INSTITUTE OF MEDICINE

ROYAL COLLEGE OF PHYSICIANS OF IRELAND

INTERNATIONAL CLINICAL FELLOWSHIP TRAINING IN

RESPIRATORY MEDICINE

Outcome Based Education Curriculum

This curriculum of training in Respiratory Medicine was developed in 2022 by Dr Cedric Gunaratnam and Dr David Curran and undergoes an annual revision by Dr David Curran, Dr Emer Kelly, National Specialty Directors, and by the RCPI Education Department. The curriculum is approved by the Respiratory Training Committee and by the Institute of Medicine.

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1.0	July 2024	Mariangela Esposito	No edits

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Introduction

The International Clinical Fellowship Programme (ICFP) provides a route for overseas doctors wishing to undergo structured and advanced postgraduate medical training in Ireland. The ICFP enables suitably qualified overseas postgraduate medical trainees to undertake a fixed period of active training in clinical services in Ireland.

The purpose of the ICFP is to enable overseas trainees to gain access to structured training and in active clinical environments that they cannot get in their own country, with a view to enhancing and improving the individual's medical training and learning and, in the medium to long term, the health services in their own countries.

This Programme will allow participants to access a structured period of training and experience as developed by the Royal College of Physicians of Ireland to specifically meet the clinical needs of participants as defined by their home country's health service.

Aims

Upon satisfactory completion of the ICFP, the doctor will be **competent** to undertake comprehensive medical practice in their chosen specialty in a **professional** manner, in keeping with the needs of the healthcare system.

Competencies, at a level consistent with practice in the specialty, will include the following:

- Patient care that is appropriate, effective and compassionate dealing with health problems and health promotion.
- Medical knowledge in the basic biomedical, behavioural and clinical sciences, medical ethics and medical jurisprudence and application of such knowledge in patient care.
- Interpersonal and communication skills that ensure effective information exchange with individual patients and their families and teamwork with other health professionals, the scientific community and the public.
- Appraisal and utilisation of new scientific knowledge to update and continuously improve clinical practice.
- Capability to be a scholar, contributing to development and research in the field of the chosen specialty.
- Professionalism.
- Ability to understand health care and identify and carry out system-based improvement of care.

Professionalism

Medical professionalism is a core element of being a good doctor. Good medical practice is based on a relationship of trust between profession and society, in which doctors are expected to meet the highest standards of professional practice and behaviour. It involves partnership between patient and doctor that is based on mutual respect, confidentiality, honesty, responsibility and accountability. In addition to maintaining clinical competence, a doctor should also:

- Show integrity, compassion and concern for others in day-to-day practice
- Develop and maintain a sensitive and understanding attitude with patients
- Exercise good judgement and communicate sound clinical advice to patients
- Search for the best evidence to guide professional practice
- Be committed to continuous improvement and excellence in the provision of health care whether working alone or as part of a team

Prior to commencing their sponsored clinical placements, all participants will also be required to undergo the mandatory screening requirements of the relevant clinical site/service including occupational health assessment and Garda/Police clearance.

Training Programme Duration & Organisation of Training

The period of clinical training that will be provided under the International Clinical Fellowship Programme (ICFP) for medical specialities is up to 3 years, after which the overseas doctors will be required to return to their country of origin. It should be noted that the standard programme length is two years and that to progress to the third year of training, trainees must hold the full MRCPI/UK.

- Each ICFP is developed by the Royal College of Physicians of Ireland will be specifically designed so as to meet the training needs of participants to support the health service in their home country.
- All appointees to the ICFP will be assessed by the Royal College of Physicians of Ireland to ensure that they possess the necessary requirements from a training and clinical service perspective.
- Each overseas doctor participating in the ICFP will be enrolled with the Royal College of Physicians of Ireland and will be under the supervision of a consultant doctor who is registered on the Specialist Division of the Register of Medical Practitioners maintained by the Medical Council and who is an approved consultant trainer.
- Appointees to the ICFP will normally be registered on the Supervised Division of the Register of Medical Practitioners maintained by the Medical Council in Ireland.
- Appointees will agree a training plan with their trainers at the beginning of each training year.
- For the duration of their International Medical Graduate (IMG) programme and associated clinical placements, all participants will remain directly employed and directly paid by their sponsoring state at a rate appropriate to their training level in Ireland and benchmarked against the salary scales applicable to NCHD's in Ireland;
- Successful completion of an ICFP will result in the participant being issued with a formal Certificate of completion for the Fellowship Programme by the Royal College of Physicians of Ireland. This Certificate will enable the participant's parent training body in their sponsoring home country to formally recognise and accredit their time spent training in Ireland.

The training programme offered will provide opportunities to fulfil all the requirements of the curriculum of training. There will be posts in both general hospitals and teaching hospitals.
Each post within the programme will have a named trainer/educational supervisor and programmes will be under the direction of the National Specialist Director of the relevant medical speciality to be confirmed by the College. Programmes will be as flexible as possible consistent with curricular requirements, for example to allow the trainee to develop their sub-specialty interest.

ePortfolio logbook

Each trainee is responsible for maintaining an up-to-date record of progress through training and compiling a portfolio of achievements for presentation at each annual assessment review. The trainee also has a duty to maximise opportunities to learn, supplementing the training offered with additional self-directed learning in order to fulfil all the educational goals of the curriculum.

Up-to-date training records and an ePortfolio of achievements will be maintained by the trainee throughout. The training records will be countersigned as appropriate by the trainers to confirm the satisfactory fulfilment of the required training experience and the acquisition of the competencies set out in the training plan. They will remain the property of the trainee and must be produced at their annual assessment review.

Trainees must co-operate with the College in completing their training plan.

It is in a trainee's own interest to maintain contact with the Royal College of Physicians of Ireland, and to respond promptly to all correspondence relating to training. At review, your ePortfolio will be examined.

Review

A consultant trainer/educational supervisor will be identified for each participant in the programme. He/she will be responsible for ensuring that the educational potential of the post is translated into effective training which is being fully utilized. Only departments approved for Training by the Royal College of Physicians of Ireland and its constituent training bodies will be used.

The training objectives to be secured should be agreed between each trainee and trainer at the commencement of each posting in the form of a written training plan. The trainer will be available throughout, as necessary, to supervise the training process. In each year trainees undergo a formal review by an appropriate panel. The panel will review in detail the training record, will explore with the trainee the range of experience and depth of understanding which has been achieved and consider individual trainer's reports. An opportunity is also given to the trainee to comment on the training being provided; identifying in confidence any deficiencies in relation to a particular post.

A quarterly and annual review of progress through training will be undertaken on behalf of the International Clinical Fellowship Programme (ICFP). These will include assessments and reports by educational supervisors, confirmation of achievements and the contents of the ePortfolio will be reviewed. At some or all of these annual reviews a non-specialty assessor will be present capable of addressing core competencies.

The award of a Certificate of completion will be determined by a satisfactory outcome after completion of the entire series of assessments.

Core Professional Skills

Partnership

Communication and interpersonal skills

- Facilitate the exchange of information; be considerate of the interpersonal and group dynamics; have a respectful and honest approach.
- Engage with patients and colleagues in a respectful manner,
- Actively listen to the thoughts, concerns and opinions of others,
- Consider data protection, duty of care and appropriate modes of communication when exchanging information with others,

Collaboration

- Collaborate with patients, their families and your colleagues, to work in the best interests of the patient, for improved services and to create a positive working environment.
- Work cooperatively with colleagues and team members to deliver an excellent standard of care.
- Seek to build trust and mutual respect with patients.
- Appropriately share knowledge and information, in compliance with GDPR guidelines.
- Take on-board available, relevant feedback.

Health Promotion

- Communicate and facilitate discussion around the effect of lifestyle factors on health and promote the ethical practice of evidence based medicine.
- Seek up to date evidence on lifestyle factors that:
    - negatively impact health outcomes
    - increase risk of illness
    - positively impact health and decrease risk factors
- Actively promote good health practices with patients individually and collectively.

Caring for patients

- Take into consideration patient's individuality, personal preferences, goals and the need to provide compassionate and dignified care.
- Be familiar with
    - Ethical guidelines
    - Local and national clinical care guidelines
- Act in the patient's best interest.
- Engage in shared decision making and discuss consent.

Performance

Patient safety and ethical practice

- Put the interest of the patient first in decisions and actions.
- React in a timely manner to issues identified that may negatively impact the patient's outcome.
- Follow safe working practices that impact patient's safety.
- Understand ethical practice and the Medical Council guidelines.
- Support a culture of open disclosure and risk reporting.
- Be aware of the risk of abuse, social, physical, financial and otherwise, of vulnerable persons.

Organisational behaviour and leadership

- Be aware of he activities, personnel and resources that impact the functioning of the team, hospital and health care system.
- Understand and work within management systems.
- Know the impacts of resources and their necessary management.
- Demonstrate proficient self-management.

Wellbeing

- Be responsible for own well-being and health, and its potential impact on the provision of clinical care and patient outcomes.
- Be aware of signs of poor health and well-being.
- Be cognisant of the risk to patient safety related to poor health and well-being of self and colleagues.
- Manage and sustain your own physical and mental well-being.

Practice

Continuing competence and lifelong learning

- Continually seek to learn, to improve clinical skills and to understand established and emerging theories in the practice of medicine.
- Meet career requirements including those of the Medical Council, your employer and your training body.
- Be able to identify and optimise teaching opportunities in the workplace and other professional environments.
- Develop and deliver teaching using appropriate methods for the environment and target audience.

Reflective practice and self-awareness

- Bring awareness to your actions and decisions and engage in critical appraisal of own work to drive lifelong learning and improve practice.
- Pay critical attention to the practical values and theories which inform every day practice
- Be aware of your own level of practice and your learning needs.
- Evaluate and appraise your decisions and actions with consideration as to what you would change in the future.
- Seek to role model good professional practice within the health service.

Quality assurance and improvement

- Seek opportunities to promote excellence and improvements in clinical care through the audit of practice, active engagement in and the application of clinical research, and the dissemination of knowledge at all levels and across teams.
- Gain knowledge of quality improvement methodology.
- Follow best practice in patient safety.
- Conduct ethical and reproducible research.

Specialty Section

Core Respiratory Skills for Patient Management

- Communication skills
- History and Examination
- Imaging interpretation
- Recognition of normal and abnormal respiratory physiology
- Diagnostic and therapeutic procedures

Communication skills

By the end of Specialist training the trainee will be able:

1. Communicate effectively with patients, relatives and carers

Skill Development			
Opportunity	**Record**	**Assessment**	**Timeframe**
Procedural consent	1 observed during SpR1	*Procedures & Investigations.* Signed as complete during end of post meeting	SpR1
Breaking Bad news	Study day attendance and 1 observed episode	Record in *Speciality Case Experience.* Signed as complete during end of post meeting. Observation should be completed in year 1.	SpR1-3
Ceiling of care discussion	1 observed discussion with patient and relatives in a patient with very advanced lung disease		SpR1-3
Ward Rounds	1 observed per year	*Clinics.* Record as agreed with trainer for post, observation signed off in workplace	SpR1-3

2. Communicate with senior and junior medical staff and within a multi-disciplinary team; perform effective clinical teaching and academic presentations

Skill Development			
Opportunity	**Record**	**Assessment**	**Timeframe**
Ward MDT	1 observed during SPR1	*Clinics*. Observation signed off in workplace	SpR1
Oral presentation or tutorial	1 observed per year	*Additional Professional Experience*	SpR1-3
Journal Club	Record at least 5 attended and present at 1	Presentation signed off at end of post. Record attendance in *Collaborative Activities*	SpR1-3
Ward Rounds	1 observed per year	*Clinics.* Record as agreed with trainer for post; observation signed off in workplace	SpR1-3

History and Examination

By the end of Specialist training the trainee will be able to:

1. Perform nuanced history taking and clinical examinations in patients presenting with a wide range of respiratory and systemic symptoms

Skill Development			
Opportunity	**Record**	**Assessment**	**Timeframe**
Present new out- patients and post-take patients to a senior colleague	At least 3 cases in *Speciality Case Experience*	Case Based Discussion signed off by trainer	SpR1-3
Present patients at x-ray conferences, outpatient clinics, lung cancer MDT meetings and other specialist meetings	At least 3 cases in *Speciality Case Experience*	Trainer sign off at end of post	SpR1-3

Imaging Techniques

By the end of Specialist training the trainee will be able to:

1. **I**nterpret plain chest radiographs, helical and high-resolution CT of thorax and CT pulmonary angiograms
2. Determine the need for CT/ultrasound-guided biopsies
3. Appreciate the clinical value of ordering bone scans, CT/MRI brain, PET scans, cardiac MRI and ventilation /perfusion scans
4. Complete necessary aspects of Pleural USS – see specific section

Skill Development			
Opportunity	**Record**	**Assessment**	**Timeframe**
Chest Radiograph	Interpret 20 at outpatient clinic and 20 post take per year	Record in *Imaging Techniques* Or *Speciality Case Experience*. Signed off in the workplace.	SpR1-3
HRCT Thorax	Interpret 10 at OPD and 10 at ILD clinics per year		SpR1-3
Helical CT	interpret 10 at clinic, 20 at bronchoscopy		SpR1-3
CTPA	10 post take and 10 in-patients		SpR1-3
Image guided lung biopsy	Attend 1	*Procedures & Investigations*	SpR1-3
ILD clinics	Attend 10	*Clinics*	SpR1-3
Lung cancer MDT	Attend 20	*Collaborative Activities*	SpR1-3
HRCT Thorax	Study day attendance	Record attendance	SpR1-3
Helical CT thorax			SpR1-3

Recognition of normal and abnormal respiratory physiology

Lung Function Testing

By the end of Specialist training the trainee will be able to:

1. Perform and interpret spirometry and flow-volume loops
2. Understand the mechanisms behind measuring lung volumes by plethysmography and nitrogen washout and their clinical significance
3. Understand the principles behind measuring carbon monoxide gas transfer and its clinical significance
4. Order appropriately and interpret bronchial provocation testing
5. Interpret tests of respiratory muscle strength- to include erect/ supine spirometry, MIPs, MEPs and SNIPs

<table>
<tr><th colspan="2">Skill Development</th><th></th><th></th></tr>
<tr><th>Opportunity</th><th>Record</th><th>Assessment</th><th>Timeframe</th></tr>
<tr><td>Be able to perform spirometry independently</td><td rowspan="7">Record an example</td><td>Procedures & Investigations</td><td rowspan="8">SpR1</td></tr>
<tr><td>Correctly identify obstruction, reversibility and air trapping</td><td rowspan="7">Imaging Techniques</td></tr>
<tr><td>Correctly identify restriction - pulmonary and extra-pulmonary</td></tr>
<tr><td>Correctly identify combined obstruction and restriction</td></tr>
<tr><td>Correctly identify reduced gas transfer</td></tr>
<tr><td>Correctly identify extra thoracic obstruction</td></tr>
<tr><td>Measuring lung volumes -Mechanisms</td><td>Agree with trainer</td></tr>
<tr><td>Pulmonary function testing Study Day</td><td>Record attendance</td><td>Study day attendance</td><td>SpR1</td></tr>
<tr><td>Reporting lung function with your supervising consultant</td><td>One case per year</td><td>Specialty Case Experience</td><td>SpR1-3[123]</td></tr>
<tr><td>Respiratory muscle strength testing</td><td colspan="2">Witness once erect and supine spirometry, MIPs, MEPs and SNIPs and interpret results in patients with neuromuscular weakness, record in Specialty Case Experience</td><td>SpR1-3</td></tr>
</table>

Gas Exchange and Oxygenation

By the end of Specialist training the trainee will be able to:

1. Perform arterial blood gas sampling
2. Interpret arterial blood gases and calculate Alveolar-arterial oxygen difference (Aa diff)
3. Prescribe appropriate acute oxygen therapy and interface in acute type 1 and 2 resp failure
4. Perform flight assessments and interpret hypoxic challenge testing
5. Interpret overnight pulse oximetry and trans-cutaneous carbon dioxide monitoring
6. Perform and interpret 6 minute walk tests
7. Understand the principles of cardio-pulmonary exercise testing (CPET) and its role in lung transplantation referral in cystic fibrosis and fitness for surgery in lung cancer patients

Skill Development			
Opportunity	**Record**	**Assessment**	**Timeframe**
Perform ABGs supervised by an experienced senior colleague	Agree a goal with Yr 1 Trainer	Record in *Speciality Case Experience,* Observed in the workplace and signed off by trainer	SpR1
ABG analysis	correctly interpret type 1 and type 2 respiratory failure	Record in *Speciality Case Experience* complete informal CBD	
Calculating Alveolar arterial oxygen difference	Record Case examples as agreed with Trainer		
Mixed metabolic and respiratory disturbance on blood gas analysis			
Interpret overnight pulse oximetry and trans-cutaneous carbon dioxide			
Acute O2 prescription	Discuss cases of acute O2 prescription and the interface employed and why	Record in *Speciality Case Experience* with CBD, signed off by trainer in the workplace	
Present patients at x-ray conferences, outpatient clinics, lung cancer MDT meetings and other specialist meetings	At least 3 cases in *Speciality Case Experience*	Trainer sign off at end of post	SpR1-3
	Record example and seek informal feedback	*Procedures & Investigations*	
Interpret and observe one 6 minute walk test			
Observe 1 CPET test			

LTOT, non-invasive ventilation

By the end of Specialist training the trainee will be able to:

1. Appropriately prescribe long-term oxygen therapy
2. Appropriately prescribe and set up a non-invasive ventilation circuit in patients with acute acidotic type 2 respiratory failure and monitor clinical response
3. Appropriately prescribe non-invasive ventilation in patients with chronic type 2 respiratory failure and monitor clinical response
4. Understand the principles of sleep studies with and without EEG monitoring and the indications for treatment

Skill Development			
Opportunity	**Record**	**Assessment**	**Timeframe**
Prescribing long-term oxygen therapy	Record example in *Specialty Case Experience*. Discuss commencing a patient on long-term oxygen therapy and their follow-up		SpR1
Instituting acute non-invasive ventilation	Record example in *Specialty Case Experience*. Discuss clinical examples of setting up an acute non-invasive ventilation circuit in patients with acidotic type 2 respiratory failure with 1 observed in real-time (observer can be supervising Consultant, Senior Colleague or the Institutional NIV team)		
Prescribing Chronic NIV	Record example in *Specialty Case Experience*. Discuss cases you have commenced on domiciliary non-invasive ventilation in patients with chronic type 2 respiratory failure and their follow-up		SpR1-3
Sleep studies*	*See sleep disorders		

Diagnostic and therapeutic procedures

Bronchoscopy

By the end of Specialist training the trainee will be able to:

1. Recognise Indications and contraindications for flexible bronchoscopy
2. Perform consent for this procedure
3. Prepare the patient for the procedure and perform safe effective sedation and local anaesthesia
4. Independently perform oral and nasal approach flexible bronchoscopy and sampling techniques including bronchial biopsy, bronchial brushings, bronchoalveolar lavage and transbronchial biopsy
5. Recognise normal and variant bronchial anatomy
6. Institute appropriate clinical monitoring during the procedure
7. Institute appropriate haemostatic techniques if there is excessive bleeding
8. Institute safe post-procedural care

Skill Development			
Opportunity	**Record**	**Assessment**	**Timeframe**
Discuss indication for bronchoscopy	Agree feedback discussion with trainer	Record in *Bronchoscopy*	SpR1-3
Performing bronchoscopy	Record up to 200 or as agreed with NSD to include: Correctly identify the endobronchial anatomy Correctly perform bronchial wash/lavage Correctly perform bronchial biopsies Correctly perform bronchial brushings Correctly perform transbronchial lung biopsies Haemostasis post sampling with cold 0.9% saline, 1:1000 adrenaline and tamponande techniques		
Directly Observed Assessment of Bronchoscopy	Keep a record of the number and different sampling techniques performed and any complications	*Bronchoscopy DOPS*	SpR3
Perform unsupervised bronchoscopies	Keep a record of the number and different sampling techniques performed and any complications	*Bronchoscopy*	
Directly Observed Assessment of Bronchoscopy	Perform one bronchoscopy observed by your institutional bronchoscopy lead	Final sign off in first 6 months of year in *Bronchoscopy DOPS*	SpR5

EBUS

By the end of Specialist training the trainee will be able to:

1. Recognise Indications and contraindications for EBUS
2. Prepare the patient for the procedure and perform safe, effective sedation and local anaesthesia
3. Institute appropriate clinical monitoring during the procedure
4. Institute safe post-procedural care

Skill Development			
Opportunity	**Record**	**Assessment**	**Timeframe**
Discuss Indications For EBUS	Agree with Trainer	Complete once	SpR1-3
Witness/assist at EBUS	Record 20 procedures	*Investigations and procedures*	

Pleural Ultrasound/procedures

By the end of Specialist training the trainee will be able to:

1. Recognise normal anatomy of pleura and diaphragm, heart, liver, kidneys and spleen
2. Differentiate transudative from exudative effusions including use of Light's criteria. Recognise an empyema
3. Identify a pleural effusion and interpret its depth and size and whether there are exudative features including loculation
4. Identify pleural thickening and its differentiation from fluid
5. Identify consolidated lung and its differentiation from pleural fluid
6. Perform consent for thoracocentesis/ intercostal tube placement
7. Recognize Indications and contraindications for diagnostic thoracocentesis and small bore (≤ 18 FR guage) intercostal tube insertion via Seldinger technique
8. Identify a safe site for thoracocentesis/ intercostal tube placement
9. Prepare the patient for diagnostic thoracocentesis/ intercostal tube procedure and perform safe local anaesthesia
10. Institute safe post-procedural care and intercostal tube management

Skill Development			
Opportunity	**Record**	**Assessment**	**Timeframe**
Differentiate Transudate and Exudates	Agreed with Trainer	Procedures & Investigations	SpR1-3
Supervised Pleural USS	Record approx. 30, with 20 supervised normal pleural ultrasounds and 10 abnormal pleural ultrasounds highlighting the anatomy		
Thoracocentesis – supervised ultrasound-guided	Record 10		
Intercostal tube insertion via seldinger technique -supervised	Record 10		

Witnessed intercostal tube insertion via seldinger technique	DOPS with final sign off- in first 6 months of 3rd clinical resp year		SpR3
Attend a pleural ultrasound course			

Diagnosis and Treatment of Specific Respiratory Conditions

- Respiratory Diseases 1: Airway diseases, ILD and Cancer
- Respiratory Diseases 2: Pulmonary Infections
- Respiratory Diseases 3: Bronchiectasis, Sleep, VACC and Transplant

Respiratory Diseases 1: Airway diseases, ILD and Cancer

Asthma

By the end of Specialist training the trainee will be able to:

1. Rapidly diagnose, assess and treat patients attending ED with acute severe asthma including when to involve acute anaesthetic care
2. Diagnose, assess severity and treat out-patients with asthma according to current GINA guidelines
3. Monitor control of asthma in an out-patient setting including compliance, inhaler technique and patient self-management
4. Identify triggers of asthma including occupational factors and co-existing GORD and upper airway disease
5. Diagnose and treat cough predominant asthma
6. Recognise the role of bronchial bronchoprovocation tests in diagnosis / exclusion of asthma
7. Appropriately initiate a trial of Omalizumab /IL-5 inhibitors in poorly controlled patients with severe allergic asthma and eosinophilic asthma respectively
8. Differentiate asthma from other conditions such as vocal cord dysfunction, dysfunctional breathing, sleep-apnoea, CCF and COPD.

Skill Development			
Opportunity	**Record**	**Assessment**	**Timeframe**
Asthma diagnosis - recognise obstruction and reversibility*	Agree a goal with Trainer	Record in *Speciality Case Experience* and signed off by trainer at EoP/Qrtly Assessment	SpR1-3
Difficult asthma diagnosis: Observe and interpret a mannitol inhalation test Observe and interpret a histamine or metacholine inhalation test	Record cases		
Attend 10 dedicated difficult asthma clinics	Record attendance at 10. Focus on common differential diagnoses and when to consider a treatment trial of Omalizumab/ or IL-5 inhibitors	Record in *Clinics.* Signed as complete at assessment.	
Management of acute severe asthma attack	Present history, exam and management plan of patients attending ED with acute severe asthma in CBD	Record in *Speciality Case Experience* and complete CBD	SpR1-3[123]
Management of asthma in outpatient setting	Discuss cases citing possible triggers including occupational factors, GINA/BTS treatment guidelines and self-management plans		

*Please see previous section on lung function testing

COPD

By the end of Specialist training the trainee will be able to:

1. Rapidly diagnose, assess and treat patients attending ED with acute exacerbations of COPD including when to initiate acute NIV and establish ceiling of care
2. Diagnose and assess severity of out-patients with COPD according to current GOLD guidelines
3. Treat patients focussing on risk factors, symptoms and exacerbations employing non-pharmacological and pharmacological methods
4. Provide expert advice on smoking cessation
5. Refer patients appropriately for, and understand the principles of, pulmonary rehabilitation
6. Refer patients appropriately for consideration of lung transplantation
7. Know when to refer patients appropriately for palliative care

Skill Development			
Opportunity	**Record**	**Assessment**	**Timeframe**
COPD Diagnosis – Recognize aetiological factors and post-bronchodilator obstruction and lack of reversibility*	Agree with Trainer	Record in *Speciality Case Experience* and signed off by trainer at EoP/Qrtly Assessment	SpR1
Management of acute exacerbation of COPD (AECOPD)**	Present history, exam, ABG and CXR interpretation and management plan of patients attending ED with an AECOPD including those with acidotic type 2 resp failure requiring controlled oxygen prescription and acute NIV	Record in *Speciality Case Experience* and complete CBD	
Observed ceiling of care discussion***	Complete once	Record in *Speciality Case Experience* and complete observation	
Management of COPD in outpatient setting	Discuss the management of patients based on GOLD guidelines focussing on modifying risk factors, and symptom and exacerbation control, including referral for pulmonary rehabilitation and lung transplantation	Record in *Speciality Case Experience* and complete CBD	SpR1-3

* See Lung Function Testing

**See Gas Exchange

***See communication

Chronic Cough in non-smokers with normal lung physiology and imaging

By the end of Specialist training the trainee will be able to:

1. Take a detailed cough history focussing on the commonest causes such as rhinosinusitis, cough predominant asthma, gastro-oesophageal reflux disease (GORD), post-infectious cough and cough secondary to ACE-inhibitor therapy
2. Identify potential cough complications namely syncope, vomiting and urinary incontinence in women (latter rarely self reported)
3. Prescribe appropriate mono-treatment trials, if possible, although some patients with complex cough syndromes may need to start on 2 or even 3 agents
4. Stop ACE-inhibitor therapy for the correct duration
5. Appreciate that a number of patients with post nasal drip and GORD are asymptomatic and that PPI treatment of GORD only reduces the acidity of the reflux, not the reflux volume or proximal extent
6. Consider further investigations if treatment trials fail, including bronchial challenge testing, bronchoscopy, HRCT thorax, OGD, 24 hr oesophageal pH monitoring/impedence testing, barium swallow, CT sinuses and ENT review
7. Palliate idiopathic cough with opiates, low-dose gabapentin or pregabalin

Skill Development			
Opportunity	**Record**	**Assessment**	**Timeframe**
Aetiology: common causes and treatment	Record a case annually and discuss Discuss palliative treatments	Record in *Speciality Case Experience* and complete CBD	SpR1-3[123]
Treatment failure			
Palliative treatment			

Occupational and Environmental Lung Disease

By the end of Specialist training the trainee will be able to:

1. Appreciate that the environment in which the patient lives and works can cause or exacerbate respiratory disease
2. Recognise the common occupations that may cause occupational asthma and how to investigate this possibility
3. Assess the potential role of occupational dust, fumes and vapours in causing or contributing to the development of COPD
4. Recognize the common exposures that may cause acute and chronic hypersensitivity pneumonitis
5. Make a diagnosis of hypersensitivity pneumonitis based on history, examination, serum precipitins, CT imaging, bronchoscopy with lavage, and lung biopsy
6. Treat and monitor acute and chronic hypersensitivity pneumonitis
7. Have a working knowledge of the exposures that can cause inorganic lung disease particularly asbestos
8. Differentiate the different lung pathologies associated with asbestos exposure

Skill Development			
Opportunity	**Record**	**Assessment**	**Timeframe**
Taking Case History	Worsening asthma or late-onset asthma: develop the habit of asking about occupation, timing of symptoms and have some knowledge of common sensitisers that can cause occupational asthma	Record in *Speciality Case Experience* and complete informal CBD, signed off by trainer in the workplace	SpR1-3
Acute hypersensitivity pneumonitis	Cases encountered, diagnostic features and management strategy		
Asbestos lung disease	Strive to see cases of asbestos pleural plaques, benign pleural thickening, rounded atelectasis, asbestos pleuritis, mesothelioma, and asbestosis		
Other inorganic lung diseases	Discuss cases and report to rare lung disease group		
Attend Study day early in training	Record Attendance	*Study Day Attendance*	

Lung Cancer

By the end of Specialist training the trainee will be able to:

1. Recognise potential symptoms and physical signs of lung cancer including paraneoplastic syndromes
2. Recognize potential plain radiographic and CT features of lung cancer
3. Assess performance status
4. Rapidly organise tissue confirmation of lung cancer by the least invasive and / or highest staging method
5. Break bad news
6. Recognise the role of EBUS in confirming and staging lung cancer
7. Stage non-small cell and small cell lung cancer and mesothelioma with procedures, biopsies and appropriate imaging including CT thorax and upper abdomen, CT / MRI brain, PET scan and bone scan
8. Present cases of lung cancer/ mesothelioma at MDT meetings
9. Identify and refer patients for radical treatment as early as possible
10. Appreciate the various therapeutic modalities available based on type of cancer, staging, patient wishes, genetic markers and performance status
11. Organise appropriate palliative interventions as soon as possible – pleural fluid control, radiotherapy, airway de-bulking /stenting / haemostatic techniques, SVC stenting
12. Refer appropriately to palliative care team

<table>
<tr><th colspan="4">Skill Development</th></tr>
<tr><th>Opportunity</th><th>Record</th><th>Assessment</th><th>Timeframe</th></tr>
<tr><td>SCLC and NSCLC</td><td>Discuss different disease stages</td><td>Record in Speciality Case Experience and complete informal CBD</td><td>SpR1-3[123]</td></tr>
<tr><td>Rapid access lung cancer clinic</td><td rowspan="2">Attend at least 20 during training</td><td>Record in Clinics</td><td rowspan="2">SpR1-3</td></tr>
<tr><td>Lung cancer MDT meetings</td><td>Record in Collaborative Activities</td></tr>
</table>

See previous sections for training in bronchoscopy, EBUS, thoracocentesis, chest drain insertion and breaking bad news. Further training can also be sought, if available, in joint thoracic clinics (attended by respiratory physicians, lung cancer nurses, medical and radiation oncologists and thoracic surgeons) and survivorship clinics.

Interstitial Lung Disease (ILD)

By the end of Specialist training the trainee will be able to:

1. Appreciate that ILD is a highly heterogenous group of conditions some of which are rapidly progressive
2. Perform detailed history and examination of patients presenting with ILD
3. Order appropriate blood tests that may contribute to the diagnosis
4. Assess functional status with spirometry, static lung volumes, diffusion capacity, 6MWT, BMI and blood gases
5. Recognize distinctive patterns of radiological abnormality on chest radiograph and HRCT in common causes of ILD such as sarcoidosis, idiopathic pulmonary fibrosis (IPF), connective tissue disease-associated ILD, hypersensitivity pneumonitis, asbestosis, lymphangitis carcinomatosis, cystic lung disease and radiation pneumonitis and fibrosis
6. Decide when a biopsy is appropriate and what type of biopsy
7. Assess disease progression with imaging and functional tests
8. Decide which patients should be treated and with what medication including anti-fibrotic therapy for IPF

Skill Development			
Opportunity	**Record**	**Assessment**	**Timeframe**
Discuss different phenotypes of IPF including patients prescribed anti-fibrotic therapy and those referred for lung transplantation assessment	Record Cases in *Speciality Case Experience*	Complete informal CBD and sign off by trainer	SpR1-3
Discuss cases of sarcoidosis, those who need/don't need treatment, including Lofgren's syndrome			
Discuss any patients with drug-induced ILD, CTD-associated ILD, cystic lung disease (LIP, LAM , Langerhan's cell histiocytosis), hypersensitivity pneumonitis*			
Attendance at 10 ILD clinics	Record Attendance	*Clinics*	
Attendance at 10 ILD MDT meetings		*Collaborative Activities*	
Attendance at one HRCT interpretation study day		*Study Day Attendance*	

* See previous section on occupational and environmental Lung disease

Respiratory Diseases 2: Pulmonary Infections

Acute respiratory infections

By the end of Specialist training the trainee will be able to:

1. Differentiate bronchitis from likely parenchymal lung infections
2. Ascertain if a patient has an underlying chronic lung disorder, e.g. COPD or bronchiectasis, and if they chronically colonised with certain bacteria
3. Determine likely viral aetiology and send viral swabs if appropriate
4. Recognise patients at risk of primary or secondary aspiration, opportunistic infection or HAP
5. Appreciate the role of urgent sampling (sputum and BAL) in patients suspected of opportunistic infection
6. Investigate, diagnose and empirically treat CAP based on CURB 65 score
7. Recognise complications of pneumonia, namely abscess formation, empyema, ARDS and metastatic infection
8. Determine which patients with pneumonia require critical care
9. Arrange appropriate follow-up and consider treatments to reduce future risk of lung infection

Skill Development			
Opportunity	**Record**	**Assessment**	**Timeframe**
History, examination, chest x-ray interpretation	Record cases from general medicine take	*Speciality Case Experience*, discussed at end of post	SpR1-3[123]
Chest x-ray Interpretation*	Interpret 20 acute chest x-rays post take per year		

*See imaging, requirement meets both criteria

Mycobacterial infection

By the end of Specialist training the trainee will be able to:

1. Suspect the diagnosis of TB based on symptoms, immunodeficiency including HIV, and characteristic radiology
2. Appreciate the diagnostic and potential infectivity implications of sending 3 sputum samples (≥1 early morning sample)for smear and culture in productive patients with suspected pulmonary TB
3. Perform a tuberculin test
4. Appreciate the role of targeted BAL and tissue biopsy, and sending for PCR, microbiological culture (biopsy in saline), and histology to achieve diagnosis of TB
5. Appreciate that TB in patients on TNF inhibitors is frequently extra-pulmonary
6. Appreciate that all patients with newly diagnosed tuberculosis require A HIV test
7. Decide if community treatment, or hospitalization and isolation, is the most appropriate
8. Prescribe standard RIPE treatment for TB for the correct duration and be aware of compliance issues, drug toxicities (particularly hepatitis) and interactions, and the importance of close clinical follow-up
9. Determine early if there is a risk of MDR-TB based on patient ethnicity, known contact's drug susceptibility, history of previous TB treatment and/or poor compliance
10. Refer to specialist clinic if MDR-TB proven

Latent TB

By the end of Specialist training the trainee will be able to:

1. Understand the concept of latent TB and future risk of developing TB
2. Test close contacts of infectious TB patients for latent TB by IGRA test and/or 2Tu tuberculin tests and advise treatment if positive
3. Test patients due to commence TNF- inhibitors for latent TB by IGRA test and/or 2Tu tuberculin tests, and advise treatment if positive

Mycobacterium Other Than Tuberculosis (MOTT)

By the end of Specialist training the trainee will be able to:

1. Appreciate that some patients are colonised or infected with MOTT.
2. Recognise risk factors for MOTT, such as middle-aged females with recurrent bronchitis, environmental exposure, chronic airway inflammation, Cystic Fibrosis, and immunosuppression including HIV infection
3. Recognise that not all patients require treatment and some are best observed
4. Appreciate that these bacteria are very resistant and treatment courses are typically ≥ 18 months often in frail, elderly patients with the potential for high drug toxicity
5. Consider referral to specialty clinics if drug toxicity, high drug resistance and treatment failure, and if lung resection is being considered.

Assessment – CBDs, mini-CEX, DOPs (administering and reading Tuberculin tests)

Skill Development			
Opportunity	**Record**	**Assessment**	**Timeframe**
Tuberculin test	Observe once	Record in *Procedures & Investigations*	SpR 1-5
IGRA test	Agree target with trainer		
Active tuberculosis	Record Cases in *Specialty Case Experience*	Complete CBD and signed off by Trainer	
Discuss any cases of managing patients with MOTT			
Discuss any case of patients with latent TB who required immunosuppressive drugs			
Attendance at 10 TB clinics	Record Attendance	*Clinics*	

Respiratory Diseases 3: Bronchiectasis, Sleep, VACC and Transplant

Non Cystic- Fibrosis Bronchiectasis

By the end of Specialist training the trainee will be able to:

1. Suspect a diagnosis of bronchiectasis based on patients symptoms
2. Confirm disease by high-resolution CT scanning
3. Appreciate that the aetiology is highly heterogenous
4. Investigate in detail the cause of bronchiectasis and whether targeted therapy is indicated e.g. GORD, ABPA, Immunoglobulin deficiency, HIV and mycobacterium avium intracellulare infection, lung resection if the disease very localised
5. Understand the role of regular sputum clearance to improve QoL and reduce exacerbation frequency
6. Prescribe appropriate antibiotics in acute exacerbations preferably based on recent sputum or BAL microbiology
7. Consider an eradication antibiotic trial for the first sputum culture positive for *Pseudomonas Aeruginosa*
8. Determine which patients may benefit from oral and/ or nebulised prophylactic antibiotics
9. Appreciate the role of pulmonary rehabilitation and lung transplantation

Skill Development			
Opportunity	**Record**	**Assessment**	**Timeframe**
Discuss cases with different aetiology/ management plan	Record Cases in *Specialty Case Experience*	CBD signed off by Trainer	SpR1-3[123]
Attend dedicated bronchiectasis clinic if available	Record Attendance	*Clinics*	SpR1-3
HRCT thorax study day		*Study Days*	
Attend 10 X-ray-meetings		*Collaborative Activities*	
Attend 1 sputum clearance training session			

Try and review imaging of each bronchiectasis patient that you encounter in the outpatient clinic and those attending for bronchoscopy

Cystic fibrosis

By the end of Specialist training the trainee will be able to:

1. Recognise that Ireland has the highest prevalence of CF in the world with 1:19 people a carrier of the gene and ~1:1400 people affected. All newborn Irish babies are now screened for this condition because of the clear benefits of an earlier diagnosis
2. Recognise that the disease is very clinically heterogenous depending on genetic mutations and that some patients present as adults
3. Confirm a diagnosis of CF based on sweat test and genetic profiling and communicate the diagnosis to patient and family and likely treatment
4. Appreciate that treatment of CF is best delivered in tertiary centres with large patient numbers and experience of transitioning teenagers to adult care
5. Treat patients focussing on sputum clearance – chest physiotherapy, nebulised DNAse, Hypertonic Saline and Bronchodilators
6. Institute appropriate anti-microbial therapy for attempted eradication therapy following first positive culture of *Staphylococcus Aureus* and *Pseudomonas Aeruginosa*
7. Institute appropriate anti-microbial therapy for acute exacerbations – choice and mode of administration depends on bacteria isolated, and commence prophylaxis with nebulised anti-pseudomonal antibiotics, macrolides and, in pre-transplant patients or patients with advanced disease, commence continual rotating IV antibiotics
8. Refer patients to tertiary centres for appropriate gene modulating treatment
9. Appreciate that patients should be segregated from each other due to cross-infection risk
10. Screen and treat for malabsorption, liver dysfunction, diabetes mellitus, ABPA
11. Give advice re fertility issues and refer to appropriate services
12. Recognise the risk of severe complications such as lung atelectasis, large volume haemoptysis, pneumothorax, distal intestinal obstruction and infection with *Burkholderia Cepacia*
13. Recognise the value of an MDT approach and close long-term follow-up including consideration of referral for lung transplantation
14. Refer to palliative care services when appropriate

Assessment – CBDs, mini-CEXs

Skill Development			
Opportunity	**Record**	**Assessment**	**Timeframe**
Discuss chronic management of CF. Discuss clinical cases to include patients on home NIV, inhaled antibiotics, receiving home IV antibiotics, gene modifying therapy and patients referred for lung transplantation and palliative care	Record Cases in *Specialty Case Experience*	Complete Case Based Discussion	SpR1
Discuss management of acute exacerbations of CF Discuss the management of patients admitted with acute exacerbations of CF to include discussion of the role of synergistic intravenous antibiotic therapy			

3-month attachment at an adult cystic fibrosis unit	Agreed with Trainer	Signed off at end of post	SpR1-3
Attend a CF MDT/ lung transplant referral meeting	Record Attendance	Collaborative Activities	
Attend 1 sputum clearance training session			

Sleep Related Disorders

By the end of Specialist training the trainee will be able to:

1. Recognise the risk factors, symptoms and signs of potential obstructive sleep apnoea (OSA) and obesity-hypoventilation syndrome (OHS)
2. Administer and interpret risk questionnaires for OSA
3. Arrange appropriate investigations for OSA and OHS including screening overnight oximetry and sleep studies
4. Refer patients with suspected periodic breathing and parasomnias for full polysomnography
5. Advise on initial treatment with non-invasive ventilation for moderate or severe OSA and OHS
6. Independently commence patients on a CPAP or BiPAP circuit
7. Liase with experts in the obesity service regarding patients with very high BMI
8. Refer appropriate patients with mild OSA to dental service for a trial of a mandibular advancement device
9. Follow up treated patients in the clinic focussing on compliance, efficacy, interface issues and weight reduction in those with high BMI

Skill Development			
Opportunity	**Record**	**Assessment**	**Timeframe**
Joint reporting of sleep studies with institutional sleep physician.	Be able to interpret low to moderate complexity limited and full sleep studies; agree number with trainer	Specialty Case experience, signed off at end of post	SpR1-5
Attend 10 Sleep Clinics	Record Attendance	*Clinics*	SpR1-5

Diseases of the Chest wall and Respiratory muscles

By the end of Specialist training the trainee will be able to:

1. Identify classic chest wall deformities such as barrel chest, pectus excavatum, kyphosis including ankylosing spondylitis, scoliosis and remote TB surgical interventions
2. Appreciate that restriction caused by some of these deformities can lead to type 2 respiratory failure in later life, which can be treated very effectively with NIV
3. Recognise the symptoms of respiratory muscle weakness
4. Advise appropriate tests to assess if respiratory muscle weakness is present and how severe
5. Appreciate there may also be co-existent bulbar weakness and to screen for aspiration risk
6. Diagnose acute and chronic conditions that can cause respiratory muscle weakness including paralysed hemidiaphragm, motor neurone disease, myasthenia gravis, acute inflammatory demyelinating polyradiculoneuropathy, muscular dystrophy and myositis
7. Advise if acute non-invasive or invasive ventilation is warranted
8. Advise if long-term non-invasive ventilation is advised and arrange follow-up

Skill Development			
Opportunity	**Record**	**Assessment**	**Timeframe**
Identify common chest wall disorders	Record Cases	Record in Specialty Case Experience, signed off at end of post	SpR1-3
Examine cases of neuromuscular weakness	Record Cases and include MND and Myotonic Dystrophy		

See previous pulmonary function tests section & LTOT, non-invasive ventilation section

Pulmonary Vascular Diseases (PVD)

By the end of Specialist training the trainee will be able to:

1. Sub-group PVD into congenital anomalies, pulmonary hypertension, VTE and vasculitis
2. Diagnose AV malformations by CT angiogram and shunt fraction, and refer to interventional radiology if appropriate
3. Diagnose pulmonary hypertension; assess severity with echo, right heart catheterization and 6MWT; consider a number of potential causes; and refer to specialist centre if vasodilator therapy being considered
4. Investigate acute PE by clinical risk assessment, d-dimer estimation and CTPA if appropriate
5. Treat acute PE based on systemic blood pressure, right heart strain and myocardial stress
6. Decide if PE provoked or unprovoked and duration of therapy
7. Appreciate the role of NOACs in acute PE
8. Diagnose patients with acute vasculitis based on history, examination, imaging, serology testing ± biopsy
9. Recognise the urgency in treating acute severe haemoptysis
10. Determine the type of vasculitis – c- or p- anca positive, eosinophilic granulomatosis with polyangiitis or Behcets disease
11. Determine if there is any renal involvement and refer appropriately
12. Decide on the best treatment and monitor accordingly

Skill Development			
Opportunity	**Record**	**Assessment**	**Timeframe**
Discuss cases of acute PE to include risk factors, indication for acute thrombolysis and duration and means of anticoagulation	Record Cases in *Specialty Case Experience*	Complete CBD and signed off by Trainer	SpR1-3[123]
Pul hypertension - Discuss cases of PPH, CTEPH, L→R shunt			SpR1-3
Vasculitis - discuss P-ANCA, C-ANCA and EGPA cases			
Attend a pulmonary hypertension MDT meeting	Record Attendance	Collaborative experience	

Attend a VTE symposium Attend a vasculitis symposium		Study Day Attendance	

Lung Transplantation

By the end of Specialist training the trainee will be able to:

1. Determine that the patient has very advanced lung disease with no further treatment options available
2. Recognise indications and contra-indications for lung transplant referral
3. Recognise that potentially suitable recipients are placed on the active transplant list only after a very detailed in-patient assessment in the Mater hospital, Dublin
4. Inform patients that after a transplant they will remain on a high number of potentially toxic treatments for life and will have to commute regularly to the transplant centre
5. Detail the average early and late mortality post-transplantation
6. Detail the main threats to long-term survival after transplant particularly the development of bronchiolitis obliterans

Skill Development			
Opportunity	**Record**	**Assessment**	**Timeframe**
Know referral criteria/ contraindications for lung transplantation	Record Cases in *Specialty Case Experience*	Complete informal CBD and signed off by Trainer	SpR1-3
Know likely survival benefit of lung transplantation			
Discuss patient(s) that you referred for lung transplantation*			
Attend a pre- lung transplantation MDT meeting	Record Attendance	Collaborative Activities	
Attend a post -lung transplantation clinic		Clinics	

* there is dedicated 14 page on-line referral form to facilitate uploading all relevant patient information

ICU

An ICU attachment is not mandatory for CSCST in respiratory medicine. However, there are a limited number of Respiratory centres that offer a 2-3 month secondment to the ICU as part of the HST respiratory training attachment.

By the end of the attachment the trainee will be able to:

1. Recognise patients who need acute respiratory support including non-invasive and invasive ventilation
2. Decide which patients with advanced lung disease should be considered for invasive ventilation
3. Understand the complications of laryngeal intubation and invasive ventilation and when tracheostomy is indicated
4. Establish a diagnosis of Acute Respiratory Distress syndrome
5. Understand the pharmacology of commonly used drugs in ICU
6. Understand the role of the Multidisciplinary Team in ICU - interaction of intensivists, microbiologists, physicians and radiologists
7. Appreciate the concept of organ failure and how this impacts on duration of critical care stay and prognosis
8. Perform a bronchoscopy via ET tube or tracheostomy to treat atelectasis or provide a microbiological sample for culture

Skill Development		
Opportunity	**Assessment**	**Timeframe**
3 month secondment to intensive care unit with dedicated intensivists	*Additional Professional Experience*	SpR≥3
Mechanically ventilated patients - discuss with intensivist re chosen ventilator settings and why		
Patients with ARDS and multi-organ failure- Discuss management plans and requirement for / timing of tracheostomy		
Join the microbiology ICU ward rounds where possible		
Perform bronchoscopy for airway toileting, enhanced microbiological identification and assistance at percutaneous tracheostomy		
Accompany intensivists on discussions with relatives		
Mechanically ventilated patients - discuss with intensivist re chosen ventilator settings and why		

Programme Requirements

Activity	Requirement
Personal Goals Form	At the start of each post complete a Personal Goals form, agreed with your trainer
Gain Experience on Call	Complete Specialty Call as agreed with your trainer in all Resp Years
Deliver Teaching	Annually record at least 3 lectures, tutorials and instances where you have delivered bedside teaching
Research	Actively participate in research, seek to publish a paper and present research at conferences or national/international meetings
Audit	Complete and report on an audit or Quality Improvement (QI) project each year; whether to start, continue or complete.
Assessments	Complete a Quarterly Assessment/End of post assessment with your trainer four times in each year. Discuss your progress and complete the form.
End of Year Evaluation	Prepare for your end of year evaluation by ensuring your portfolio is up to date and your end of year evaluation form is initiated with your trainer.
National/International Meetings	Attend minimum of one per year of training
Attendance at In-House Activities	Each month attend at least one in-hospital teaching/collaborative activity
Grand Rounds	Attend each month and record attendance at 10 per year
Journal Club	Attend each month and record attendance at 10 per year
MDT meetings	Attend each month and record attendance at 5 per year; those outlined in your specialty requirements are included in this 5. Present at 2.
Radiology Conference	Record attendance at 20 per year
Pathology Conference	Record attendance at 10 per year
Weekly Multidisciplinary Conference	Record attendance at 30
Clinics and ward rounds	Attend Clinics and Ward Rounds as agreed with your trainer, record attendance for each post.
Attend Study Days	Attend 6 in every year, including those specified in the specialty section requirements
Mandatory Courses	ACLS
	Ethics Foundation
	An Introduction to Health Research Methods (Year 1)
	HST Leadership in Clinical Practice (Year 3+)
	Mastering Communication (Year 1)
	Performing Audit (Year 1)
	Wellness Matters
	NIHSS Stroke Scale
	Delirium (Online)
Recommended Courses	Ultrasound course
	EBUS simulation course

Data OSCE	Complete the Data OSCE in year one or two of training
	Data Analysis OSCE includes: Pulmonary function testing Sleep studies Pharmacology Ventilator Settings Tuberculin skin testing Overnight Oximetry/TOSCA monitoring Echo Exercise testing Six-minute walk test Radiology Blood Gases Interpretation Pathology
Examinations	Attempt the HERMES exam in year 2 or 3 of training

Specialty Training Goals Overview

Complete the learning opportunities outlined in the specialty section for each Training Goal

Core Respiratory Skills for Patient Management	Communication skills	
	History and Examination	
	Imaging Techniques	
	Recognition of normal and abnormal respiratory physiology	
	Lung Function Testing	
	Gas Exchange and Oxygenation	
	LTOT, non-invasive ventilation	
Diagnostic and therapeutic procedures	Communication skills	
	History and Examination	
	Imaging Techniques	
Diagnosis and treatment of specific respiratory conditions	Respiratory Diseases 1: Airway diseases, ILD and Cancer	Asthma
		COPD
		Chronic Cough in non-smokers with normal lung physiology and imaging
		Occupational and Environmental Lung Disease
		Lung Cancer
		Interstitial Lung Disease (ILD)
	Respiratory Diseases 2: Pulmonary Infections	Acute respiratory infections
		Mycobacterial infection
		Latent TB
		Mycobacterium Other Than Tuberculosis (MOTT)
	Respiratory Diseases 3: Bronchiectasis, Sleep, VACC and Transplant	Non Cystic- Fibrosis Bronchiectasis
		Cystic fibrosis
		Sleep Related Disorders
		Diseases of the Chest wall and Respiratory muscles
		Pulmonary Vascular Diseases (PVD)
		Lung Transplantation
ICU (Optional)		

