Respiratory Diseases
A training resources guide

Contents

Introduction

Respiratory disease has been identified as a new national clinical priority in the NHS Long Term Plan (LTP). The UK specifically is in the top 20 developed countries for chronic obstructive pulmonary disease (COPD) deaths and admissions, with COPD being the third most common cause of death in England (approximately 30,000 deaths per year). Correspondingly, lung conditions, including lung cancer, are estimated to cost wider society around £11 billion each year. From 2010 to 2017, hospital admissions for lung disease had risen at three times the rate of all admissions generally (British Lung Foundation, 2017).

Over the next ten years, the NHS is targeting investment in improved treatment and support for those with respiratory disease, with an ambition to transform our outcomes to equal, or better, than international counterparts. The NHS LTP outlines how it'll make improvements along the full pathway from symptom onset to ongoing care, including early detection and diagnosis, treatment and rehabilitation. For example, between 10-30% of people with COPD are not diagnosed until they are admitted to hospital with an exacerbation, and only 13% of eligible COPD patients are referred to pulmonary rehabilitation services. NHS England and Improvement aims to increase the number of patients who would benefit from Pulmonary Rehabilitation by increasing referral rates from 13% to 60%.

Health Education England (HEE) is working to ensure we have a workforce with the right number, skills and capabilities to deliver on the NHS LTP ambitions for respiratory disease. It aims to explore the support offer regarding respiratory disease for the system on upskilling, knowledge and skills development, for example using the HEE STAR methodology to support workforce transformation.

Background

Respiratory disease are types of disease that affect the lungs and other parts of the respiratory system. Common causes of respiratory disease include infection, smoking tobacco, breathing in second-hand tobacco smoke, radon, asbestos, and other forms of air pollution, though the cause of some diseases is still unknown. Respiratory diseases include asthma, COPD, pulmonary fibrosis, pneumonia, and lung cancer.

Respiratory disease affects one in five people in England and is the third biggest cause of death – lung cancer, pneumonia and COPD are the biggest causes of respiratory deaths. The UK is also one of the worst-performing developed countries, ranking 35 out of 37 for asthma deaths in the 5-to-34-year-age range (see Health Education England).

Incidence and mortality rates from respiratory disease are higher in disadvantaged groups and areas of social deprivation, with the gap widening and leading to worse health outcomes. The most deprived communities have a higher incidence of smoking rates, exposure to higher levels of air pollution, poor housing conditions and exposure to occupational hazards.

Working with its partners, HEE aims to support areas in respiratory disease healthcare by supporting the workforce through training, continuous development and workforce planning to improve early and accurate diagnosis, medicine optimisation, pulmonary rehabilitation, and

supporting self-management. For example, measures such as pulmonary rehabilitation services aim to improve patient outcomes and quality of life in 90% of patients who complete a programme (NHS England - Pulmonary rehabilitation).

Role of education

The aim of this guide is to provide learners with a comprehensive list of available resources that can be used to support respiratory workforce upskilling, training and development. The toolkit addresses a national gap in a central portal for respiratory disease resources. Enhancing education has been identified as a method to combat respiratory disease by strengthening healthcare systems/workforce and diagnosis (Forum of International Respiratory Societies , 2017).

The NHS experiences high pressure levels during the winter period regarding respiratory conditions; most respiratory admissions are non-elective and during the winter period these double in number. In light of recent events (pandemic), effective healthcare systems and management is further crucial, with coronavirus alongside respiratory conditions being associated with severe illness (Centre for Disease Control and Prevention, 2021). Therefore, workforce upskilling, training and driving continuous improvements to healthcare is essential to combat high demands.

Through having a central portal for respiratory disease resources, which is available virtually, accelerated dissemination of information and knowledge will be enabled and the need for accessible virtual education resources is addressed.

A digital version of this guide will be made available on e-learning for healthcare and any comments and feedback can be sent to enquiries@e-lfh.org.uk.

Supporting Organisations

College of Paramedics

The Chartered Society of Physiotherapy in Respiratory Care

The British Journal of Primary Care Nursing

The Queen's Nursing Institute

National Centre for Smoking Cessation and Training

Action on Smoking and Health

Respiratory Professional Care

United Kingdom Clinical Pharmacy Association

Prevention

e-Learning for Healthcare (eLfH) and HEE

Smoking

Session	Description	Learning Outcomes
Very Brief Advice on Smoking: ASK, ADVISE, ACT	This session has been designed to explain why it is our responsibility as health professionals to provide very brief interventions to identify and influence smoking in hospital patients.	- Recall what Very Brief Advice (VBA) on Smoking is and what is required for each of the three elements (ASK, ADVISE, ACT). - Know how to raise the issue of smoking effectively and sensitively with your patients. - Know what the best way of stopping smoking is and how to effectively convey this information to your patients. - Understand that smokers expect to be asked about their smoking in hospital and why this is an important part of patient care. - Understand that smokers are more likely to successfully stop smoking with specialist support combined with stop smoking medications, and how to offer this support to your patients.
All Our Health: Smoking and Tobacco	This is a bite-sized session to give health and care professionals an overview of smoking and tobacco - including key evidence, data and signposting to trusted resources to help prevent illness, protect health and promote wellbeing.	- Understand smoking as a health issue, causing damage not only to smokers themselves but also to the people around them. - Discuss the considerable health benefits of stopping smoking at any time. - Understand your role as a front-line health and care professional, team leader/manager or a senior/strategic leader in supporting smokers on their quit journey. - Know where to find further reading, resources, and examples of good practice.

Session	Description	Learning Outcomes
Very Brief Advice on smoking for pregnant women	This session focuses on the delivery of very brief advice (VBA) on smoking to pregnant women, including carbon monoxide (CO) screening.	- Describe the main effects of smoking upon the health of the mother and baby. - Understand the patterns and prevalence of smoking among pregnant women. - Provide an overview of VBA (ASK, ADVISE, ACT) and where this fits into the care pathway. - Establish smoking status (ASK), including CO screening. - Advise women on the best way of stopping smoking or managing their exposure to smoke (ADVISE). - Support women to quit or manage their exposure to smoke (ACT). - Deal with issues as they arise. - Complete a short assessment to consolidate your knowledge.
Smokefree pregnancy: Why it is important to support women to be smoke free	This short film discusses the role of healthcare professionals and all members of the maternity team in supporting women and their families to have a smokefree pregnancy.	- Understand why it is important to support women and families to have a smokefree pregnancy. - List the risks associated with smoking in pregnancy. - Discuss the role of healthcare professionals and all members of the maternity team to support women stopping smoking during pregnancy. - Provide very brief advice on smoking and using the carbon monoxide monitor.
A lifetime of difference: Delivering very brief advice on smoking in pregnancy makes the difference	This short film discusses the importance of addressing smoking with pregnant women, the consequences of not doing this and the positive outcome of taking action.	- Highlight the importance of delivering very brief advice on smoking to pregnant women. - Understand the potential consequences of not doing this. - Use of carbon monoxide monitoring to support having a brief meaningful conversation about smoking and the positive outcome of taking action.
Supporting smokefree pregnancy: Resources to support training for healthcare professionals	This education series is designed to bring healthcare professionals up to speed on the latest evidence and techniques for	- Understand the latest data, research and recommended practices for delivering very brief advice on smoking.

Session	Description	Learning Outcomes
	supporting pregnant women with quitting smoking.	- Support women with establishing smokefree environments. - Discuss techniques for dealing with challenging situations. - Understand the latest information and evidence on the harm posed to both mother and fetus from maternal smoking and exposure to secondhand smoke in pregnancy.
Health Visitors - Supporting smokefree families: - Full video - Conversation with new mother including CO monitoring - Conversation with partner, including CO monitoring - Health Visitor talking with a pregnant woman - Q&A section	This short film discusses the importance for Health Visitors to address smoking and secondhand smoke with women and families, how to have a brief meaningful conversation and how to offer referral for support.	- Understand why it is important to talk to women and families about smoking and secondhand smoke. - Understand how to introduce the topic, with or without the use of a CO monitor. - Provide evidence-based advice to help women and families stop smoking and stay smoke free. - Respond to key questions and referring for support.

External smoking resources

Action on Smoking and Health (ASH):
- Smokers with Mental Health conditions films
- Smoking and Mental Health fact sheet
- Smoking Cessation training guide
- Smoking in Pregnancy Challenge Group resources can be found here.

Public Health England (PHE):
- Health matters - Smoking and mental health guidance
- Smoking cessation in secondary care
- Health matters - Clearing up some myths around e-cigarettes
- Health matters - Stopping smoking, what works? - Guidance
- Stop smoking options: Guidance for conversations with patients

- Data, research and recommended practice for Health Visitors on VBA regarding smoke-free support and practices

Action on Smoking and Health (ASH) Scotland:

- Impact – Let's talk about smoking: Guidance for mental health

Resources and training for health and social care professionals on smoking cessation by the National Centre for Smoking Cessation and Training (NCSCT) can be found here.
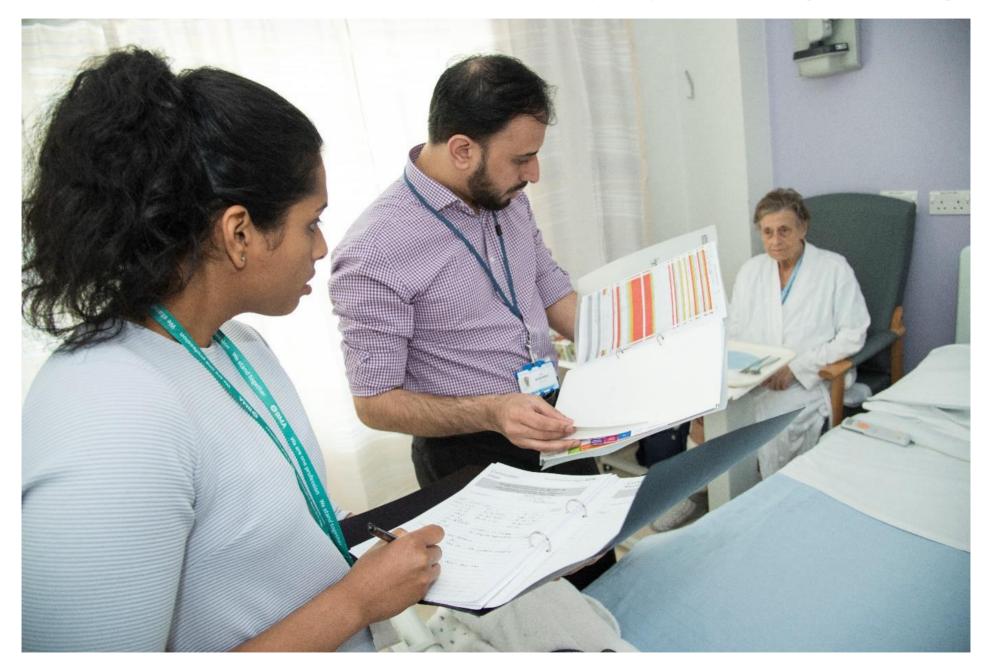
Resources on smoking prevention by the National Institute for Health and Care Excellence can be found here.

Air pollution

Session	Description	Learning Outcomes
All Our Health: Air Pollution	This is a bite-sized session to give health and care professionals an overview of air pollution - including key evidence, data and signposting to trusted resources to help prevent illness, protect health and promote wellbeing.	- Understand air pollution as the largest environmental risk to public health. - Recognise your role as a front-line health and care professional, team leader/manager or a senior/strategic leader in promoting an understanding of air pollution. - Assess your knowledge on the topic of air pollution. - Know where to find further reading, resources and examples of good practice.
Building a Net Zero NHS	This session is designed to raise awareness of the climate and ecological emergency, why it matters for health, and how healthcare contributes to it. Learners are introduced to the "Net Zero NHS" plan and case studies, which demonstrate how clinical practices can reduce carbon, costs and waste, whilst improving care quality.	- Describe how healthcare contributes to the climate crisis, and why it matters for health. - Discuss the aims of the net zero NHS plan. - Identify cases of effective sustainable practice in clinical care. - Describe ways that they can help implement carbon reduction practices for the NHS.

External resources

- Primary Care Respiratory Academy - CPD Modules - Sign in required.
- National Institute for Health and Care Excellence (NICE) - Everything Nice says about Respiratory Conditions pathway

Return to top

Recognition and Management

e-Learning for Healthcare (eLfH) and HEE

Asthma

Session	Description	Learning Outcomes
Introduction to Asthma and its Diagnosis	This session describes the impact of asthma on patients and identifies the key characteristics of asthma. It also explores the issues surrounding the diagnosis of asthma and describes the objective tests that are commonly used to support diagnosis.	- Describe the impact of asthma on morbidity and mortality. - Identify the key characteristics of asthma. - Explain why it can be difficult to diagnose asthma. - Describe the tests used to support the diagnosis of asthma.
Overview of Routine Asthma Monitoring	This session explores the aims and benefits of routine asthma monitoring and identifies the key components of a structured asthma review. It also focuses on how to assess asthma control and the most common reasons for poor asthma control.	- Describe the aims and benefits of routine asthma monitoring. - List the key components of a structured asthma review. - Describe how to assess asthma control. - Identify the most common reasons for poor asthma control.
Pharmacological and Non-pharmacological Management of Asthma	This session explores the options associated with the pharmacological and non-pharmacological management of asthma. As a long-term medical condition, ongoing management is the key to asthma control and patient safety.	- Identify methods for assessing inhaler technique and adherence. - Explain the role of non-pharmacological management. - Describe the purpose of regular ongoing treatment in asthma. - List the broad groups of drugs used in the long-term management of asthma and identify examples of each. - Describe the phased approach to managing asthma.
Recognising and Managing Asthma Attacks	This session provides an overview of asthma attacks including the initial assessment and management as well as	- List the key measurements required to correctly assess asthma attacks. - Discuss the initial management options for acute asthma.

Session	Description	Learning Outcomes
	recommendations for follow-up by an asthma-trained healthcare professional.	- Identify situations where admission to hospital is required. - Explain the role of the post-attack review and when it should take place.
Supporting Self-Management in Asthma	This session introduces the concept of agreed self-management for patients with asthma. It also explores the role of healthcare professionals in supporting patients in the ongoing management of their asthma by educating them and working with them to develop personalised asthma action plans.	- Discuss the benefits of effective agreed self-management in asthma. - List the important components of self-management education. - Explain the role of a personalised asthma action plan. - Identify the key action points to be included in such a plan.
Differentiating COPD and Asthma	COPD and asthma are both common conditions that affect the airways and can present in similar ways. It is important to differentiate between the two and understand how this can be done. This session is designed to address these questions.	- Appreciate that COPD and asthma are different diseases. - Understand why this distinction is important. - Have the skills to differentiate COPD from asthma.
Long Term Conditions for Paramedics: Asthma	This session aims to enable paramedics to understand the relevant pathophysiology of asthma, along with varying treatment options when presented with differing clinical cases.	- Demonstrate an understanding of the pathophysiology relevant to asthma. - Describe how this applies to paramedic practice and the assessment of a patient. - Explain how to manage patients with asthma in the prehospital setting. - Explain the management of cardiac arrest patients with asthma in the prehospital setting.
History of Acute Asthma	This session examines the history of acute asthma presentation and how it relates to the underlying pathophysiology. It goes on to identify important indicators of acute and life-threatening disease.	- Identify the clinical history of acute asthma and risk of life-threatening disease.

Session	Description	Learning Outcomes
Chronic Asthma	This session will cover the presentation and investigation of chronic asthma in an outpatient setting.	- Make a firm diagnosis of asthma through a detailed history, clinical examination and results from baseline investigations.
Asthma Guidelines and Inhaler Technique	This session will cover the initiation of treatment in patients diagnosed with asthma and when to step up or step down treatment. It will also describe how to assess the inhaler technique of your patients.	- Describe the stepwise management of chronic asthma and the role of different therapies - Identify the circumstances under which the patient should be referred to a specialist - Educate patients and check inhaler technique.
Assessing Severity of Acute Asthma	This session identifies clinical severity indicators in acute asthma.	- Recognise clinical signs that indicate the severity of acute asthma.

Ventilation

Session	Description	Learning Outcomes

Mechanical Ventilation Basics	This session provides an overview of non-invasive and invasive ventilation.	- Develop understanding of:
		  o Non-Invasive Ventilation
		  o Invasive Ventilation.
		- Gain insight into which settings effect which values.
		- Discuss the mechanics of ventilation weaning.

Non-Invasive Respiratory Support	This session is an outline of continuous positive airway pressure (CPAP) and bi-level ventilation and their role in treatment of acute respiratory failure.	- Define non-invasive ventilation (NIV) and its different modes. - Describe the physiological basis of continuous positive airway pressure (CPAP) and bi-level pressure support ventilation. - Identify in which patients a trial of NIV is appropriate. - Outline the characteristics of the equipment used to deliver NIV. - Select the appropriate initial settings when commencing NIV.

Pleural Effusion

Session	Description	Learning Outcomes
Investigation and Management of Unilateral Pleural Effusion in Adults	This session provides an overview of the initial investigation and management of unilateral pleural effusion in adults.	- Plan the appropriate initial investigations for a unilateral pleural effusion Determine an appropriate management plan based on the investigation results.
Pleural Effusion Diagnosis Criteria For Transudate And Exudate In Adults	This session reviews the diagnostic criteria for transudate and exudate pleural effusion in adults.	- Define the diagnostic criteria for transudate and exudate pleural effusion in adults.
Pleural Effusion Causes	This session reviews the causes of transudate and exudate pleural effusion in adults.	- Define the causes of transudate and exudate pleural effusion in adults.

Human Immunodeficiency Virus (HIV)

Session	Description	Learning Outcomes
Respiratory Disease and HIV	This session describes commonly encountered respiratory diseases in HIV and an approach to investigation and treatment of these conditions.	- Describe frequently occurring and relevant respiratory diseases in a patient infected with HIV. - Recognise symptoms and signs typical of the respiratory diseases common in HIV infection. - Confidently apply your knowledge on how to approach breathlessness and cough in an HIV-infected patient. - Form a differential diagnosis for an abnormal chest radiograph in an HIV-infected patient and summarise appropriate investigations to determine the cause. - Recognise the appropriate management for common respiratory diseases in HIV infection.
Pneumococcal Infections in HIV	This session covers the epidemiology and risk factors for pneumococcal infection, describes the varying clinical presentations and features, elaborates on the different diagnostics available, and discusses the general and specific management	- List the risk factors for pneumococcal infections. - Describe the various clinical presentations and features of pneumococcal infections in HIV (including pneumonia, meningitis, and septicaemia). - Define the general and specific laboratory diagnostics of pneumococcal infections.

Session	Description	Learning Outcomes
	indicated and available prevention strategies.	- Describe the therapies indicated for pneumococcal infections and debate the use of corticosteroids in meningeal disease. - Discuss the use of vaccination to prevent pneumococcal infection in HIV.
Tuberculosis	This session covers the aetiology, natural history, clinical presentation, differential diagnosis, investigation, and management of tuberculosis infection in HIV.	- State the modes of transmission, the differing clinical stages and the various clinical presentations and features of tuberculosis in individuals with HIV infection (including pulmonary, meningeal, and other non-pulmonary disease). - Describe the general and specific laboratory diagnostics for tuberculosis. - List standard first-line treatment regimens for presumed or known drug sensitive tuberculosis, identify second and third-line anti-tuberculous drugs and the indications for corticosteroids, and appreciate the usual clinical response to anti-tuberculous regimens. - Identify risk factors for drug resistance and how to prevent its development. - Identify potential drug interactions of anti-tuberculous medications and antiretrovirals/other commonly utilised drugs. - Describe the diagnosis of latent tuberculosis.

Drug-induced

Session	Description	Learning Outcomes
Drugs That Can Cause Breathlessness and Underlying Lung Disease	This session looks at drugs commonly associated with causing shortness of breath, the underlying pathogenesis of the pulmonary drug reaction and clinical manifestations.	- Identify the mechanism by which drugs affect the respiratory system and list the top five drugs in each category.

Session	Description	Learning Outcomes
Drug Induced Hoarseness and Stridor	This single objective session explores the causes of drug-induced hoarseness and stridor.	- List the drugs that commonly cause hoarseness and stridor.
Drug-induced Cough and Bronchospasm	This session reviews the possible presentations of drug-induced cough and its causes.	- List the drugs that commonly cause chronic cough.
Drug Induced Hoarseness and Stridor	This single objective session explores the causes of drug-induced hoarseness and stridor.	- List the drugs that commonly cause hoarseness and stridor.

Pulmonary Embolism

Session	Description	Learning Outcomes
Presenting Features of Pulmonary Embolism	Pulmonary embolism (PE) is difficult to detect because patients present with a wide array of symptoms and signs. This module will highlight the breadth of clinical presentations and which signs and symptoms are common in particular age groups.	- Identify the common and rarer presenting features of pulmonary embolism and how these change with patients of different ages.
Symptoms and Signs of Pulmonary Embolism at Initial Presentation	This session highlights the wide range of clinical features that pulmonary embolus (PE) may precipitate in patients.	- Quantify the frequency of individual symptoms and signs of PE at initial presentation.
Risk Factors for Pulmonary Embolism	Explanation of the origins and utilisation of the modified Wells score for pulmonary embolism in practice.	- Integrate the modified Wells score into your routine management of a suspected pulmonary embolism.
Managing Pulmonary Embolism in Special Circumstances	This session discusses the management of a pulmonary embolism in special circumstances including pregnancy, anaemia, thrombophilia and malignancy.	- Safely investigate and treat pregnant patients with a suspected pulmonary embolism. - Decide when it is appropriate for patients with a suspected pulmonary embolism to be managed in an ambulatory care or outpatient setting. - Manage therapy for patients with a suspected pulmonary embolus and severe bleeding or iron-deficiency anaemia.

Session	Description	Learning Outcomes
		- Select which patients, with a confirmed pulmonary embolus, should be investigated for thrombophilia or malignancy.

Lung Disease

Session	Description	Learning Outcomes
Pathway to Diagnosing Interstitial Lung Disease	Having established a history, examination, and chest x-ray (CXR) that suggest a possibility of interstitial lung disease (ILD) as a diagnosis, this session will identify subsequent appropriate investigations to establish a more precise diagnosis.	- Identify appropriate further investigations for a patient with suspected interstitial lung disease (ILD).
Investigation and Management of Interstitial Lung Disease	This session will revise the current classification of Interstitial Lung Disease and review the approach to diagnosis and management of this group of diseases.	- Recall the current classification of ILD. - Identify important aspects of the history, examination and baseline investigations in establishing a differential diagnosis. - Define the role of HRCT thorax, lung functions tests and histology in the approach to diagnosis of specific forms of ILD. - List current treatment options for differing types of ILD.
Interstitial Lung Disease and the Acute Medical Take	This session outlines a variety of ways in which interstitial lung disease (ILD) may present on the acute medical take.	- Identify potential interstitial lung disease (ILD) in an acute admission patient.
Difficulties of Treating Interstitial Lung Disease	This session briefly outlines the complexity and limitations of treating interstitial lung disease (ILD), with an emphasis on those types that can present acutely. It identifies treatments with some evidence of benefit.	- Outline the complexity and limitations of treating interstitial lung disease (ILD), particularly those forms that can present acutely.
Interstitial Lung Disease Case Studies	This session considers different types of interstitial lung disease and key investigations used to arrive at a diagnosis. The different treatment and management	In this session different types of interstitial lung disease will be explored through four case studies which focus on: • Presentation • Medical history

Session	Description	Learning Outcomes
	options available for patients are also covered.	• Investigations • Treatment.

Other resources

Session	Description	Learning Outcomes
Recognising and managing deterioration: - Universal - Advanced	This resource is structured around the ABCDE assessment tool and allows participants to revise their anatomy and physiology, develop their skills and knowledge in the assessment process to recognise deterioration and manage the findings within the scope of their clinical role.	- Develop knowledge needed to undertake a competent ABCDE assessment in the deteriorating patient.
ABCDE Guide to Critical Care for redeployed staff	This slide set provides an introduction to the ABCDE of ICU for redeployed staff.	- Develop skills and knowledge in the ABCDE assessment of an intensive care patient.
Respiratory Pathophysiology	This session provides an overview of pathophysiology, including VQ mismatch, asthma, COPD, pneumonia, ARDS, proning.	- Understand the terms V/Q mismatch and respiratory failure. - Understand the disease process behind some of the most common ICU respiratory admissions. - Understand the nursing requirements of these patients.
Respiratory system - anatomy, physiology & assessment	This slide set provides an overview of respiratory anatomy, physiology, and assessment.	- Recap of the anatomy of the respiratory system. - Understand the role and function in normal respiration. - Understand the definition of internal and external respiration. - Understand what is meant by gas exchange and how it occurs. - Discuss respiratory assessment.
Long Term Conditions for Paramedics: COPD	This session aims to develop your understanding of the pathophysiology of chronic obstructive pulmonary disease and how it affects paramedic practice.	- Describe the pathophysiology of chronic obstructive pulmonary disease (COPD) - Apply the pathophysiology of COPD to paramedic practice and the assessment of patients

Session	Description	Learning Outcomes
		- Manage patients with chronic obstructive pulmonary disease in the out of hospital setting.
COVID Oximetry at home e-learning	People with COVID-19 may become very unwell if their oxygen levels fall too far. The COVID Oximetry @home and COVID Virtual Wards pathways enable people to be monitored in community settings such as care homes. This e-learning provides an overview of pulse oximetry for carers, including how to take the measurements and how to tell others if they are worried.	- Understand why you need to measure someone's oxygen levels. - How to measure oxygen levels. - How to record oxygen levels. - What you should do if you think someone is unwell. - How to tell someone you are worried.
Assessment of breathlessness	This session gives a framework of how to assess breathlessness as an essential first step to appropriate management in the patient approaching the end of life.	- Give a working definition of breathlessness, encompassing the physical experience and other factors. - Recognise the different types of pathophysiology (aetiology) that underlie breathlessness. - Outline the core steps involved in an assessment of breathlessness, to reach a diagnosis and initiate a management plan - listing the key elements of a breathlessness history and examination. - Recognise the range of investigations that can be used to aid diagnosis and treatment of breathlessness, if appropriate for the patient.
Non-drug management of breathlessness	This session reviews non-drug interventions within an integrated approach to the management of breathlessness.	- List the main non-drug options used to alleviate the symptom of breathlessness in end-of-life care patients. - Outline the utility and limitations of these approaches. - Recognise other breathlessness management interventions that are used alongside as part of an integrated approach to symptom control.
Acute Presentations of Tuberculosis (TB)	This session discusses how tuberculosis might present acutely to the emergency department or on the acute medical take (e.g. pulmonary, spinal, meningitis). It also	- Describe the factors that make TB a possible/probable diagnosis in patients presenting to the Emergency Department/Acute Medical Take - Explain the initial management of TB.

Session	Description	Learning Outcomes
	examines the complications of anti-tuberculous chemotherapy that may present acutely (e.g. hepatotoxicity and skin reactions) and their management.	- Identify common side-effects of anti-tuberculous chemotherapy and manage them accordingly.
Variability of Lung Cancer Presentations	This session examines the variability of presentations of lung cancer with reference to the NICE Referral guidelines for suspected cancer ('Two-Weeks Guidelines') and provides an understanding of the work-up involved when diagnosing and treating patients with lung cancer.	- Describe the appropriate action to take when a patient with symptoms of lung cancer presents in a hospital setting - Identify the symptoms that require referral for secondary care - Differentiate between presentations attributable to the tumour and those attributable to paraneoplastic syndrome - List neurological disorders associated with antibodies in lung cancer.
Investigation and Management of Rarer Causes of Haemoptysis	This session discusses the investigation of rarer causes of haemoptysis. The results of investigations are shown and the subsequent management of these conditions is discussed.	- List the initial investigations required in the investigation of haemoptysis - Identify investigation findings that suggest rarer causes of haemoptysis - Recognise the need for involvement of speciality teams - Manage rarer causes of haemoptysis.
The Symptoms and Signs of Sarcoidosis	This session provides an overview of the symptoms experienced by patients with sarcoidosis and of signs found on examination.	- Recognise the signs and symptoms of sarcoidosis involving the lungs and extrapulmonary organs.
Taking an Occupational History	This session focuses on how to take an occupational history, with particular reference to respiratory diseases such as asbestosis and occupational asthma.	- Take a thorough occupational history and explain how respiratory diseases might be triggered by work hazards.
The Difference between BiPAP and CPAP	This session discusses the principle differences between bi-level positive airways pressure (BiPAP) and continuous positive airways pressure (CPAP), and	- Describe the difference between CPAP and BiPAP and state when to use them.

Session	Description	Learning Outcomes
	provides a brief summary as to how they work and when to use them.	
Cough: Investigation and Management and BTS Guidelines	This session focuses on the causes of acute and chronic cough and describes the investigation and management of cough.	- Recognise when an acute cough needs baseline and/or further investigation - Recognise the causes of chronic cough and their management - Discuss the management of intractable cough - Recognise when to refer patients to a specialist cough clinic.
Diagnosis and Treatment of Hyperventilation Syndrome	This session reviews the diagnosis and treatment approaches for patients with chronic hyperventilation syndrome (HVS).	- Recognise the typical presentation of patients with hyperventilation - List discriminating tests required to enable diagnosis - Recognise important discriminating symptoms in the differential diagnosis and be aware of 'red flag' symptoms which suggest more serious pathology in the breathless patient - Formulate a management plan.
Severity Assessment of Pneumonia Using the CURB-65 Criteria	This session covers the severity assessment of patients with community-acquired pneumonia, including the CURB-65 score and its use in formulating an initial management plan.	- Determine the severity of a patient with pneumonia using the CURB-65 score and decide on an initial management plan.
Rarer Causes of Haemoptysis	This session will discuss the rarer causes of haemoptysis.	- Identify the differential diagnoses of haemoptysis.
New Lung Cancer Diagnosis and Management	This session discusses the investigation and initial management of patients with suspected lung cancer, either in clinic or as in-patients, covering the important questions in the history, salient examination points and investigations before a multidisciplinary team discussion.	- List five important questions in undertaking a history in a patient with lung cancer - List five important possible examination findings in a patient with lung cancer - Discuss the essential initial investigations - Describe when a patient is suitable for surgery and why it carries the best prognosis.

Session	Description	Learning Outcomes
Management of Drug Induced Breathlessness	This session looks at investigating and managing a patient with drug induced breathlessness, a commonly overlooked presentation with potentially long-term adverse drug effects. The session looks at how to interpret test results to confirm the diagnosis and how best to manage the patient thereafter.	- Interpret blood, lung function and arterial blood gas tests in lung fibrosis - Interpret x-ray and HRCT chest findings in lung fibrosis - Institute management of a patient with drug induced breathlessness - Identify key pieces of information that should be imparted when counselling a patient with drug induced breathlessness.
Investigation and Management of Sarcoidosis	This session provides an overview of how to investigate a patient with suspected sarcoidosis. It looks at how to follow up those diagnosed with the condition and it includes some information on appropriate treatment.	- Recognise how to make a diagnosis of sarcoidosis - List the initial investigations needed to assess the extent and severity of the disease - Classify the radiological features of sarcoidosis - Identify ways of monitoring disease activity - Identify who needs treatment and with what agent.
Mechanisms behind Haemoptysis in Bronchiectasis	This session explains the mechanisms underlying haemoptysis in bronchiectasis.	- Describe the mechanisms of haemoptysis in bronchiectasis - Outline the management of haemoptysis and bronchiectasis.
Investigation and Management of Hoarseness and Stridor	This session describes hoarseness and stridor and explains the investigation and management of these conditions.	- Describe characteristic symptoms of hoarseness and stridor - List the causes of hoarseness and stridor - List the investigations used to diagnose hoarseness and stridor - Describe the management of hoarseness and stridor.
Importance of Good History	This session focuses on the importance of taking a good history when reviewing a patient with a cough.	- Take a reliable history from a patient with cough so it can be used to organise the most appropriate investigations and management.
Definition and Description of Bronchiectasis	This single objective session describes bronchiectasis and its causes.	- Define bronchiectasis - Describe the causes of this condition.
Common and Serious Respiratory Causes of Cough	This session focuses on understanding and recognising the common causes of cough and the underlying risk factors.	- Describe the common causes of cough, both benign and more serious.

Session	Description	Learning Outcomes
Common Causes of Pulmonary Diseases	This session is a brief overview of the possible causes of shortness of breath in an HIV+ patient.	- Give a differential diagnosis of shortness of breath (SOB) in an HIV+ patient - Recognise that HIV+ patients are at risk of more than one infection at any one time - Recall that bacterial pneumonia is more common in HIV-infected individuals than the general population.
Causes and Risk Factors for Primary and Secondary Pneumothorax	This session revises the causes and risk factors for primary and secondary pneumothorax.	- Describe the aetiology and risk factors for the development of primary and secondary pneumothorax.
Breathlessness Type 1 and Type 2 Respiratory Failure	This session discusses the causes of Type 1 and Type 2 respiratory failure, and why people suffer with these types of respiratory problems.	- Describe the differences between Type 1 and Type 2 respiratory failure and list the causes of each type.

Other resources

- Anatomy and physiology of the respiratory system video.

External resources

- Asthma UK resources
- Nation Institute for Health and Care Excellence (NICE) - Everything Nice says about Respiratory Conditions pathway
- NHS Right Care Respiratory
  Sign in required:
- Education for Health eLearning
- Primary Care Respiratory Academy - CPD Modules
- Royal College of General Practitioners - resources
- RCNiLearning Free Modules
- MIMIS Learning CPD Topics Respiratory Medicine
- Primary Care Issues & Answers – Asthma Webinar

Return to top

Assessment and Airway Management

e-Learning for Healthcare (eLfH and HEE)

All resources

Session	Description	Learning Outcomes
Respiratory system - anatomy, physiology & assessment	This slide set provides an overview of respiratory anatomy, physiology, and assessment.	- Recap of the anatomy of the respiratory system. - Understand the role and function in normal respiration. - Understand the definition of internal and external respiration. - Understand what is meant by gas exchange and how it occurs. - Discuss respiratory assessment.
Assessment of breathlessness	This session gives a framework of how to assess breathlessness as an essential first step to appropriate management in the patient approaching the end of life.	- Give a working definition of breathlessness, encompassing the physical experience and other factors. - Recognise the different types of pathophysiology (aetiology) that underlie breathlessness. - Outline the core steps involved in an assessment of breathlessness, to reach a diagnosis and initiate a management plan - listing the key elements of a breathlessness history and examination. - Recognise the range of investigations that can be used to aid diagnosis and treatment of breathlessness, if appropriate for the patient.
Humidification	Humidification of inspired gases is a vital process by which the body moistens and warms the gases that we breathe. Breathing gases which are not humidified can lead to damage of the cells lining the respiratory tract, impairing ciliary function and increasing the patient's susceptibility	- Choose the optimal method for humidification for your patient. - Identify the principles involved in the working of the different types of humidifiers. - Recognize the importance of humidification and the complications that develop when it is inadequate.

Session	Description	Learning Outcomes
	to respiratory tract infection. This session discusses the methods of delivering humidified gas to the patient and using the respiratory tract to deliver medication.	- List the advantages and disadvantages of the humidifiers in common use. - Describe the different ways of delivering drugs via the airway and the drugs that can be delivered.
Respiratory Management: Oxygen Therapy	This session describes the different types of oxygen delivery and suitability based on the BTS recommendations.	- Recommend appropriate oxygen therapy within the scope of the British Thoracic Society (BTS) 2017 guidelines. - Identify the different delivery devices and the flow rates required to give appropriate delivery of oxygen therapy to achieve target saturations.
Respiratory Management: Humidification	This session discusses the indications, application and documentation of humidification.	- Identify indications for humidification. - Describe different types of humidification devices. - Troubleshoot any issues that may occur.
Respiratory Management: Tracheostomies	This session guides you through the indications for and types of tracheostomy, and the common problems associated with having one. It also explains the use of speaking valves and oxygen delivery.	- Identify indications for a tracheostomy. - Identify different types of tracheostomy tubes. - Identify common problems and how to problem solve these.
Respiratory Management: Incentive Spirometry	Incentive spirometry is designed to mimic natural sighing or yawning by encouraging the patient to take long, slow, deep breaths. This session explains the procedure of incentive spirometry.	- Identify why incentive spirometry is used and understand how to use it.
Respiratory Management: Manual Techniques	This session guides you through what manual techniques are and when they are indicated.	- Identify the indication for and implementation of manual techniques. - Assess efficacy and document appropriately.
Respiratory Management: Suction	This session describes the indications, precautions and contraindications for using suction.	- Identify the indications, precautions and contraindications for suction. - Follow the procedure to effectively implement a nasopharyngeal suction technique, open suction and closed suction via an endotracheal tube used in conjunction with manual hyperinflation. - Assess and troubleshoot efficacy. - Effectively document procedure.

Session	Description	Learning Outcomes
Respiratory Management: ACBT – Active Cycle Breathing Technique	This session guides you through the indications and implementation of the Active Cycle of Breathing Technique (ACBT).	- List the indications for ACBT. - Correctly teach ACBT. - Troubleshoot. - Correctly document treatment.
Basic Airway Management	Patients with airway compromise need prompt recognition and correction using basic airway techniques. These essential skills for emergency physicians are covered in this session	- Clinically identify patients with airway compromise. - Respond to these with simple airway manoeuvres. - Select and introduce airway adjuncts appropriately. - Recognise the need for ventilation and deliver this effectively.
Introduction to Cardiorespiratory Assessment and Clinical Reasoning	This session introduces a conceptual model of clinical reasoning (CR) and outlines a sequential CR process that is closely linked to stages in the assessment.	- Gain an understanding of the hypothetico–deductive clinical reasoning process and application to the assessment of cardiorespiratory patients. - Gain insight about other skills required in the clinical reasoning process and how these are used depending on the patient and the clinical context. - Follow a systematic A-E assessment process that can be expanded upon and tailor made to suit the individual patient.
Aspects of the A-E Assessment: Arterial Blood Gases	This session introduces arterial blood gases and common abnormalities associated with respiratory conditions.	- Explain what an ABG is used for. - State the normal values for ABGs. - List the six steps to analysing ABGs. - Identify common abnormalities associated with respiratory conditions.
Aspects of the A-E Assessment: Auscultation	This session outlines a systematic auscultation technique and gives you the opportunity to listen to a number of different auscultation sounds.	- Describe an effective auscultation technique, taking into consideration the normal surface markings of the lungs and where to place a stethoscope. - Identify normal and abnormal breath sounds and relate findings to the underpinning pathophysiology to build a clinical impression.
Aspects of the A-E Assessment: Chest X-Rays	This session teaches you to use the A-H systematic approach to interpret a chest x-ray as part of your objective assessment, and to identify common abnormalities	- Follow and use the A-H comprehensive assessment of a chest x-ray. - Identify common abnormalities on a chest x-ray and link to pathologies.

Session	Description	Learning Outcomes
Adjuncts: Insufflation Exsufflation (cough assist)	This session discusses the indications, precautions and contraindications for using an insufflation-exsufflation 'cough assist' machine.	- Recognise the indications, precautions and contraindications for using an insufflation-exsufflation 'cough assist' machine. - Follow a procedure of how to set up and deliver treatment, trouble shoot and assess efficacy.
Adjuncts: Intermittent Positive Pressure Breathing	This session guides you through the indications, precautions and contraindications for using intermittent positive pressure breathing (IPPB) and some tips for solving common problems.	- Identify the indications for the appropriate use of IPPB. - Recognise the precautions and contraindications associated with using IPPB. - Identify the main settings and how to adjust for individual patients. - Troubleshoot potential issues during use of the IPPB.
Adjuncts: Non-Invasive Ventilation	This session guides you through non-invasive ventilation and when it is indicated.	- List the indications, precautions and contraindications for using NIV. - Explain how to fit a mask and apply NIV.
On-call respiratory physiotherapy clinical scenarios	In this module there are four on-call scenarios for you to work through to facilitate your clinical reasoning and decide what is the most appropriate management for each one. There is an opportunity for you to reflect at the end of each scenario about what went well, what didn't go so well, and how you might improve.	- Consider the information given in the phone call - review the A-E assessment and identify the patient's problem list. - Review the treatment options and justify your choices. - Reflect on the case study and identify what went well, not so well and what you would do differently next time.
Safe Sedation Procedures in Adults	This session focuses on the knowledge, skills, facilities and equipment required to perform safe emergency department procedural sedation. Commonly used sedation agents and some of their qualities are described.	- Discuss the indications for procedural sedation and analgesia in adults. - Identify at risk patients. - Identify which pharmacological agent is most appropriate in a given situation. - Describe how you would ensure your practice is safe. - Outline appropriate documentation, recovery and discharge considerations. - Recognise pitfalls in sedation.
Spontaneous Pneumothorax	This session covers the assessment and management of primary, secondary and	- Identify and categorise pneumothorax size on a chest radiograph.

Session	Description	Learning Outcomes
	tension pneumothoraces. It includes the use of radiograph investigations and simple aspiration and chest drains.	- Explain the difference in management between primary and secondary pneumathoraces. - Differentiate those patients that require admission from those that can be discharged from the emergency department. - Describe how to safely insert a chest drain using a Seldinger technique. - Give advice to a patient regarding future flying and diving.
Oxygen in Human Physiology	This session reviews the transfer of oxygen from the atmosphere to the body's tissues.	- Define the important gas laws that govern the carriage of necessary gases from the atmosphere to the pulmonary capillaries and beyond. - Explain the transport of oxygen in blood and implications of hypoxia and hypoxaemia. - Describe the effects of various physiological factors on the binding of oxygen to haemoglobin as related to the oxygen-haemoglobin dissociation curve. - Recognise the value of therapies in relieving hypoxia and hypoxaemia. - Explain the pulmonary influences on acid-base homeostasis and processes that destabilise the normal equilibrium in clinical disease.
Respiratory Anatomy	This session covers the essential anatomy required to carry out a clinical pulmonary examination and interpret a chest radiograph. The following four areas are described: thoracic wall, mediastinum, lungs and pleura.	- Identify the intrathoracic structures lying at the level of the Angle of Louis. - Locate the site used for chest drain insertion. - Explain why aspirated foreign bodies tend to go down the right main bronchus. - List the broncho pulmonary segments which are first to be affected in dependent patients. - Describe the surface anatomy sites where the pleura is not covered by the rib cage.

NHS Education Scotland

Session	Description	Learning Outcomes
NHS Education Scotland - Online Respiratory training for physiotherapists: Airway clearance techniques modules	This module discusses the basic airway clearance techniques: - Active cycle of breathing technique - Autonomic drainage - Postural drainage - Percussion - Chest wall vibrations.	- List and describe the various physiotherapy airway clearance techniques (ACT's) available. - Identify the indications for the use of the available ACT's. - State the contraindications and precautions for each ACT. - Basic knowledge and understanding of application of techniques.
NHS Education Scotland - Online Respiratory training for physiotherapists: Intermittent positive pressure breathing (IPPB) module	This module discusses the delivery of intermittent positive pressure breathing (IPPB) through the 'Bird' machine. The technique of IPPB can be delivered through alternative systems, such as non-invasive ventilators and cough assist devices.	- Understand the purpose of IPPB. - Identify the indications for use. - Identify cautions and contraindications to use. - Assemble equipment correctly. - Understand the settings and controls.

External resources

Sign in required:
- British Thoracic Society - eLearning - These e-learning resources are available for BTS members to access free and are for personal use only.
- NHS Respiratory Care and Assessment

Return to top

Diagnostic Imaging

e-Learning for Healthcare (eLfH) and HEE

All resources

Session	Description	Learning Outcomes
Radiographic Procedure	This session focuses on the practical imaging aspects of the x-ray procedure in particular preparation and post-examination requirements.	- Explain how to take a mobile chest x-ray examination on a COVID-19 patient effectively. - Define important pre- and post-examination actions to ensure safe practice. - Describe how to produce a diagnostic image at the first opportunity.
Minimising Risk during Mobile Radiography	This session looks at the measures radiographers can take to minimise risk to themselves, their families, their patients and the wider community. In particular in relation to infection control, preventing the spread of COVID-19 (Coronavirus), communicating effectively and being aware of the psychological and emotional support available to them.	- Define how radiography practitioners/assistants and technologists can work to prevent the spread of COVID-19 (Coronavirus). - Describe how training, good working practice and effective communication can help reduce risk. - Outline the psychological and emotional support available.
Mobile Chest Radiography	This session describes how to use mobile x-ray equipment safely.	- Explain how to use a mobile x-ray machine effectively to perform a mobile chest x-ray examination for a COVID-19 patient. - Understand the parameters which can optimise the radiation dose for a mobile chest x-ray examination on a COVID-19 patient.
Image Evaluation for the Diagnostic Quality of Chest Radiographs Including COVID-19 Cases	This session describes how to effectively apply the 10-point plan to ensure the image is diagnostic for a mobile chest radiograph on a COVID-19 patient. It also	- Effectively apply the 10-point plan to ensure the image is diagnostic for a mobile chest radiograph on a COVID-19 patient.

Session	Description	Learning Outcomes
	provides information on how to identify common pathological appearances on the radiograph of COVID-19 and the importance of communicating findings to the referrer.	- Identify common pathological appearances on the radiograph of COVID-19 and communicate the findings to the referrer.
Image Interpretation – Plain X-rays of the Adult Chest: Introduction	This session covers the principles of safe practice related to image interpretation, along with an overview of the chest image interpretation project. It also discusses terminology along with advice on how to structure a written interpretation.	- Recognise the importance of safe practice relating to image interpretation of the chest radiograph. - Describe an overview of the image interpretation sessions. - Recall some of the commonly used terminology within the chest module. - Discuss the important features of written interpretation.
Plain X-rays of the Adult Chest: General Anatomy and Physiology	This session looks at anatomy of the thoracic cavity and the physiology of respiration. It focuses on identifying anatomy demonstrated on diagrams.	- Identify the anatomy of the chest on diagrams. - Describe the physiology of respiration and gas exchange.
Plain X-rays of the Adult Chest: The Normal Chest Radiograph	This session looks at the normal appearances of a chest x-ray. It covers the radiological anatomy, use of a search strategy, common radiographic abnormalities, and normal variants.	- Identify the anatomy of the chest on a radiograph. - Develop a search strategy when examining chest radiographs. - Use the silhouette sign to locate abnormalities within the thorax. - Recognise common normal variants that may simulate disease.
Nasogastric Tube Placement: Using Chest Radiographs to Identify Nasogastric Tube Placement	This session covers the main principles of correctly identifying the nasogastric (NG) tube position on a chest radiograph. It also includes how to tell if the NG tube should be advanced and the safety issues surrounding this.	- Identify the position of a correctly placed NG tube. - Identify an incorrectly placed NG tube and explain when it must be removed. - Identify when the NG tube needs to be advanced.
Nasogastric Tube Placement: Safe Practice and Clinical Governance	This session highlights clinical governance and safety issues involved with assessing radiographs for the correct	- Recognise 'Never Events' and safety issues that have previously had a negative impact on patient care.

Session	Description	Learning Outcomes
	nasogastric (NG) tube placement. Systems to promote safe practice are also outlined.	- Recognise the importance of safe practice relating to image interpretation of the chest radiograph for correct nasogastric (NG) tube placement. - Identify ways in which safe practice for assessing the nasogastric (NG) tube position can be improved.
Basic Lung Ultrasound	This session will describe the practical aspects of imaging of the lungs and pleural spaces. Two common pathologies in critical care patients are explained and discussed: pleural effusion and pneumothorax.	- Describe how artifacts are generated during basic lung ultrasound and define the associated terminology - Explain how to diagnose a pneumothorax - Describe the appearance of a pleural effusion and differentiate it from a pericardial effusion - Identify the limitations and pitfalls of thoracic ultrasound.
Image Interpretation - Nuclear Medicine: Lung Scanning	This session explains the use of a ventilation and perfusion lung scan for diagnosing suspected pulmonary embolism, how it compares with computed tomography pulmonary angiography (CTPA), how it is performed and how the results can be interpreted.	- Explain the values and limitations of ventilation and perfusion lung scanning in comparison with CT pulmonary angiography (CTPA) - Outline the imaging procedure - Recognise normal image appearances and explain how normal and abnormal results can affect patient management.

Other resources

COVID-19 Resources for Diagnostic Radiographers
- COVID-19 Pandemic: Summary of Current and Emerging Issues for Radiographers.
- Frequency and Distribution of Chest Radiographic Findings in COVID-19 Positive Patients.
- COVID-19 A Case Series to Support Radiographer Preliminary Clinical Evaluation.

Return to top

Paediatrics Recognition and Management

e-Learning for Healthcare (eLfH) and HEE

Asthma

Session	Description	Learning Outcomes
Introduction to Asthma and its Diagnosis in Children	This session identifies the key characteristics of asthma and explores the impact that it has on children and their families. It also explores the issues surrounding the diagnosis of asthma and describes the objective tests that are commonly used to support diagnosis.	- Describe the impact of asthma on children and their families. - Identify the key characteristics of asthma in children. - Explain why it can be difficult to diagnose asthma in children. - Describe the tests used to support the diagnosis of asthma in children.
Overview of Routine Asthma Monitoring in Children	This session provides an overview of the purpose of routine monitoring of asthma in children, highlighting its importance and benefits to patients and the NHS. The structured asthma review is explored with a particular focus on the assessment of control and common reasons for poor asthma control.	- Describe the purpose and importance of routine asthma monitoring in children. - List the key components of a structured asthma review. - Discuss methods for assessing asthma control in children. - Identify common reasons for poor asthma control in this age group.
Pharmacological and Non-Pharmacological Management of Asthma in Children	This session provides an introduction to the pharmacological and non-pharmacological therapeutic options for the management of asthma in children. As a long-term medical condition, ongoing management is the key to control and patient safety.	- Identify methods for assessing inhaler technique and adherence. - Explain the role of non-pharmacological management. - Describe the purpose of regular ongoing treatment in asthma. - List the broad groups of drugs used in the long-term management of asthma in children and identify examples of each. - Describe the phased approach to managing asthma in children.
Recognising and Managing Asthma Attacks in Children	This session provides an overview of asthma attacks in children including their	- List the key measurements required to correctly assess asthma attacks.

Session	Description	Learning Outcomes
	initial assessment and management as well as recommendations for follow-up by an asthma trained Healthcare Professional (HCP).	- Discuss the initial management options for acute asthma in children. - Identify situations where admission to hospital is required. - Explain the role of the post-attack review and when it should take place.
Supporting Self-Management in Asthma in Children	This session introduces the concept of agreed self-management for children with asthma and explores the role of Healthcare Professionals (HCPs) in supporting children and their families by educating them and working with them to develop Personalised Asthma Action Plans (PAAPs).	- Discuss the benefits of effective agreed self-management in asthma. - List the important components of self-management education. - Explain the role of a personalised asthma action plan. - Identify the key action points to be included in a personalised asthma action plan.
Asthma, Eczema and Other Allergies	This session describes three important atopic diseases – asthma, eczema and anaphylaxis. All can profoundly affect a child's health at school. The recognition and management of symptoms in the school environment are also covered.	- Summarise epidemiology, evolution, social impact and in school management of eczema. - Review epidemiology of asthma and non-stigmatising management in school settings. - Outline the extra issues and precautions for a child with difficult asthma. - Describe common allergies, use of antihistamines, and appropriate non-stigmatising avoidance in school. - Describe the use of an adrenaline auto-injector (also known as an epinephrine pen). - Explain accessible and safe delivery of medication needed in school for asthma, eczema or anaphylaxis.

Other Asthma resources

- The care and management of the child with respiratory illness:
    - Primary and Community Care
    - Secondary Care (Ward based - Level 1, Level 2, Level 3).
- Emergency advanced stabilisation and transfer - Ward based (Level 1, Level 2, Level 3)

Respiratory Surge

Session	Description
Acute Transport See Example Clinical Guidelines for transfer of child with bronchiolitis (PDF, 10 mins)	This short overview PDF contains information on 1. Diagnosis, 2. Initial Management, 3. Respiratory Support 4. Management following intubation & 5. Transport considerations. (This is an example from one acute transfer service (CATS) and you must check your local transfer service for their specific guidance). (PDF, 10 mins).
Paediatric Critical Care - Severe Bronchiolitis (PDF, 10 mins)	This 1 page summary sheet provides guidance for those patients with severe bronchiolitis who are being considered for critical care, thus interventions like chest x-ray(CXR), bloods, fluid restriction and antibiotics are appropriate. (This is an example from one acute transfer service (STRS) and you must check your local transfer service for their specific guidance). (PDF, 10 mins).
Pre-transport stabilisation (PDF, 10 mins)	This 1-page guideline is for staff to use as a prompt when preparing a child for safe retrieval. (This is an example from one acute transfer service (STRS) and you must check your local transfer service for their specific guidance). (PDF, 10 mins).
Intraosseous access (DFTB) (Web blog, 15 mins)	A comprehensive overview of intraosseous access through discussion of a case study; including indications, contraindications, technique, sites, landmarks, considerations in an alert child, complications and equipment. (Web blog, 15 mins).
Prepare For Transport: Costas Kanaris at DFTB19 (DFTB) (Video, 20 mins)	An overview of the systematic A-E approach to stabilising a sick child for transport; includes rationale behind considerations such as choice of induction agents, vasoactive agents; fluids and antimicrobials. Stresses importance of teamwork and communication to achieve best possible patient outcome. (Video, 20 mins).

External resources

- Nation Institute for Health and Care Excellence (NICE) - Everything Nice says about Respiratory Conditions pathway
- NICE Bronchiolitis in Children
- Asthma UK resources
  Sign in required:
- Education for Health eLearning
- Primary Care Respiratory Academy - CPD Modules
- MIMIS Learning CPD Topics Respiratory Medicine

Return to top

Paediatrics Assessment and Airway Management

e-Learning for Healthcare (eLfH) and HEE

All resources

Session	Description	Learning Outcomes
Respiratory Examination - History	This is the first of two sessions describing a comprehensive approach to the clinical assessment of an infant or child known to have a respiratory problem. It details what to include in a respiratory history.	- Describe a comprehensive approach to the clinical assessment of an infant or child known to have a respiratory problem. - State what to include in a respiratory history.
Respiratory Examination - Inspection and Examination	This is the second of two sessions describing a comprehensive approach to the clinical assessment of an infant or child known to have a respiratory problem. It details what to include in a respiratory physical examination.	- Describe a comprehensive approach to the clinical assessment of an infant or child known to have a respiratory problem. - State what to include in a respiratory physical examination. - Relate common abnormal findings to their underlying cause.
Respiratory Examination - Neonatal Inspection and Examination	This session describes a comprehensive approach to the clinical assessment of a neonatal patient with a respiratory problem. It details what to include in a respiratory inspection and physical examination.	- Describe a comprehensive approach to the clinical respiratory assessment of a neonatal patient. - State what to include in a neonatal respiratory history, inspection, and physical examination.
Respiratory Examination - Asthma: History and Examination	This is the first of two sessions on childhood asthma. It covers the non-acute clinical presentation of asthma, history taking and clinical examination.	- Recognise the clinical presentation of paediatric asthma. - Explain the detailed history required to make a diagnosis. - Describe the examination of a child who may have asthma.

Session	Description	Learning Outcomes
Respiratory Examination - Asthma: Investigation, Acute Presentation and Differential Diagnosis	This is the second of two sessions covering asthma. It includes investigations and differential diagnosis. It also contains videos of cases showing acute clinical presentation and assessment of severity.	- Select the investigations you would need to help with the diagnosis. - Assess severity of acute asthma. - Describe the differential diagnosis of asthma.
Respiratory Examination - Pneumonia	This session covers paediatric pneumonia, including the recognition of clinical features, aetiology, and treatment.	- Define pneumonia. - Recognise the clinical features of paediatric pneumonia. - Describe the aetiology of pneumonia. - State the features of severe pneumonia. - Describe the treatment of pneumonia.
Respiratory Examination - Bronchiolitis	This session covers bronchiolitis, including its aetiology, natural history, clinical features, and treatment.	- Define bronchiolitis. - Describe the aetiology of bronchiolitis. - Describe the natural history of bronchiolitis. - Recognise the clinical features of bronchiolitis. - Describe the treatment of bronchiolitis.
Respiratory Examination - Stridor	This session covers stridor, including its presentation, pathophysiology, possible causes and treatments.	- Define stridor. - Recognise the typical pathophysiologies of stridor. - Describe the aetiology of stridor. - State the treatments of the causes of stridor.
Respiratory Examination - Tracheostomy	This session covers paediatric tracheostomy including when it may be required, the complications that may occur, choice of tube and the training of carers.	- State the indications for tracheostomy. - List the early and late complications of tracheostomy. - Explain the choice of tracheostomy tube. - Describe the training needs of a carer of a child with a tracheostomy.

Session	Description	- Learning Outcomes
Respiratory Examination - Obstructive Sleep Apnoea	This session introduces obstructive sleep apnoea: describing high risk groups and causes, signs and symptoms, diagnosis, and treatment.	- Define obstructive sleep apnoea (OSA). - Recognise the causes of OSA and high-risk groups. - State the signs, symptoms and complications associated with OSA. - Describe the diagnosis and treatment of OSA.
Respiratory Examination - Bronchiectasis	This session covers bronchiectasis: definition, aetiology, history, and examination findings. At the end there are two short sections discussing cystic fibrosis and primary ciliary dyskinesia (two causes of bronchiectasis). This session does not cover the treatment of bronchiectasis or the full spectrum of investigations that may be needed to investigate a patient with bronchiectasis.	- Describe the aetiology of bronchiectasis. - Define acute and chronic cough. - Recognise the symptoms suggestive of bronchiectasis. - Describe the examination of a child who may have bronchiectasis. - Recognise the pathophysiology and presentation of two particular causes of bronchiectasis: cystic fibrosis and primary ciliary dyskinesia.
Respiratory Physiotherapy: Paediatrics	Chest physiotherapy in paediatrics must take a physiological and developmental approach because of the age-specific physiological differences which change according to development. This session helps you to prepare for working with infants and children presenting with signs of respiratory distress.	- Identify unique differences in anatomy and physiology of an infant compared to an adult. - Follow a systematic approach that includes all the body systems in your assessment. - Identify common respiratory problems and their appropriate management.

Return to top

Paediatrics Diagnostic Imaging

e-Learning for Healthcare (eLfH) and HEE

All resources

Session	Description	Learning Outcomes
Image Interpretation - Radiographs of the Paediatric Chest: Neonatal Disorders - Session 1	This session focuses on the normal anatomy on a neonatal chest and abdomen x-ray. The session also explores the commonly encountered support lines and tubes used in neonatal intensive care.	- Identify the anatomy of the chest and abdomen on neonatal radiographs. - Describe a search strategy for use when interpreting neonatal chest and abdominal radiographs. - Recognise common support lines and tubes used in neonatal intensive care.
Image Interpretation - Radiographs of the Paediatric Chest: Neonatal Disorders - Session 2	This session focuses on the pathologies commonly encountered on a neonatal chest and abdominal. It describes the pathological processes behind each disease, highlights clinical signs and allows recognition of their radiographic appearance.	- Discuss the pathological processes that occur in neonatal chest and abdominal disease. - Identify the clinical presentation of common diseases. - Describe the radiographic appearance of diseases affecting the neonatal chest and abdomen.
Image Interpretation - Radiographs of the Paediatric Chest: Infection - Session 1	This session is the first of two sessions that focus on the radiographic appearances of infections commonly encountered amongst paediatric patients.	- Recognise basic radiographic appearances commonly encountered secondary to chest infection. - Describe the key radiologic appearances and the underlying process they represent in the context of a chest infection.
Image Interpretation - Radiographs of the Paediatric Chest: Infection - Session 2	This session is the second of two sessions that focus on the radiographic appearances of infections commonly encountered amongst paediatric patients.	- Identify basic anatomy of the chest on a radiograph. - Recognise the radiographic appearances of infections. - Recall the difference between upper and lower respiratory tract infection. - Describe the pathologic process that causes the radiological appearances of chest infection on a radiograph.

Session	Description	Learning Outcomes
Image Interpretation - Radiographs of the Paediatric Chest: Cystic	This session looks at disease processes that can give rise to a cystic appearance on chest radiographs.	- Describe the basic anatomy of the bronchial tree. - List three disease processes that can lead to the development of cystic changes within the lung. - Describe the common chest radiographic findings in cystic fibrosis, bronchiectasis and congenital cystic adenomatoid malformation. - Describe to a basic level the causes of these radiographic appearances. - List some common complications of these disease processes.
Image Interpretation - Radiographs of the Paediatric Chest: Congenital Heart Disease	This session focuses on congenital heart disease, its presentation and typical chest radiograph appearances. While often complex medical problems, these radiographic appearances can be relatively simple. The important discriminating radiological features are discussed.	- Describe the differences between the fetal and adult circulation. - Give a basic description of the incidence, causes and commonest types of congenital heart disease. - Appreciate the role of the chest radiograph in the investigation of congenital heart disease. - Look at a chest radiograph performed in a child with congenital heart disease in a systematic fashion and describe the appearances of basic conditions.

Return to top

Rehabilitation

e-Learning for Healthcare (eLfH) and HEE

Coronavirus (COVID-19)

Session	Description	Learning Outcomes
Breathlessness after COVID-19	This session introduces how COVID-19 can lead to breathlessness while outlining the psychological and physical impact it can have on a person.	- Discuss how to measure and monitor the severity of a person's breathlessness. - Explain how to manage breathlessness in people recovering from COVID-19.
Exercise after COVID-19	This session describes how COVID-19 can lead to breathlessness and a decrease in exercise capacity and muscle strength.	- Explain the role of physical activity and exercise in rehabilitation - Discuss the principles of exercise testing, aerobic and resistance training and how to apply them to people recovering from COVID-19.
Cough after COVID-19	This session explains the changes seen in chest x-rays and CT scans following COVID-19.	- Describe the pathology of COVID-19. - Explain how to manage a cough following COVID-19 - Select appropriate cough and chest clearance techniques.
Fatigue after COVID-19	This session describes fatigue in relation to COVID-19.	- Understand the effects of fatigue in people recovering from COVID-19. - Discuss how to employ strategies to manage fatigue in the short and long-term. - Explain other sources of support for fatigue management.

External Coronavirus (COVID-19) recourses

- Primary Care Issues & Answers - COVID-19 Webinars

Other resources

Session	Description	Learning Outcomes
Cancer Conditions: Being Active	This session discusses the positive impact of physical activity on people living with cancer.	- Explain the importance of physical activity for the prevention and management of cancer - Describe the use of physical activity in patients in different stages of cancer, including advanced cancer.

Other resources:

- Self-directed Learning Resources: Breathing - Additional Therapy webpage

Return to top

Intensive Care

e-Learning for Healthcare (eLfH) and HEE

Ventilation

Session	Description	Learning Outcomes
Introduction to Ventilation Acute NIV - Pre-training Questionnaire Post-training Questionnaire	This session discusses the mechanics of respiratory and ventilation, including what can go wrong. It also explains the causes of Type 1 and Type 2 respiratory and ventilatory failure, and non-invasive ventilation and the indications for its use. The contraindications and precautions of non-invasive ventilation are also covered.	- Explain respiration and ventilation including the mechanics of the respiratory pump. - Identify potential ways that ventilation can go wrong. - List the causes and management of Type I and Type II respiratory and ventilatory failure. - Identify the indications for use of non-invasive ventilation. - List the contraindications and precautions of non-invasive ventilation.
Selection of Patients for NIV: Indications and Considerations	This session explains what to do once non-invasive ventilation is initiated and the patient has settled. It also discusses how to continue over the next 24-48 hours and how to progress treatment.	- Recognise COPD and patients in Type II respiratory failure. - Interpret Type II respiratory failure from blood gas results. - Identify indications and contraindications for NIV.
Non-Invasive Ventilation: Set Up	This session covers the key considerations for placing a patient on non-invasive ventilation. It provides an overview of equipment to be used as well as how to interact with the patient during this process.	- Identify the most appropriate/effective equipment and prepare the device correctly. - Select the correct ventilation mode and pressure settings. - Identify the correct drug therapy whilst on NIV. - Explain patient positioning and patient comfort.
Non-Invasive Ventilation: Monitoring	This session discusses the monitoring requirements of a patient receiving non-invasive ventilation.	- Identify the clinical assessments that are required for the patient receiving NIV. - Identify the physiological measures and clinical assessment parameters. - Interpret the NIV machine alarms and set alarm parameters.

Session	Description	Learning Outcomes
		- Explain the importance of patient/machine synchrony and monitoring tolerance/compliance.
Acute Non-invasive Ventilation Ongoing Management and Escalation	This session explains what to do once non-invasive ventilation is initiated and the patient has settled. It also discusses how to continue over the next 24-48 hours and how to progress treatment.	- Explain what an improving patient looks like. - Explain when to escalate a patient. - List the key points when referring to Intensive Care. - State the legal and ethical issues to consider when considering withdrawal of treatment. - Develop an appropriate weaning plan. - Describe the role of domiciliary ventilation for those who may not wean from nocturnal ventilation.
Non-Invasive Ventilation: Difficult Decisions	This session sets out to describe an informative and practical approach to NIV in palliation.	- Identify when palliation might be the right thing to do. - Identify when it is and is not appropriate to start NIV. - Describe the key points to consider when planning withdrawal of NIV. - Describe a protocol for effective communication. - Demonstrate effective documentation.

Mechanical Ventilation Basics	This session provides an overview of non-invasive and invasive ventilation.	- Develop understanding of:
		  • Non-Invasive Ventilation
		  • Invasive Ventilation.
		- Gain insight into which settings effect which values.
		- Discuss the mechanics of ventilation weaning.

Weaning from Mechanical Ventilation	This session describes the process of weaning from mechanical ventilation, the pathophysiology that affects the success of weaning, and the predictors of weaning success and failure. It also describes weaning techniques and the role of tracheostomy and non-invasive ventilation.	- Define the stages of weaning. - Identify the patient who is ready to wean. - Describe the factors that affect weaning success. - List the predictors of weaning success and failure. - Describe the techniques that can be used in the process of weaning.
Non-Invasive Respiratory Support	This session is an outline of continuous positive airway pressure (CPAP) and bi-level ventilation and their role in treatment of acute respiratory failure.	- Define non-invasive ventilation (NIV) and its different modes. - Describe the physiological basis of continuous positive airway pressure (CPAP) and bi-level pressure support ventilation.

Session	Description	Learning Outcomes
		- Identify in which patients a trial of NIV is appropriate. - Outline the characteristics of the equipment used to deliver NIV. - Select the appropriate initial settings when commencing NIV.

Other resources

Session	Description	Learning Outcomes
ABCDE Guide to Critical Care for redeployed staff	This slide set provides an introduction to the ABCDE of ICU for redeployed staff.	- Develop skills and knowledge in the ABCDE assessment of an intensive care patient.
Respiratory Pathophysiology	This session provides an overview of pathophysiology, including VQ mismatch, asthma, COPD, pneumonia, ARDS, proning.	- Understand the terms V/Q mismatch and respiratory failure. - Understand the disease process behind some of the most common ICU respiratory admissions. - Understand the nursing requirements of these patients.

Other resources

- Guidance for Prevention of Ventilator-associated Pneumonia
- Nursing strategies to prevent ventilator-associated pneumonia
- Safe Alarm Setting in Critical Care Areas – Guide

Return to top

Medicines Use

e-Learning for Healthcare (eLfH) and HEE

Inhalers and Nebulisers

Session	Description	Learning Outcomes
Evaluation and Advice on Good Inhaler Technique	This session shows you how to assess your patients' inhaler techniques and describes the different range of inhalers that are available and when different types of inhalers or a nebuliser should be prescribed.	- Describe the different inhaler devices available. - Explain how you will show patients how to use different types of inhalers. - State when to use different inhaler devices.
Administration of Drugs Using Inhalers	This session describes the scientific background and practical aspects of drug administration using an inhaler.	- Describe the factors that make a drug suitable for administration by inhalation. - Explain how an inhaler works and the different devices and spacers that are available. - Identify examples of drugs that are commonly administered by inhalation. - Describe how to use an inhaler effectively in sufficient detail to instruct a patient and carer. - Describe some of the adverse effects that may be associated with inhaled drugs use.

Administration of inhalers:
   • Part 1
   • Part 2
	This module provides help and advice on the administration of medicines via inhalers.	- Understand what medicines are given via inhalers and why.
		- Be aware of when and how inhalers should be administered.
		- Understand how to optimise the administration of medicines via inhalers.

Administration of Drugs Using a Nebuliser	A nebuliser is a device used to administer drugs via inhalation. This session describes how nebulisers work, the drugs that are suitable to be delivered by this	- Describe why medicines may need to be administered by a nebuliser. - Describe the factors that determine how nebulised drugs are deposited in the respiratory tract.

Session	Description	Learning Outcomes
	route and some of the adverse effects associated with nebulised therapies.	- Explain how a nebuliser works and compare it with an inhaler. - Identify examples of drugs that are commonly administered by nebulised solution. - Describe how to prepare a nebuliser for use. - Describe some of the adverse effects that may be associated with nebulised drugs.
Administration of Inhalers	The following videos are for reference, and demonstrate the correct technique for the particular type of inhaler: - Accuhaler Inhaler - Metered Dose Inhaler - Metered Dose Inhaler with a Large Volume Spacer Device - Metered Dose Inhaler with a Small Volume Spacer Device - Autohaler Inhaler - Breezhaler Inhaler - Easyhaler Inhaler - Ellipta Inhaler - Forspiro Inhaler - Genuair Inhaler - Handihaler Inhaler - NEXThaler Inhaler - Novolizer Inhaler - Respimat Inhaler - Spiromax Inhaler - Turbohaler Inhaler.	- How to use the variety of inhaler devices available to treat lung conditions.

Other resources

Session	Description	Learning Outcomes
Drug management of breathlessness	This session reviews the use of drugs and oxygen within an integrated approach to the management of breathlessness in the patient approaching the end of life.	- Describe the appropriate disease modifying treatments for the relevant cause of breathlessness in patients approaching end of life. - Explain how to prescribe and safely administer oxygen for patients with breathlessness in end-of-life care. - List the main drug options used to alleviate the symptom of breathlessness in end of life including use of low dose opioids.
Pharmocology Bronchodilators	This session covers the core pharmacology of the following bronchodilator therapeutics: ß2 agonists, muscarinic antagonists, xanthines and magnesium.	- Identify the role for bronchodilators in the emergency department. - Describe their mechanisms of action. - Describe the pharmacokinetics of the drugs covered. - List the side-effects, cautions and contra-indications of the bronchodilator therapeutics. - Outline the range of drug-drug interactions applicable to each bronchodilator and their consequences.

Return to top

End of Life Care

e-Learning for Healthcare (eLfH) and HEE

Chronic Obstructive Pulmonary Disease (COPD)

Session	Description	Learning Outcomes
Case study: COPD	This session looks at the key issues facing patients with advanced chronic obstructive pulmonary disease (COPD) in their last few months of life. This session uses a case study to illustrate the progression, treatment options and communication skills required to handle these issues.	- Identify the key issues facing patients with advanced COPD in their last few months of life. - Understand the nature of the disease trajectory and its implications for disease management. - Describe the emotional and physical consequences of breathlessness in end-stage COPD. - Describe the drug and non-drug management of breathlessness. - Understand the role of systemic effects and comorbidities in patients with advanced COPD. - Outline a sensible approach to managing terminal care for somebody with end-stage COPD and those dying of other chronic lung diseases.
Initiating conversations about end-of-life care: COPD	This session looks at the key features of end-stage chronic obstructive pulmonary disease (COPD), how to recognise where the patient is on the disease trajectory, and how to assess the impact of the disease on the patient and his or her family.	- Describe the disease trajectory in end-stage COPD. - Identify the transition points where discussions about end-of-life care in COPD are best undertaken. - Give examples of how the transition in the focus of care might be discussed with the patient and family. - Recognise how the emotional and physical consequences of end-stage COPD influence communication with patients and families.
Anaesthesia for Patients with Chronic Obstructive Pulmonary Disease (COPD)	This session gives an overview of COPD and explains the specific implications for anaesthesia of patients with COPD.	- Describe the pathophysiological features of COPD. - Assess the severity of COPD. - Plan an appropriate anaesthetic technique for a patient with COPD.

Breathlessness

Session	Description	Learning Outcomes
Non-drug management of breathlessness	This session reviews non-drug interventions within an integrated approach to the management of breathlessness.	- List the main non-drug options used to alleviate the symptom of breathlessness in end-of-life care patients. - Outline the utility and limitations of these approaches. - Recognise other breathlessness management interventions that are used alongside as part of an integrated approach to symptom control.

Other resources

- Basic Principles of Intensive Care Nursing: Breathing.
- Type II Respiratory Failure podcast.
- Management of Acute Hypercapnic Respiratory Failure in Adults.

Return to top

Palliative Care

e-Learning for Healthcare (eLfH) and HEE

All resources

Session	Description	Learning Outcomes
General Approach to Assessment of Symptoms	This session provides a general approach to the assessment of symptoms, an essential first step before a plan for symptom management and care can be started.	- Outline the core steps in the assessment of symptoms to reach a diagnosis. - Recognise the range of investigations that can be used to aid diagnosis and treatment. - Describe some assessment situations when it is not appropriate to undertake further investigations or initiate treatment.
Agreeing a Plan of Management and Care	Once the patient's symptoms have been assessed a working diagnosis can be made. The clinician can then propose a plan for improving symptoms, discussing any advantages, disadvantages and practicalities with the patient. This session examines some of the different factors involved in agreeing a plan of management and care.	- Identify some of the responsibilities of the clinician in proposing a plan of management. - Recognise the advantages of informed and collaborative decision-making between the clinician and the patient. - Describe the role of family members in agreeing the plan of management and care. - Give examples of situations in which it may not be appropriate to involve the patient in agreeing a management plan. - State some of the reasons why a patient facing the end of life may refuse or withdraw from the plan.
Communicating the Plan of Management and Care	This session discusses the different aspects that need consideration in effectively communicating the management plan to the patient, family/carers and to all professionals and services involved in the patient's care.	- Recognise the need to ensure that the plan for symptom management and care has been clearly communicated to the patient, family and carers as appropriate. - Explain the advantages of clear, timely communication of the symptom management plan to relevant professionals and services. - Describe some of the difficulties that can arise if the plan for symptom management and care has not been communicated well.

Session	Description	Learning Outcomes
Individual Preferences and Cultural Influences on Symptom Management	This session discusses the role of cultural influences and patients' individual preferences on symptom management and care plans.	- Explain the importance of ensuring that a patient approaching the end of life is offered sufficient information, at an appropriate level, to be involved in decision making about their symptom management and care plan and has the opportunity to express their preferences. - Recognise how cultural background influences the individual's approach to progressive illness/end of life, the meaning of symptoms for the patient and ways in which these may impact on management of symptoms and care. - Recognise the influence of one's own personal beliefs and attitudes when deciding and negotiating plans for care and symptom management.
Influence of Transition Points and Crises on Decision-Making in Symptom Management	This session discusses how to deal with transition points and crises, both in terms of initial management options and how these options can be explained and discussed with patients approaching the end of life and their relatives and carers. The ways in which these transition points and crises influence decision-making in symptom management are explored.	- Explain the need to be alert for changes such as infections and unexpected crises in a patient's condition, which may mark transition points in an end of life population. - Assess the signs and symptoms of change and outline initial management options. - Recognise the impact of infections, transition points and crises on patients approaching the end of life and family/carers. - Outline how you can provide supportive communication and information about infections, transition points and crises, so that sensible and appropriate decisions related to symptom management can be made.
Recognising Your Own Limitations in Symptom Management	This session discusses how being aware of your own skills and limitations can improve symptom management and care for patients at the end of life.	- Explain some of the key pressures felt by professionals in coping with symptom management in patients facing the end of life. - Describe how a professional's individual beliefs, values and personal coping strategies can impact on, or influence, patient care. - Describe the responsibilities of professionals to demonstrate self-awareness of their own limitations in

Session	Description	Learning Outcomes
		symptom management and to know when to seek help and support. - Recognise some of the personal skills that help the professional manage themselves and take care of their own well-being.
Assessment of Physical and Cognitive Deterioration in Function	This session provides a framework for the assessment of physical and cognitive deterioration in function in end of life care patients.	- Explain the importance of regularly assessing physical and cognitive function in end of life care patients. - Outline the core elements in assessing physical and cognitive function and the key professionals involved in assessment. - Give examples of standardised tools used in clinical practice and research and their utility/limitations. - Outline the impact of deteriorating physical and cognitive function on the patient and their family/carers.
Discussing hydration	This session focuses on communication with families and carers, both lay and professional, about decisions involving clinically assisted hydration at the end of life.	- Describe the common concerns expressed by patients and families regarding the giving or withholding of clinically assisted hydration at the end of life, including relevant cultural issues. - Review the evidence about the effectiveness of and the legal position regarding clinically assisted hydration at the end of life. - Develop the communication skills to identify and address the concerns raised by patients and families regarding the giving or withholding of clinically assisted hydration at the end of life. - Develop the skills to address the concerns of colleagues regarding the giving or withholding of clinically assisted hydration at the end of life.
Assessment of spiritual wellbeing	Assessment of spiritual well-being is one of the four core areas (also known as domains) of a holistic assessment in end of life care. This session will explore this domain and its potential interactions with the other core areas.	- Define the term spirituality. - Describe the purpose of assessing spiritual well-being in end of life care patients. - Examine practical ways of identifying spiritual concerns in patients approaching the end of life.

Session	Description	Learning Outcomes
		- Describe how spiritual problems may affect other aspects of end of life care.
Recognising the last months and days of life and verifying death	This session offers a framework for recognising patients who are at risk of deterioration and who may die soon (last months of life) and also recognising when death is imminent (last days). The priorities for care of the dying person are discussed and the communication with patients and families needed at these times is explored.	- Use the 'surprise question' to identify patients who may be approaching the end of their life. - Identify some key communication issues for patients and their family/carers in the dying phase and when death is imminent. - List the five priorities for care of the dying patient. - List the clinical signs that verify that a patient has died.
When the dying process is protracted or unexpectedly fast	This session looks at the key issues facing two scenarios: where the dying process is protracted and where it is unexpectedly fast. It discusses how to support those around the patient in these situations.	- Describe the key issues which you could expect in two contrasting situations: where the dying process has been particularly protracted or where it has been unexpectedly fast. - Apply the five priorities of care for the dying person to the situations. - Discuss how to support families and those close to the patient in these situations. - Describe the impact that such situations may have on other patients nearby, staff and volunteers, and how to manage this.
Talking about death and dying	This session explores the cultural issues surrounding death and dying in the UK and offers guidance on how to talk about this often difficult subject.	- Demonstrate an understanding of how different cultures approach death and dying. - Identify cultural barriers to discussing death and dying in the UK. - Recognise the importance of talking about death and dying.
Breaking bad news	This session looks at ways in which to deliver bad news effectively when faced with end of life care situations. It also looks at some of the reasons why professionals find breaking bad news so difficult.	- Discuss areas that health and social care professionals find difficult around breaking bad news and reflect on your own practice. - Discuss the importance of preparation for breaking bad news. - Describe the strategy for breaking bad news using the SPIKES framework.

Session	Description	Learning Outcomes
		- Discuss the need for follow up after breaking bad news. - Identify resources to support your development in breaking bad news.

Other resources

- [End of Life Care (e-ELCA) e-learning resources](#)

Return to top

Clinical leadership learning support

e-Learning for Healthcare (eLfH) and HEE

All resources

Session	Description	Learning Outcomes
Introduction to Leadership and LeAD	This session explores the concepts of leadership in the clinical setting. It also introduces you to the e-learning support for the development of clinical leadership (LeAD) and its relationship with the Medical/Clinical Leadership Competency Framework (MLCF/CLCF).	- Recognise the importance of leadership skills for clinicians. - Explore the key concepts of leadership. - Identify the purpose and outcome of leadership in healthcare. - Describe how LeAD e-learning works to support the MLCF/CLCF. - Identify clinical situations that can support the development of clinical leadership further.
Introduction to the Medical/Clinical Leadership Competency Framework	This session provides an overview of the Medical/Clinical Leadership Competency Framework (MLCF/CLCF). It explains how it has been constructed and how it can be used.	- Explain the rationale behind the development of the Medical/Clinical Leadership Competency Framework (MLCF/CLCF). - Describe the structure of the framework. - Explain shared leadership and how it relates to the framework. - Explain how the framework is being used to influence clinical education, training and development.
Introduction to CLCF: Demonstrating Personal Qualities	This session introduces the Medical/Clinical Leadership Competency Framework domain - Demonstrating Personal Qualities. It examines the elements of competence within the domain and the application of leadership to clinical practice.	- Identify the four competence elements within this domain. - Explain why these elements are important for clinicians. - Examine the competence descriptors for each element and identify examples of how these are relevant to you and the application of leadership to clinical practice. - Demonstrate your contribution to leadership in clinical settings by identifying what you will do to develop competence in demonstrating personal qualities.

Session	Description	Learning Outcomes
Values and Attitudes in Practice	This session explores values, beliefs, prejudice and stereotyping. It encourages reflection on how these issues might affect your working practice and considers how you can uphold the beliefs and values of your workplace. The session supports the development of leadership in clinical settings.	- Define values, beliefs and prejudice. - Explain and reflect on how individual and institutional beliefs are developed. - Make the link between values, beliefs and behaviour. - Understand how effective reflection on difficult situations can be used to change behaviour. - Consider the effect of prejudice and stereotyping on your professional practice. - Consider your role in upholding the values and beliefs of the profession and/or organisation. - Identify how you demonstrate leadership by acting to minimise the negative impact of assumptions and prejudices on patients and other staff.
Team Roles and Personality	This session examines how an individual's personality, consequent behaviours and preferred styles and approaches can impact on others. It encourages reflection on personal behaviour as well as on the behaviour of colleagues. This session supports the development of leadership in a clinical setting.	- Describe the most common approach to identifying aspects of personality and behaviour of individuals in the workplace. - Explain the influence of personality type on behaviour and consider circumstances where preferred behaviours may or may not be appropriate. - Determine the consequences of individuals with different preferences and approaches working together within teams. - Demonstrate your contribution to leadership by identifying the steps you will take to increase team effectiveness.
Feedback for Personal Development	This session considers methods of obtaining feedback from others in order to increase self-awareness and assist with personal development planning. This session supports the development of leadership in clinical settings.	- Detail the principal methods of obtaining feedback from others about personal impact and performance. - Identify and critically evaluate different feedback methods. - List means of using information from such feedback and securing appropriate support. - Describe the link to the Medical/Clinical Leadership Competency Framework.

Session	Description	Learning Outcomes
		- Demonstrate your contribution to leadership by identifying how to develop your own skills at giving feedback.
Errors and Experiences in Healthcare	This session describes the types of error encountered in healthcare settings, ways of identifying errors, and how to prevent errors occurring. It also supports the development of leadership in clinical settings.	- Explain what is meant by patient safety and clinical errors. - Categorise the types of clinical error that can occur, identifying those most likely within your own area of work. - Describe local and national processes for managing safer care. - Identify where the clinician can play a lead role in promoting safer care (using a case study). - Identify learning which may arise from clinical errors (whether by self or others). - Identify how, through demonstrating leadership, you will address issues in the future.
Managing Personal and Professional Development	This session considers the necessity for clinicians to continuously develop in the various roles that make up their professional practice, including leadership. It explores the link between individual practice and that of the organisation. This session supports the development of leadership in clinical settings.	- State the requirements for clinicians to demonstrate a consistently high standard in all aspects of their work. - Understand how individual performance impacts on the wider healthcare system. - Identify the range and means of identifying personal and professional development needs. - Describe the link to the Medical/Clinical Leadership Competency Framework. - Identify any areas for future personal development arising from this module and any appropriate training opportunities available locally. - Demonstrate your contribution to leadership by identifying steps to show improvement in your own practice and leadership.
Using Best Practice	This session considers the features of best practice and how it can help improve personal practice and clinical services by increasing transparency, facilitating	- Describe what is meant by best practice in the context of a clinical service and consider how to source relevant examples of best practice.

Session	Description	Learning Outcomes
	accountability, ensuring equity of provision and improving outcomes.	- List the advantages and disadvantages of using consistent approaches. - List the benefits of clear common processes and approaches shared across the healthcare system. - Describe the reasons behind equity of provision and outcome for the population. - Describe the link to the Medical/Clinical Leadership Competency Framework. - Demonstrate your contribution to leadership in the clinical setting by recommending improvements to clinical guidelines.
Using Policy and Guidance to Ensure Effective Healthcare	This session examines the range of policies and guidance that ensure effective practice within our healthcare organisations. The session encourages clinicians to appreciate the importance of these influences on themselves and on the wider organisations in which they work. Understanding how these frameworks are used and learning how to influence them are key factors in the development of leadership.	- List the principal frameworks (professional, legal and ethical) which have a role in ensuring the delivery of effective healthcare. - Identify the role of team members in adhering to and promoting the principles behind relevant frameworks, for the benefit of patients and the wider service. - Consider situations where non-adherence to governing frameworks has impacted on the service and the wider healthcare system. - Demonstrate your contribution to developing your leadership capabilities through reflection and awareness of the influence of these frameworks on your work.
The Challenge of Probity	This session gives practical scenarios where probity and conflicts of interest occur and examples of the expectations by professional regulators and organisations. Effective leadership requires individuals to continually demonstrate their integrity and sense of probity, especially when engaged in public service.	- Explore and define probity. - Identify how your professional body defines probity and what is required of you. - Discuss and critically evaluate the relationship between probity and effective leadership in healthcare. - Demonstrate your contribution to leadership in your clinical setting by elaborating on the ways in which the challenges of probity may occur and what steps you personally could take to address these.
Introduction to CLCF: Working with Others	This session introduces the Medical/Clinical Leadership Competency	- Identify the four competency elements within this domain.

Session	Description	Learning Outcomes
	Framework domain - Working with Others. It examines the elements of competence within the domain and the application of leadership to clinical practice.	- Explain why these elements are important for clinicians. - Examine the competence descriptors for each element and identify examples of how these are relevant to you and the application of leadership to clinical practice. - Demonstrate your contribution to leadership in clinical settings by identifying what you will do to develop competence in working with others.
Leadership Styles	This session examines what is meant by leadership style, explores the different types of leadership style, and considers which style is likely to be the most effective in different situations. This session supports the development of leadership in clinical settings.	- Examine the key definitions and models of leadership and leadership style. - Describe current predominant thinking around leadership. - Explain how leadership style can be driven by different situations. - State the most likely outcome of adopting the various leadership styles. - Analyse and critique your personal leadership styles and those of others. - Demonstrate your contribution to leadership by identifying leadership approaches to improving the experience of healthcare for patients.
Team Dynamics	This session examines team dynamics. This includes what constitutes a good team in healthcare, the team's development, your contributions to a successful team, and how to intervene in and improve a dysfunctional team. It also gives you the foundations for successfully contributing to leading a team in a clinical setting.	- Define a team and explain the differences between groups and teams. - Explain what constitutes an effective team and its development. - Recognise your personal contribution to effective team working and the skills required for leading a team. - State the interventions required for teams that are not functioning well. - Demonstrate your contribution to leadership through identifying actions to support effective functioning of teams.
Effective Team Working	This session examines how working within and across multidisciplinary teams to deliver and improve services can bring	- Describe the range of teams and team structures that are found in healthcare settings, including those of which you are a part.

Session	Description	Learning Outcomes
	benefits to patients. This session contributes to the development of leadership in clinical settings.	- List the advantages of working across networks to deliver and improve services. - Identify the characteristics and benefits of multidisciplinary teams (MDTs) as well as any associated difficulties. - Demonstrate your contribution to leadership by identifying action to improve the way clinical teams function.
Working in a Group	The session looks at what can make working groups successful, and what you can do to contribute towards achieving the group goals, whether you are the designated chair, or a member of the group.	- Explain how working groups function. - Consider ways in which you can contribute to the effectiveness of a group. - Demonstrate leadership in your field of practice by reflecting on your contribution to a working group.
Coaching for Practice	This session explores values, beliefs, prejudice and stereotyping. It encourages reflection on how these issues might affect your working practice and considers how you can uphold the beliefs and values of your workplace. The session supports the development of leadership in clinical settings.	- Describe the main features of a coaching approach. - Discuss how to create an effective coaching alliance. - Understand key techniques and approaches. - Discover how to motivate yourself and others. - Demonstrate your contribution to leadership by reflecting on coaching in a context relevant to your field of practice.
Introduction to CLCF: Managing Services	This session introduces the Medical/Clinical Leadership Competence Framework domain - Managing Services. It examines the elements of competence within the domain and the application of leadership to clinical practice.	- Identify the four competence elements within this domain. - Explain why these elements are important for clinicians. - Examine the competence descriptors for each element and identify examples of how these are relevant to you and the application of leadership to clinical practice. - Demonstrate your contribution to leadership in clinical settings by identifying what you will do to develop competence in managing services.
Ensuring Development and Learning	This session examines the formal and informal means of reviewing and managing the individual performance of	- Define performance management in the context of the individual.

Session	Description	Learning Outcomes
	other people. It describes key aspects around educational supervision, performance review, mentoring and coaching. The session supports the development of leadership in clinical settings.	- Relate performance management to the formal systems of individual performance review, educational supervision and appraisal. - Identify the skills and techniques associated with conducting effective individual performance review. - Explain the role of mentoring, coaching and counselling in supporting development and improved performance. - Identify where poor performance or inappropriate behaviour calls for the use of formal measures to deal with the situation. - Identify how managing performance relates to clinical leadership.
Organisational Performance	This session examines the sort of information used by healthcare organisations to assess their performance and considers how this information can be used to improve performance. This session supports leadership development in the clinical setting.	- Describe the range of information that can be helpful in indicating performance. - Explain the formal mechanisms and approaches to organisational performance management in the NHS. - Analyse the information provided in a case study to identify key performance issues for a service and decide what actions may be necessary. - Consider how information about performance can be used to inform future plans. - Explore how performance is measured and managed in your own service. - Demonstrate your contribution to leadership by identifying appropriate performance indicators in your service.
Introduction to CLCF: Improving Services	This session introduces the Medical/Clinical Leadership Competency Framework domain - Improving Services and examines the elements of competence within the domain and the application of leadership to clinical practice.	- Identify the four competence elements within this domain. - Explain why these elements are important for clinicians. - Examine the competence descriptors for each element and identify examples of how these are relevant to you and the application of leadership to clinical practice.

Session	Description	Learning Outcomes
		- Demonstrate your contribution to leadership in clinical settings by identifying what you will do to develop competence in improving services.
Introduction to Quality Improvement	This session introduces you to quality improvement in healthcare, in particular the role of the clinician, the discipline of improvement, the people and leadership skills involved, and the main approaches and tools. This session supports the development of leadership in clinical settings.	- Define the term quality improvement. - Explain your role as a clinician involved in quality improvement to others. - List the elements that make up a quality improvement approach, in particular the discipline of improvement. - Identify the key tools and approaches for each of the elements in the discipline of improvement. - Demonstrate your contribution to leadership in your clinical setting by identifying areas for improvement in your own service.
Quality Improvement and Patient Safety	This session explores the importance of patient safety and provide some practical tools for improvement. This session supports the development of leadership in clinical settings.	- Explain the link between quality improvement and safer patient care. - Describe the methods needed to undertake improvements to ensure patient safety and confidence. - Identify how and when process mapping can be used to analyse services. - Explain how patient and carer input can be obtained and used in service improvement. - State means of evaluating improvement and measuring the impact of changes. - Explain how quality improvement processes relate to the broader system. - Demonstrate your contribution to leadership by identifying changes in the way care is delivered in order to improve patient safety.
Minimising Risk in Healthcare Organisations	This session defines risk and via the presentation of various clinical situations, discusses approaches to the management of risk. This session contributes to the development of leadership in a clinical setting.	- Define risk management generally and explain how it applies within the clinical context and to the concept of leadership. - Identify and critique current policies and protocols used locally to manage risk.

Session	Description	Learning Outcomes
		- Describe and categorise potential sources of risk within your area of work. - Describe commonly used tools and techniques for managing risk. - Through consideration of a case study, demonstrate your contribution to leadership by identifying how risk can be systematically managed.
Clinical Governance	This session outlines the principles of clinical governance, including how clinical governance works for individual clinicians, and how clinical governance is applied to whole organisations to assure and improve quality. This session supports the development of leadership in clinical settings.	- Explain how individual clinicians can use governance principles to improve the quality of their care. - Describe the essential components of a structured governance plan within a hospital directorate or GP practice. - Evaluate regional and national factors that impinge on local governance requirements. - Demonstrate how you contribute to the development of leadership by identifying how you would assure the quality of service for patients.
Monitoring Systems of Care	This session explains the term outcomes, the methods commonly used to assess quality, and the contribution of monitoring to ensuring standards are met and that there is equity of provision and outcome. This session supports the development of leadership in the clinical setting.	- Describe the meaning of outcomes in the context of system wide clinical services. - State the mechanisms used to assess quality and outcomes. - Identify opportunities where systems of care might benefit from assessing the quality of provision and service. - Explain the steps that would be necessary to bring a more systematic approach to monitor the outcome of provision. - Develop your leadership by recommending appropriate outcome measures for your service.
Introduction to CLCF: Setting Direction	This session introduces the Medical/Clinical Leadership Competency Framework domain, Setting Direction. It examines the elements of competence	- Identify the four competence elements within this domain. - Explain why these elements are important for clinicians.

Session	Description	Learning Outcomes
	within the domain and the application of leadership to clinical practice.	- Examine the competence descriptors for each element and identify examples of how these are relevant to you and the application of leadership to clinical practice. - Demonstrate your contribution to leadership in clinical settings by identifying what you will do to develop competence in setting direction.
Successful Patient Outcomes	This session examines how patient outcome measures contribute to national and local programmes looking at effectiveness and safety in healthcare and are used to inform service plans nationally and locally. This session supports the development of leadership in clinical settings.	- Identify how national programmes relate to local services. - Examine the type of data and information needed to measure patient outcomes. - Consider the use of patient outcomes information in planning practice and services. - Describe how results from national programmes on patient outcomes can be used constructively to influence individual practice. - Demonstrate your contribution to the development of leadership in your area of practice by identifying relevant national patent outcome measures.

More learning sessions can be found on the eLfH Leadership for Clinicians e-learning programme webpage.

Return to top

Management learning support

e-Learning for Healthcare (eLfH) and HEE

All resources

Session	Description	Learning Outcomes
Working with Others: Developing Networks	This session will increase your knowledge in the importance of developing networks and how your role as a registered practitioner can impact on patient care and the service which you provide. Multi-professional working and learning is essential for any healthcare practitioner. Networking gives you the opportunity to not only work alongside colleagues and other professionals, but also to understand different perspectives in care delivery (including patients and carers).	- Identify opportunities where working with patients and colleagues in the clinical setting can bring added benefits. - Create opportunities to bring individuals and groups together to achieve goals. - Promote the sharing of information and resources. - Actively seek the views of others.
Working with Others: Building and Maintaining Relationships	The aim of this session is to enhance your knowledge and appreciation of the importance of building and maintaining relationships as a newly qualified, or new to role healthcare professional, including the positive impact relationships can have on the quality of patient care and safety.	- Listen to others and recognise different perspectives. - Empathise and take into account the needs and feelings of others. - Communicate effectively with individuals and groups, and act as a positive role model. - Gain and maintain the trust and support of colleagues.
Working with Others: Working within Teams	This session will support you in your team to deliver and improve services.	- Have a clear sense of your role, responsibilities and purpose within the team. - Adopt a team approach, acknowledging and appreciating efforts, contributions and compromises. - Recognise the common purpose of the team and respect team decisions.

Session	Description	Learning Outcomes
		- Lead a team, involving the right people at the right time.
Managing Services: Managing Performance	This session discusses why measuring performance is a key part of delivering high quality, effective and safe services. It helps you consider how to improve performance and give some ideas for how to take this forward.	- Analyse information from a range of sources about performance. - Take action to improve performance. - Take responsibility for tackling difficult issues. - Build learning from experience into future plans.
Improving Services: Ensuring Patient Safety	This session provides information about minimising the risk to patient safety through deliverance of evidence-based practice within the healthcare environment. It discusses how this can improve the quality of care given to patients through root cause analysis, risk assessment and will also consider how healthcare professionals can reflect on lessons learnt following patient safety incidents.	- Identify and quantify the risk to patients using information from a range of sources. - Use evidence, both positive and negative, to identify options. - Use systematic ways of assessing and minimising risk. - Monitor the effects and outcomes of change.
Improving Services: Encouraging Improvement and Innovation	This session explores ways to support the creation of a climate of continuous service improvement.	- Question the status quo. - Act as a positive role model for innovation. - Encourage dialogue and debate with a wide range of people. - Develop creative solutions to transform services and care.
Improving Services: Facilitating Transformation	This session looks at actively contributing to change processes that lead to improving healthcare.	- Model the expected change. - Articulate the need for change and its impact on people and services. - Promote changes leading to systems redesign. - Motivate and focus a group to accomplish change.
Setting Direction: Identifying the Contexts for Change	This session helps you explore how to be aware of the range of factors to be taken into account when identifying the contexts for change.	- Demonstrate awareness of the political, social, technical, economic, organisational and professional environment. - Understand and interpret relevant legislation and accountability frameworks.

Session	Description	Learning Outcomes
		- Anticipate and prepare for the future by scanning for ideas, best practice and emerging trends that will have an impact on health outcomes. - Develop and communicate aspirations.
Assertiveness in the Workplace	Assertiveness is getting the attention and the respect you deserve while at the same time, respecting the views of the person you are talking to. It's a two-way process consisting of adult, professional and constructive dialogue. This module gives you the confidence to apply the skills of assertive behaviour in the workplace so benefiting yourself and your team.	- Identify the difference between passive, aggressive and assertive behaviour. - Understand how assertive behaviour can get your desired outcome. - Understand the principles of being assertive. - Identify the importance of giving and receiving honest feedback. - Identify how to apply the skills of assertive behaviour in the workplace.
Coaching Skills	This module will enable you to identify and understand some of the principles of successful coaching, and is your first step on the path to becoming a successful coach to help people find their focus and be the best they can be.	- Identify and understand the principles of coaching. - Understand how coaching can be used in the work context. - Be able to apply a simple model for coaching – GROW. - Know when and how to use coaching skills. - Be clear about the coach/coachee relationship.
Coaching to Support Change	This module looks at how coaching can be applied as a means of developing specific areas of knowledge and skill to allow a person to perform to the best of their abilities in their job role - particularly when experiencing times of change.	- Understand how coaching can support staff through times of change. - Define workplace coaching and how it differs from other types of coaching. - Understand how workplace coaching will benefit the individual, the manager and the organisation. - Understand the process and benefits of three-way contracting.
Dealing with Difficult People	Dealing with difficult people is something we will all have to do at some time and no workplace is without them. This module uses a number of scenarios to introduce how you can deal more effectively with difficult people.	- Recognise the common behaviours of a 'difficult' person. - Understand the reasons why dealing with difficult people should not be avoided. - Understand the LEAD model and how this can be a useful tool when dealing with difficult people.

Session	Description	Learning Outcomes
		- Understand how dealing with difficult people professionally and appropriately can have a positive outcome for all concerned.
Empowering the Manager – Managing Upwards	Managing upwards involves a range of skills in order to get what we need from our manager, whilst keeping them happy too. Sometimes it's necessary to say no to our manager and we must do so assertively without causing any ill-feeling. This module covers three specific skills of influence, negotiation and delegation to help with the process of managing upwards.	- Identify a range of common work styles and understand how to deal with them. - Be able to receive delegated work more clearly, with explicit measures of time and quality expectations. - Identify skills you already have that can be utilised in managing upwards. - Plan to say 'no' without upsetting the boss. - Self-awareness – what can you do differently to change the results you get with your manager.
Performance Management	This module introduces the concept of performance management as a way of effectively managing and supporting the individuals within your team so effectively increasing your overall team performance and contribution to the organisation.	- Identify personal barriers to dealing with performance problems. - Set clear goals for yourself and your team members. - Be more effective in giving reward and encouragement for a job well done. - Identify and differentiate between performance and behaviour issues within the workplace.
The Situational Leader	This module introduces theories and concepts you can use to help you become a more effective leader and manager.	- Recognise how different situations will require different management styles. - Understand why consistent leadership does not necessarily mean treating All staff exactly the same. - Recognise different leadership styles and how a combination of these styles is more effective than just choosing one.

More learning sessions can be found on the eLfH Leadership Foundations e-learning programme webpage.

Return to top