign body aspiration
- Haemothorax
- Lung infection, including (but not limited to):
 - » atypical and/or fungal infections
 - » bronchiolitis
 - » empyema
 - » influenzae, COVID, RSV, and other viral infections
 - » lung abscess
 - » pneumonia
- Pleural effusions
- Pneumothorax
- Pulmonary oedema
- Severe upper airways disease

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.

Presentations

- Acute respiratory deterioration of patient on ventilatory support (invasive or non-invasive)
- Antenatal or postnatal diagnosis of respiratory conditions (e.g., congenital diaphragmatic hernia, congenital lung malformations)
- Non-respiratory acute presentations of cystic fibrosis
- Respiratory deterioration in patients undergoing treatment for oncological or haematological conditions
- Respiratory distress in the patient with immune deficiency / immunosuppression
- Respiratory distress of the newborn or young infant
- Syncope

Conditions

- Acute lung injury:
 - » toxic inhalation including vaping (EVALI)
 - » trauma
- Congenital diaphragmatic hernia
- Congenital lung malformations
- Down syndrome
- Drowning
- Eosinophilic lung disease
- Hypersensitivity pneumonitis
- Interstitial lung disease
- Post-stem cell transplant
- Pulmonary disease associated with congenital heart disease
- Pulmonary hypertension
- Pulmonary vascular disease (including pulmonary arteriovenous malformation, vasculitides such as granulomatosis with polyangiitis)

EPIDEMIOLOGY, PATHOPHYSIOLOGY,

Epidemiology

- Asthma and preschool wheeze
- Bronchiolitis

AND CLINICAL SCIENCES

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

- Obstructive sleep apnoea (OSA) / sleep disordered breathing (SDB)
- Pneumonia
- Respiratory disease in Aboriginal and Torres Strait Islander and Māori peoples
- Smoking and e-cigarette use
- Sudden infant death syndrome / sudden unexpected infant death

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

- Basic lung function tests, such as DLCO, lung volumes, and spirometry:
 - » abbreviated or limited channel sleep studies
 - » polysomnography
- Radiological tests:
 - » airway fluoroscopy
 - » chest CT scan
 - » chest ultrasound
 - » chest x-ray
 - » contrast swallow tests
 - » nuclear medical tests

Procedures

- Aerosol delivery systems (with or without additional oxygen):
 - » potential complications, including infection control
 - » procedural skills
 - » risks and benefits
- Airway management, including emergency intubation
- Bronchoscopy (flexible versus rigid) for acute presentations
- Oxygen therapy:
 - » adverse effects
 - » assessment of ongoing therapy
 - » indications and guidelines for use
 - » oxygen delivery systems and their application:
 - different mask set-ups
 - nasal prongs, including humidified circuit and low flow versus high flow
- Pleural procedures:
 - » intercostal tube placement and drainage (large and small bore)
 - » needle thoracentesis (fluid and air)
 - » pleural ultrasound imaging
- Surgical procedures:
 - » intravascular line placement
 - » lung, lymph node, or lung mass biopsy, including radiologically guided
 - » thoracoscopy
 - » tracheostomy
- Ventilatory support in the acute setting:
 - » adverse effects
 - » assessment of ongoing therapy
 - » delivery systems
 - » different modalities for delivery ventilatory support
 - » indications and guidelines for use

IMPORTANT SPECIFIC ISSUES

- Acute management of pulmonary bleeding (mild to severe)
- Impact of climate change on respiratory health, including:
 - » directly promoting or aggravating respiratory diseases, such as asthma and respiratory infections

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

- » increasing exposure to risk factors for respiratory diseases, such as chemical air pollutants and effect on aeroallergens
- Radiation dose related to CT scans and other imaging techniques, and variation between different equipment and scanning protocols
- Smoking and vaping cessation strategies and interventions, including management of nicotine withdrawal in young people (both in the hospital and in the community)

**KEY PRESENTATIONS
AND CONDITIONS**

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

Presentations

- Apnoea
- Chest pain
- Concerns about breathing during sleep
- Cough
- Dyspnoea
- Haemoptysis
- Slow weight gain / Poor weight gain
- Stridor
- Syncope
- Tachypnoea
- Wheeze

Conditions

- Chronic airway disease:
 - » asthma and related conditions
 - » cystic fibrosis and related conditions
 - » primary ciliary dyskinesia (PCD)
 - » protracted bacterial bronchitis and chronic suppurative lung disease / bronchiectasis
- Chronic lung disease of prematurity
- Congenital diaphragmatic hernia
- Conditions relating to acute and chronic aspiration syndromes:
 - » feeding and swallowing disorders
- Conditions relating to lung injury
- Conditions relating to lung transplantation
- Conditions relating to stem cell transplantation
- Congenital lung malformations, including:
 - » bronchial atresia
 - » bronchogenic cyst
 - » bronchopulmonary sequestration
 - » congenital cystic pulmonary airway malformation
 - » congenital lobar emphysema
- Diseases of the chest wall, spine, and respiratory muscles, including neurodisability
- Disorders of breathing during sleep:
 - » non-obstructive
 - » obstructive
- Disorders of the pleural space, including (but not limited to):
 - » chylothorax
 - » pneumothorax
- Disorders of the pulmonary circulation, including (but not limited to) pulmonary hypertension
- Environmental lung diseases
- HIV / AIDS and its pulmonary manifestations
- Interstitial and diffuse lung disease of childhood (chILD)
- Newborn respiratory disorders
- Obliterative bronchiolitis
- Other orphan lung diseases
- Paediatric thoracic tumours

- Pleuropulmonary manifestations of systemic disease and extrapulmonary disorders
- Pulmonary complications on the intensive care unit
- Pulmonary conditions relating to hypereosinophilia
- Pulmonary disorders in the immune-compromised host (excluding HIV / AIDS)
- Pulmonary infections:
 - » bacterial
 - » fungal
 - » mycobacterial
 - » parasitic
 - » viral
- Pulmonary haemorrhage syndromes and venous thrombo-embolic disease
- Respiratory complications of congenital heart disease
- Respiratory disorders related to syndrome / genetic conditions (e.g., Down syndrome, VACTRL)
- Tracheoesophageal fistula

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

- Capnography
- Longitudinal monitoring of chronic respiratory disease
- Lung function testing (all the different modalities in clinical practice)
- Overnight oximetry
- Sleep study

Procedures

- Aerosol delivery systems:
 - » correct use of different aerosol delivery systems
- Airway management:
 - » indications
 - » management risks and benefits
 - » potential complications
 - » procedural skills required (e.g., nasopharyngeal airways)
 - » strategies for decannulation
 - » tracheostomy care
- Chest physiotherapy and airway clearance techniques:
 - » basics of the different airway clearance techniques
 - » different airway clearance devices
 - » indications for chest physiotherapy / airway clearance
 - » medications which improve mucociliary clearance
 - » potential complications
 - » risks and benefits, including infection control consideration
 - » the role of exercise, vibrating vest devices, and cough-augmentation devices
- Long-term venous access:
 - » indications, benefits, and risks of long-term venous access
 - » long lines, central venous lines, peripherally inserted central catheters, and total implanted venous access devices
 - » management of complications
 - » management of long-term venous lines
 - » potential complications
 - » risks and benefits of long-term venous access
- Lung transplant (with appropriate lung transplant physician support):
 - » absolute and relative contra-indications for referral
 - » indications for, and interpretation of, transbronchial biopsy
 - » indications for referral for consideration of lung transplantation

- » issues relating to lung transplantation, including immunosuppression and complications (such as infection, malignancy, and renal disease)
- Oxygen therapy
- Smoking / vaping cessation (or appropriate referrals):
 - » concept of motivational interviewing techniques
 - » potential complications
 - » principles of smoking / vaping cessation for adolescents and adults
 - » risks and benefits of various strategies
 - » strategies to minimise exposure to environmental tobacco smoke / vapes
 - » understanding different smoking / vaping cessation strategies (pharmacological and non-pharmacological)
- Ventilatory support in the chronic setting:
 - » different ventilatory strategies
 - » how to apply a mask and head gear to a child
 - » how to apply the principles of ventilation and adjustment of non-invasive ventilation (NIV) and continuous positive airway pressure (CPAP) settings
 - » how to monitor patient progress including compliance
 - » indications and limitations for ventilatory support interventions
 - » initiation, monitoring, and weaning
 - » intervention risks and benefits
 - » invasive ventilation
 - » NIV:
 - bi-level non-invasive ventilation (Bi-level NIV)
 - CPAP
 - high flow nasal cannula oxygen therapy (HFNC)
 - » potential complications
 - » the functioning of, and indications for, a variety of face masks use and management of humidification circuits in NIV

IMPORTANT SPECIFIC ISSUES

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

- Consideration of cultural safety, and advocating for promotion of culturally safe health practices and management
- Cystic fibrosis modulator therapies, and potential alternative therapies for those not eligible for modulator therapies
- Impact of climate change on respiratory health, including:
 - » directly promoting or aggravating respiratory disease, such as asthma and respiratory infections
 - » increasing exposure to risk factors for respiratory diseases, such as chemical air pollutants and effect on aeroallergens
- Increased life expectancy of patients with cystic fibrosis, and hence consideration of potential complications in people with cystic fibrosis, such as:
 - » cardiovascular complications
 - » gastrointestinal cancer
 - » impacts of cystic fibrosis on pregnancy and fertility
 - » mental health and wellbeing
- Radiation dose related to CT scans and other imaging modalities, and variation between different equipment and scanning protocols
- Smoking and vaping cessation strategies and interventions, including management of nicotine withdrawal in young people (both in hospital and community settings)
- Use of biological agents in asthma and other respiratory diseases

KEY PRESENTATIONS AND CONDITIONS

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

Presentations
Lower airways

- Chest pain
- Cough
- Decrease in exercise capacity
- Dyspnoea (at rest and/or with exertion)
- Haemoptysis
- Respiratory distress (including in the newborn)
- Tachypnoea
- Wheeze

Other generalised symptoms

- Fatigue
- Fever
- Slow weight gain
- Syncope

Sleep disorders

- Apnoea during sleep
- Brief resolved unexplained event (BRUE) / Apparent life-threatening events (ALTEs)
- Daytime somnolence
- Disrupted sleep, including concerns about development or academic performance / daytime behaviour in the context of sleep-related symptoms
- Sleep-related hypoventilation, including congenital central hypoventilation syndrome
- Snoring and concerns about obstructive sleep-disordered breathing

Upper airway

- Cough
- Stertor
- Stridor

Conditions

Chest wall and breathing

- Chest wall deformity, including pectus excavatum
- Conditions affecting the chest wall
- Neuromuscular disease
- Scoliosis

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

Lower airways

- Allergic bronchopulmonary aspergillosis (ABPA)
- Aspiration syndromes
- Asthma
- Churg–Strauss syndrome
- Congenital airway anomalies:
 - » Suis bronchus
- Cystic fibrosis (CF)
- Drowning / Near drowning
- Eosinophilic pneumonias (acute, chronic, and drug-induced)
- Foreign body inhalation
- Idiopathic hypereosinophilic syndrome
- Inhalation lung disease, including EVALI
- Non-CF bronchiectasis
- Obliterative bronchiolitis
- Primary ciliary dyskinesia (PCD)
- Protracted bacterial bronchitis
- Recurrent aspiration / gastroesophageal reflux
- Simple pulmonary eosinophilia (Loffler syndrome)
- Trachea / bronchomalacia
- Trachea-oesophageal fistula

Sleep

- Conditions causing central sleep-disordered breathing, including sleep hypoventilation syndromes / obesity hypoventilation
- Conditions causing obstructive sleep-disordered breathing
- Seizure disorders

Upper airways

- Acute conditions
- Adenoid / tonsillar hypertrophy / nasal turbinate hypertrophy
- Allergic rhinitis
- Choanal atresia
- Chronic conditions
- Congenital malformations of the upper respiratory tract
- Croup
- Diphtheria
- Epiglottitis
- Foreign body in airway
- Laryngeal cleft

- Laryngeal web
- Laryngomalacia
- Retropharyngeal abscess
- Sub-glottic stenosis
- Syndromes that affect the upper airway anatomy, such as:
 - » craniofacial condition
 - » Crouzon syndrome
 - » Pierre Robin sequence
- Tonsillitis
- Tracheitis
- Tracheoesophageal fistula
- Tracheomalacia
- Vocal cord palsy

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 Chest wall and breathing

- Central respiratory drive:
 - » congenital or acquired
- Upper motor neuron:
 - » cerebral palsy
 - » hemiplegia
 - » quadriplegia
- Lower motor neuron:
 - » Guillain–Barré syndrome
 - » phrenic nerve palsy or paralysis
 - » poliomyelitis
 - » spinal muscular atrophies
 - » tetanus
 - » traumatic nerve injury
- Neuromuscular junction:
 - » botulism
 - » congenital myasthenic syndromes
 - » drugs
 - » myasthenia gravis
- Respiratory muscles:
 - » congenital myopathies
 - » eventration and other diaphragmatic malformations
 - » metabolic myopathies
 - » muscular dystrophy
 - » steroid myopathy
- Non-muscular, chest wall structures:
 - » congenital rib cage abnormality
 - » connective tissue disease
 - » giant exomphalos
 - » obesity
 - » thoracic burns

EPIDEMIOLOGY, PATHOPHYSIOLOGY, AND CLINICAL SCIENCES

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

- Developmental changes in chest wall compliance, and effects of chest wall pathology on respiratory mechanics
- Knowledge of known sudden infant death syndrome risk factors (including social and family factors)
- Mechanics of breathing in an infant, child, and adolescent
- The normal and abnormal structure and function of the components of the respiratory system in relation to respiratory muscles (including neural mechanisms), chest wall, and airways (upper and lower)

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

- Additional investigations for ALTE (non-respiratory):
 - » assessments for gastroesophageal reflux disorder
 - » electrocardiography, echocardiography, and Holter monitoring
 - » electroencephalography
 - » home apnoea monitors and home oxygen saturation monitoring
- Allergy testing
- Polysomnography (diagnostic and pressure titration study), and measurement of gas exchange
- Radiological imaging studies for assessment of airway (e.g., dynamic imaging and lateral neck x-ray)
- Radiological imaging studies for patients presenting with haemoptysis, including angiography and bronchial artery embolisation
- Respiratory function testing for assessment of airway and functions, such as forced oscillation technique and multiple breath washout
- Respiratory muscle strength testing (non-invasive and invasive), including maximal inspiratory and expiratory pressures and peak cough flow
- Spirometry, plethysmography, exhaled nitric oxide, and bronchial provocation testing

Procedures

- Bronchoscopy (flexible versus rigid) and laryngobronchoscopy
- Corrective surgery for chest wall deformities / spinal deformities
- Non-invasive ventilatory support
- Surgical intervention for airway abnormalities, including adenotonsillectomy

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.

- Evolving treatment for children with neuromuscular disease (e.g., gene therapy and its impact on the respiratory functions of children with neuromuscular disease)
- NIV procedures for sleep-disordered breathing / airway management and utilisation of remote monitoring
- Perioperative multidisciplinary assessment for children requiring surgical intervention for chest wall abnormalities / spinal deformities
- Social and cultural factors that may affect the management of children with these disorders, including cultural safety

Learning goal 17 – Pulmonary and pleural disease

Advanced Training in Respiratory Medicine
(Paediatrics & Child Health)

KEY PRESENTATIONS AND CONDITIONS

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

Presentations

- Acute respiratory distress syndrome (ARDS)
- Chest pain
- Cough
- Fever
- Shortness of breath

Conditions

- Pulmonary manifestations of cystic fibrosis
- **Acute lung injury**
 - Barotrauma
 - Chest trauma
 - Drug-induced injury / disease (including illicit drugs)
 - Other inhalation injuries (e.g., EVALI)
 - Radiation
 - Thermal – smoke inhalation and burns
- **Infections**
 - Community acquired pneumonia (CAP)
 - Extra-pulmonary tuberculosis (TB)
 - HIV / AIDS
 - Latent TB infection
 - Lung abscess:
 - » cryptococcal disease
 - » fungal infection
 - » other
 - Mycoplasma and other atypical infections (e.g., Legionella)
 - Non-tuberculous mycobacterial diseases
 - Nosocomial pneumonia
 - Para-pneumonic effusion and empyema
 - Parasitic infection:
 - » ascaris
 - » echinococcus
 - » strongyloides
 - Pertussis
 - Pulmonary TB
 - TB in the immunocompromised host
 - Upper and lower respiratory tract infections

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

- Ventilator-associated pneumonia
- Viral infection (including epidemic e.g., influenza, SARS, COVID), RSV

Neonatal conditions

- Bronchopulmonary dysplasia / Chronic lung disease of prematurity
- Hyaline membrane disease
- Meconium aspiration
- Pulmonary interstitial emphysema
- Surfactant protein deficiency
- Transient tachypnoea of newborn

Pleural disease

- Chylothorax
- Empyema
- Haemothorax
- Pleural effusions
- Pneumothorax:
 - » secondary
 - » spontaneous

Thoracic lesions, nodules, and masses

- Benign tumours
- Congenital malformations of the lower respiratory tract and lungs
- Malignant (primary, secondary, and metastatic)
- Mediastinal cysts and tumours

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

- Cardiovascular disease that affects the lung:
 - » congenital heart disease
 - » pulmonary hypertension
 - » pulmonary oedema

EPIDEMIOLOGY, PATHOPHYSIOLOGY, AND CLINICAL SCIENCES

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

- Anatomical relationships of pulmonary structures and congenital defects
- Current classifications of congenital pulmonary airway malformation and management issues (e.g., potential association with lung malignancy)
- Knowledge of other congenital lung malformation, including bronchopulmonary sequestration, bronchial atresia, and congenital lobar emphysema
- Liaison with neurodevelopmental services
- Management:
 - » acute management principles
 - » options for long-term care, particularly:
 - home oxygen
 - identification of other sequelae
 - nutrition
 - » options for patent ductus arteriosus (PDA) management
 - » role and use of surfactant
 - » role of steroids and diuretics
 - » ventilation strategies, including high frequency oscillation (HFO) and extracorporeal membrane oxygenation (ECMO)
 - » use of nitric oxide (NO) and other strategies in the management of pulmonary hypertension

Approach

- Age-appropriate differential diagnosis of infective causes, including newborn, preschool, and school-aged child
- Differential diagnosis of non-infective causes
- Management:
 - » investigation and management of acute, recurrent, persistent, and atypical pneumonia
 - » long-term sequelae of RSV, adenovirus, mycoplasma, and bronchiolitis obliterans
 - » management options for allergic bronchopulmonary aspergillosis (ABPA)
 - » public health issues, including infection control guidelines, cohorting, smoking / vaping prevention and cessation, and climate change mitigation strategies
 - » relevant microbiology and choice of appropriate antibiotics
 - » role of immunological investigations
 - » the investigation and management of typical versus atypical croup
 - » treatment of community- and hospital-acquired pulmonary infections, including ventilator-associated pneumonia
 - » vaccination

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

- Blood tests:
 - » blood count and inflammatory markers
 - » blood cultures
 - » blood tests to identify potential infectious source (e.g., pneumonia serology, strep, and TB)
 - » screening tests for potential underlying primary immunodeficiency
 - » sterile site PCR (e.g., blood, CSF, and pleural fluid)
- Investigations of pleural fluid / sputum / bronchoalveolar lavage, including microbiome investigation
- Radiological tests:
 - » chest CT scan
 - » chest x-ray
 - » nuclear studies

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.

Procedures

- Home oxygen prescription
- Identification and utilisation of community services and support (NDIS and other government funding facility for equipment)
- Insertion of chest drains
- Interpretation of blood gases
- Interpretation of radiological investigations
- Ventilation – invasive and non-invasive ventilation strategies

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.

- Appropriate timing to involve ENT and thoracic surgeons
- Identification and management of congenital malformations in the context of a child with a syndrome
- Impact of climate change on respiratory health, including:
 - » directly promoting or aggravating respiratory disease, such as asthma and respiratory infections
 - » increasing exposure to risk factors for respiratory diseases, such as chemical air pollutants and effect on aeroallergens
- Management of empyema, including administration of thrombolytics / fibrinolytics or appropriate referral for surgical intervention
- Management of TB in the immunocompromised host
- Occupational health and safety issues for staff treating patients with HIV / AIDS or TB
- Relevant public health legislation
- Role of flexible bronchoscopy / bronchoalveolar lavage
- Role of TB clinics, including contact tracing and screening
- Ventilatory strategies for congenital malformations / congenital diaphragmatic hernia

KEY PRESENTATIONS AND CONDITIONS

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

Conditions

Diffuse lung disease

- Disorders of infancy:
 - » acinar dysplasia
 - » alveolar capillary dysplasia with misalignment of pulmonary veins
 - » congenital alveolar dysplasia
 - » diffuse developmental disorders
- Growth abnormalities:
 - » associated with chromosomal abnormalities (e.g., Trisomy 21)
 - » associated with congenital heart disease in chromosomally normal children
 - » chronic lung disease of prematurity / bronchopulmonary dysplasia (BPD)
 - » pulmonary hypoplasia
- Surfactant dysfunction disorders and related abnormalities:
 - » neuroendocrine cell hyperplasia of infancy (NEHI)
 - » pulmonary alveolar proteinosis
 - » pulmonary interstitial glycogenosis
 - » specific conditions of less well understood aetiology
 - » surfactant dysfunction disorders:
 - ABCA3 genetic mutations
 - Sp-B genetic mutations
 - Sp-C genetic mutations

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

Disorders of the normal host

- Acute interstitial pneumonia / idiopathic diffuse alveolar damage
- Disorders related to environmental agents:
 - » hypersensitivity pneumonia
 - » toxic inhalation (including vaping)
- Eosinophilic pneumonias
- Idiopathic pulmonary haemosiderosis
- Infectious and postinfectious processes:
 - » postinfectious airway injury, ranging from mild airway fibrosis to constrictive / obliterative bronchiolitis with and without preceding history of viral respiratory infection
- Nonspecific interstitial pneumonia

Other systemic diseases that influence the respiratory system

- Acquired immunodeficiencies
- Congenital immunodeficiencies
- Drug-induced disease
- Graft versus host disease
- Haematological disease (including sickle cell disease)
- Post-lung transplant management
- Post-stem cell transplantation immunodeficiency
- Rheumatoid and connective tissue disorders

Vasculitides

- Pulmonary embolism
- Vasculitis (including capillaritis, small, medium, and large vessel disease)
- Veno-occlusive disease

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.

Disorders masquerading as interstitial disease

- Alpha 1 antitrypsin deficiency
- Arterial hypertensive vasculopathy
- Congestive vasculopathy, including veno-occlusive disease
- Lymphatic disorders (lymphangiectasis and lymphangiomatosis)
- Thromboembolic disease

Disorders of the immunocompromised host

- Disorders related to solid organ, lung, and stem cell transplantation, and rejection syndromes:
 - » graft versus host disease
 - » post-transplant lymphoproliferative disorder
- Disorders related to therapeutic intervention:
 - » chemotherapeutic and/or radiation injury
 - » drug hypersensitivity
- Lymphoid infiltrates related to immune compromise
- Nonspecific lymphoproliferation:
 - » malignant
 - » with lymphoid hyperplasia
 - » with poorly formed granulomas
- Opportunistic infections (e.g., pneumocystis)

Disorders related to systemic disease processes

- Immune-mediated disorders:
 - » acquired pulmonary alveolar proteinosis / autoantibody to GM-CSF
 - » Goodpasture syndrome
 - » lymphoproliferative disease
 - » nonspecific airway changes, including:
 - lymphocytic bronchiolitis
 - lymphoid hyperplasia
 - mild constrictive changes
 - » nonspecific interstitial pneumonia
 - » organising pneumonia

- » other manifestations of collagen-vascular disease
- » pulmonary hemorrhage syndromes
- » pulmonary vasculitis syndromes
- Nonimmune-mediated systemic disorders:
 - » Langerhans cell histiocytosis
 - » malignant infiltrates
 - » sarcoidosis
 - » storage disease

EPIDEMIOLOGY, PATHOPHYSIOLOGY, AND CLINICAL SCIENCES

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

- Basic histopathology of:
 - » chronic pneumonitis of infancy
 - » desquamative interstitial pneumonitis
 - » nonspecific interstitial pneumonia
 - » pulmonary alveolar proteinosis

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

- Basic histopathology of interstitial and diffuse lung disease of childhood (chILD)
- Blood tests for diagnosis of immunodeficiency / immune mediated disorder / non-immune mediated systemic disorder
- Diagnostic imaging including chest x-ray, CT, and MRI
- Genetic testing where appropriate, e.g., chILD

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.

- Clear communication between the surgeon, physician, and pathologist in relation to lung biopsy
- Differential diagnosis of infection versus rejection in the post-transplant setting
- Genetic diagnostic technique, the role of the geneticist, and the importance of genetic counselling
- Informed consent required from patients, families and carers
- The role of the international community of practice when managing rare diseases
- The role of the multidisciplinary team when managing rare disease

- Timing of lung biopsy in the diagnosis of chILD
- Transbronchial biopsy techniques