Primary Care Respiratory Update

Winter 2022 Issue 25

Your members' magazine packed with useful features, clinical updates, educational updates, respiratory news and opinion.

In this edition...

Primary Care Respiratory Society

100/6 + 200/6 = £1.06 million

Luforbec could support annual cost improvements of £1.06 million on average per ICS/Health Board vs Fostair pMDIs NHS list price[1,2]

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Luforbec 100/6 is indicated for adult asthma and COPD (FEV_1 <50% predicted normal)[6] Luforbec 200/6 is indicated for asthma in adults[7]

Prescribing Information: Luforbec® 100/6 and 200/6 pressurised metered dose inhaler (pMDI) Consult the full Summary of Product Characteristics (SmPC) before prescribing. Presentation: Pressurised inhalation solution. Luforbec 100/6 pMDI: Each dose contains beclometasone dipropionate (BDP) 100 micrograms (mcg) and formoterol fumarate dihydrate 6 mcg. Luforbec 200/6 pMDI: Each dose contains beclometasone dipropionate (BDP) 200 mcg and formoterol fumarate dihydrate 6 mcg. **Indications:** ***Asthma:*** Regular treatment of asthma where use of an inhaled corticosteroid/long-acting $beta_2$-agonist (ICS/LABA) combination is appropriate: patients not adequately controlled on ICS and as needed short-acting $beta_2$-agonist, or patients already adequately controlled on both ICS and LABA. ***COPD*** **(Luforbec 100/6 only):** Symptomatic treatment of patients with severe COPD (FEV_1 <50% predicted normal) and a history of repeated exacerbations, who have significant symptoms despite regular therapy with long-acting bronchodilators. **Dosage and administration:** For inhalation in adult patients (≥18 years); not recommended for children and adolescents under 18 years. ***Asthma:*** **Maintenance therapy:** Luforbec 100/6 pMDI: 1–2 inhalations twice daily. Luforbec 200/6 pMDI: 2 inhalations twice daily. 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BDP in Luforbec is characterised by an extrafine particle size distribution which results in a more potent effect than formulations of BDP with a non-extrafine particle size distribution (100mcg of BDP extrafine in Luforbec are equivalent to 250mcg of BDP in a non-extrafine formulation). When switching patients from previous treatments, it should be considered that the recommended total daily dose of BDP for Luforbec is lower than that for non-extrafine BDP containing products and should be adjusted to the needs of the individual patient. **Contraindications:** Hypersensitivity to the active substances or to any of the excipients. **Warnings and precautions:** Not intended for initial management of asthma. Treatment should not be initiated during an exacerbation, or during significant worsening or acutely deteriorating asthma. Treatment should not be stopped abruptly. Medical attention should be sought if treatment is ineffective. Patients should be advised to take Luforbec every day even when asymptomatic. Treatment should be discontinued immediately if the patient experiences a paradoxical bronchospasm. Use with caution (which may include monitoring) in patients with cardiac arrhythmias, especially third degree atrioventricular block and tachyarrhythmias, aortic stenosis, hypertrophic obstructive cardiomyopathy, severe heart disease, particularly acute myocardial infarction, ischaemic heart disease, congestive heart failure, occlusive vascular diseases, arterial hypertension, aneurysm, thyrotoxicosis, diabetes mellitus, phaeochromocytoma and untreated hypokalaemia. Caution should be used when treating patients with known or suspected prolongation of the QTc interval (QTc > 0.44 seconds). Formoterol itself may induce QTc prolongation. Potentially serious hypokalaemia may result from $beta_2$-agonist therapy and may also be potentiated by concomitant treatments (e.g. xanthine derivatives, steroids and diuretics). Particular caution is advised in severe asthma as this effect may be potentiated by hypoxia. Formoterol may cause a rise in blood glucose levels. Luforbec should not be administered for at least 12 hours before the start of anaesthesia if halogenated anaesthetics are planned due to risk of arrhythmias. Use with caution in patients with pulmonary tuberculosis or fungal/viral airway infections. An increase in pneumonia and pneumonia hospitalisation in COPD patients receiving ICS has been observed. Clinical features of pneumonia may overlap with symptoms of COPD exacerbations. Systemic effects of ICS may occur, particularly at high doses for long periods e.g. Cushing's syndrome, Cushingoid features, adrenal suppression, decrease in bone mineral density, cataract and glaucoma and more rarely, psychological or behavioural effects including psychomotor hyperactivity, sleep disorders, anxiety, depression and aggression. Consider referral of patients reporting blurred vision or visual disturbances to an ophthalmologist as causes may include cataract, glaucoma or rare diseases such as central serous chorioretinopathy. Prolonged treatment with high doses of ICS may result in adrenal suppression and acute adrenal crisis. **Interactions:** Possibility of systemic effects with concomitant use of strong CYP3A inhibitors (e.g. ritonavir, cobicistat) cannot be excluded hence caution and appropriate monitoring is advised. Beta-blockers should be avoided in asthma patients. Concomitant administration of other beta-adrenergic drugs and theophylline may have potentially additive effects, therefore exercise caution. Concomitant treatment with quinidine, disopyramide, procainamide, phenothiazines, antihistamines, monoamine oxidase inhibitors (MAOIs) and tricyclic antidepressants can prolong the QTc interval and increase the risk of ventricular arrhythmias. L-dopa, L-thyroxine, oxytocin and alcohol can impair cardiac tolerance towards $beta_2$-sympathomimetics. Concomitant treatment with MAOIs including agents with similar properties (e.g. furazolidone, procarbazine) may precipitate hypertensive reactions. Concomitant treatment with xanthine derivatives, steroids, or diuretics may potentiate a possible hypokalaemic effect of $beta_2$-agonists. Hypokalaemia may increase the likelihood of arrhythmias in patients receiving digitalis glycosides. 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Refer to SmPC for full list of side effects. **Legal category:** POM **Price and Pack:** £20.52 1x120 actuations. **Marketing authorisation (MA) No(s):** PL 35507/0204, 35507/0205 **MA holder:** Lupin Healthcare UK Ltd, The Urban Building, Second Floor, 3-9 Albert Street, Slough, Berkshire, SL1 2BE, United Kingdom. **PI Last Revised:** June 2022. AeroChamber Plus® is a registered trademark of Trudell Medical International.

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Ref: 1. NHS BSA. Drug Tariff. https://www.nhsbsa.nhs.uk/pharmacies-gp-practices-and-appliance-contractors/drug-tariff Accessed: October 2022. **2.** UK General Practice Prescribing Data July 2021 - June 2022 https://www.nationalarchives.gov.uk/doc/open-government-licence/version/3/. **3.** Carbon Footprint Limited, Life Cycle Assessment Report 2022. Data on File. **4.** Certifications of carbon neutrality for Luforbec 100/6 & 200/6 pMDI. **5.** MIMS: Inhaler Carbon Emissions. https://www.mims.co.uk/inhaler-carbon-emissions/respiratory-system/article/1739635. Accessed: October 2022. **6.** Luforbec 100/6 pMDI. Summary of Product Characteristics (SPC). Lupin Healthcare UK Limited. **7.** Luforbec 200/6 pMDI. Summary of Product Characteristics (SPC). Lupin Healthcare UK Limited. Fostair® is a registered trademark of Chiesi Ltd

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Primary Care Respiratory Update

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ASTHMA RIGHT CARE

PCRS

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Initiate discussions with your patients to help empower them to adopt best practice

Support patients to best manage their condition for effective symptom control

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Asthma Right Care (ARC) is a global initiative originated, developed and led by the International Primary Care Respiratory Group (IPCRG) - www.IPCRG.org/asthmarightcare. The 2022 Asthma Right Care Programmes has been sponsored by Trudell Ltd. The sponsor has had no input into the content of this programme.

Guest Editors Update

Katherine Hickman, *Chair PCRS Executive*

'Dear Doctor, the care I have received has been life-changing for myself and my family. The biologics trial has changed my quality of life, then from this, it has also changed the quality of my family life together. I have gone from struggling to walk upstairs and missing most family activities to a combination of walking 18 miles in the last 3 days on a recent holiday with my family. I am grateful for every staircase and step I take, honestly, I just can't believe how fortunate I have been.'

We must never underestimate how life-changing asthma treatment can be. For the majority, this is simply ICS or ICS/LABA alongside good adherence and inhaler technique. For a few, though, this is not enough, and it is our duty as clinicians to identify those that would benefit from biologics, be proactive in finding them, and refer them promptly to secondary care. I am, therefore, delighted to introduce our latest pragmatic guide on severe asthma, which guides you through this process, ensuring the right patients end up in the right place with the right care.

Also in this issue, there has been a major shift in how COPD is assessed and classified announced by GOLD. Fiona Mosgrove takes you through the implications of these changes and for anybody writing or updating their local guidelines this will be invaluable reading.

So hands up anybody who is struggling to get their heads around ICS, and no I don't mean inhaled corticosteroids, ICB, HWB, PBs, LHWBs, or PCNs? You are not alone. Members of our Service Development group expertly unpick the jargon, reveal what the acronyms actually mean, and how to navigate the current architecture of our NHS.

Although the PCRS conference 2023 may seem a long way off, planning for the programme is already very much underway. I believe that if we are to truly disseminate our message of good respiratory care for all far and wide, we need to get more bums on seats in 2023. It is difficult to attend our conference without leaving excited and inspired. We are, therefore, launching Project 500 to try and get 500 delegates to our conference for 2023, and for this, we need your help. Over the next few months, we will be coming up with a number of tips and strategies to try and help get regular delegates back, but also our current PCRS members, and of course attract new friends and colleagues to our conference.

Finally, I commend you to read the tributes to my predecessor, Carol Stonham. Carol is a mentor, a friend, and an inspiration and, quite frankly, a damned hard act to follow! She has steered the PCRS effortlessly through a global pandemic and demonstrated such unbelievable leadership skills and I believe we have emerged stronger and fighting. I credit much of this to Carol. Above all, though, Carol has used her voice to stand up for primary care and raise the profile of PCRS time and time again. I still remember standing and listening to the national call while in the school playground at pick-up and hearing her take on Professor Andrew Menzies-Gow over the restart of spirometry in primary care. I smiled, to whoever was watching in the playground, with the knowledge that Carol has got us well and truly on the map, we are here to stay and I relish the challenge of taking up the mantle.

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PCRS Conference 2023

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21st - 23rd September 2023

Telford International Centre

Severe asthma – A pragmatic guide for primary care practitioners

Steve Holmes,[1] Will Carroll,[2] Fiona Mosgrove,[3] Angela Pugh,[4] Robert Stone[5]

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This pragmatic guide on the identification, referral and ongoing management of adults and children with severe asthma has been developed by an expert group led by Dr Steve Holmes, a GP based in Shepton Mallet, Somerset and including Will Carroll, University Hospital of the North Midlands, Stoke-on-Trent, Fiona Mosgrove, Clinical Lead Grampian Respiratory Improvement Programme, Angela Pugh of the University Hospital of Llandough Cardiff & Vale University Health Board and Robert Stone, Taunton and Somerset NHS Foundation Trust.

Key facts:

- Asthma UK suggest that there are an estimated 5.4 million individuals living with asthma in the UK.[1]
- Around 5% of people with asthma have severe asthma.[2] This equates to around 200,000 people in the UK.[1]
- Only around 18% of people with asthma who would benefit from specialist asthma care receive the appropriate referral.[3]
- It is estimated that ~50,000 patients with severe asthma may be eligible for biologic therapy, although currently <10,000 are receiving such therapy.[4]

Introduction

Asthma is a chronic respiratory disease that is estimated to affect around 5.4 million people in the UK.[1] The severity of asthma symptoms can fluctuate over time and in response to specific triggers which can precipitate acute exacerbations, which can be described as moderate, severe or life-threatening.[5] Patients with asthma require ongoing monitoring and management to identify triggers and ensure optimal control of symptoms on a day to day basis.[5,6] Inhaled corticosteroids (ICS) and long-acting bronchodilators (LABA) are the mainstay of treatment along with short-acting bronchodilators for as-needed, short-term use.[5,6]

A proportion of patients, however, will continue to experience daily symptoms and acute exacerbations despite the prescription of standard asthma medications. This may be due to poor adherence to therapy, poor inhaler technique or a requirement for an increased dose of medication. For a small number of patients, the reasons for apparent poor control may be because their asthma is driven by airways inflammation that is less responsive to standard inhaled corticosteroid therapy – these patients

are described as having severe asthma and are the most difficult to treat group of patients with asthma.[1,7]

An estimated 4 out of every 100 people with asthma are living with severe asthma. In the UK, this equates to around 200,000 people.[1] Patients with severe asthma are at the highest risk for severe, life-threatening asthma exacerbations and often live with debilitating daily symptoms as well as the consequences of frequent courses of oral steroids used to treat their condition. These patients require referral for specialist review in a severe asthma service where options for further treatments can be assessed including biologic therapy, bronchial thermoplasty or immunosuppressant therapy.[8]

In 2020, the Primary Care Respiratory Society (PCRS) published a pragmatic guide for primary care to support the identification, review and, where appropriate, referral of patients with poorly controlled asthma.[8] Since then several biologic agents for the treatment of patients with certain subtypes of severe asthma have been approved for use in the UK. Here we provide an updated pragmatic guide to reflect novel tools, initiatives, and pathways of care for people with severe asthma to ensure they are identified, referred for specialist review, and, where appropriate, have access to biologic therapy.

Severe asthma

Severe asthma is caused by uncontrolled airway inflammation due to the persistent activation of specific inflammatory pathways. The British Thoracic Society (BTS) and the Scottish Intercollegiate Guidelines Network (SIGN) use measures of asthma control to define asthma severity. Individuals with more than two asthma attacks a year or persistent symptoms with short-acting beta-2-agonist (SABA) use more than twice a week, despite specialist-level therapy for asthma and comorbidities, have severe asthma. (Table 1).[5] The ERS/ATS joint guidelines define asthma severity based upon the treatment required. Severe

Table 1. Definition of asthma exacerbations[5]

Definition of asthma exacerbations in adults	Definition of asthma exacerbation in children and young people
Moderate acute • Increasing symptoms • PEF >50–75% best or predicted • No features of acute severe asthma	**Moderate acute** • Able to table in sentences • SpO_2 ≥92% • PEF ≥50% best or predicted • Heart rate o ≤140 bpm in children aged 1–5 yrs o ≤125 bpm in children 5 yrs • Respiratory rate o ≤40/min in children aged 1–5 yrs o ≤30/min in children 5 yrs
Acute severe Any of: • PEF 33–50% best or predicted • Respiratory rate ≥25/min • Heart rate ≥110 bpm • Inability to complete sentences in one breath	**Acute severe** • Cannot complete sentences in one breath or too breathless to talk or feed • SpO_2 <92% • PEF ≥50% best or predicted • Heart rate o >140 bpm in children aged 1–5 yrs o >125 bpm in children 5 yrs • Respiratory rate o >40/min in children aged 1–5 yrs o >30/min in children 5 yrs
Life threatening Any one of the following in a patient with severe asthma: • Clinical signs: altered conscious level, exhaustion, arrhythmia, hypotension, cyanosis, silent chest, poor respiratory effort • Measurements: PEF <33% best or predicted, SpO_2 <92%, PaO_2 <8 kPa, 'normal' $PaCO_2$ (4.6–6.0 kPa)	**Life threatening** Any one of the following in a patient with severe asthma: • Clinical signs: exhaustion, hypotension, cyanosis, silent chest, poor respiratory effort, confusion • Measurements: PEF <33% best or predicted, SpO_2 <92%
Near-fatal • Raised $PaCO_2$ and/or requiring mechanical ventilation with raised inflation pressures	

bpm, beats per minute; $PaCO_2$, partial pressure of CO2; PaO_2, partial pressure of oxygen; PEF, peak expiratory flow; SpO_2, oxygen saturation; yrs, years.

asthma requires medications suggested for Global Initiative for Asthma (GINA) steps 4 and 5 (high dose ICS + LABA, leukotriene receptor antagonist [LTRA], or theophylline) for the previous year or systemic corticosteroids for at least 6 of the previous 12 months to prevent asthma becoming uncontrolled, or which remains uncontrolled despite this therapy.[9]

Patients with a current diagnosis of severe asthma are estimated to account for around 5% of all asthma patients, equating to around 200,000 individuals in the UK.[2,10]

Proactive identification of patients with poor asthma control

Proactive identification of patients with poor asthma control is essential to optimise treatment and reveal the subset of patients with severe asthma.

A search of the primary care practice database can be used to identify patients for urgent review. For example, a history of asthma exacerbations: patients requiring two or more courses of oral corticosteroids (OCS) for asthma exacerbations in the previous 12 months should be referred for secondary care review. SABA use/prescribing and hospital admission frequencies are other metrics that can be used to identify patients with poor asthma control including those with severe asthma. Patients with severe asthma are likely to be experiencing daily symptoms; their symptom burden may have become normalised for them, and they might consider that they are managing those symptoms effectively with what is in fact an overuse of their rescue SABA therapy.[11] There are currently no formal guidelines on which to define a threshold for rescue SABA overuse based on prescription frequency. PCRS suggest that the prescription of three or more SABA canisters in a 12-month period may indicate SABA over-reliance and prompt an urgent review with a view to referral for secondary care review. In Wales, guidelines suggest that adults requesting 6 or more SABA canisters a year require an urgent review and patients collecting fewer than 12 preventer inhalers each year (assuming a 1 month supply per prescribed inhaler) should be highlighted for review.[12] The National Bundle of Care for Children and Young People with Asthma advises that all children and young people who have been prescribed more than 3 short-acting reliever inhalers in the previous 12 months are invited for an urgent review of their asthma control.[4]

Asthma Right Care (ARC) is a global initiative developed by the International Primary Care Respiratory Group (IPCRG) and launched in the UK by PCRS in 2019 that aims to enable the identification of patients using levels of SABA that might indicate poor asthma control (https://www.pcrs-uk.org/resource/asthma-right-care). Identifying such patients and understanding and addressing the underlying reasons for SABA overuse, such as poor adherence to their maintenance medication, is a valuable approach to both improving asthma care and identifying the subset of patients who may require specialist evaluation.

Box 1: How to access Asthma Right Care educational resources and practical tools.

To access the Asthma Right Care suite of resources and tools visit the PCRS website at https://www.pcrs-uk.org/resource/asthma-right-care

Resources available open access include:

- An article describing the nine good asthma care processes.
- Practice and pharmacy posters highlighting the benefit of regular preventer inhaler therapy.
- A set of playing cards to trigger conversations with healthcare teams, and between pharmacists and patients regarding the use of/reliance on SABA inhalers.
- An article describing the building blocks of a good asthma review in adults.

The NHS Accelerated Access Collaborative (AAC) identified access to biologic agents for patients with severe asthma as a key target for their Rapid Uptake of Products (RUP) programme.[4] AAC have worked with a number of organisations to develop tools to facilitate the identification of patients with severe asthma who may require biologic therapies as part of their package of care. One such tool is the SPECTRA Primary Care Clinical System resource, developed in collaboration with AstraZeneca to facilitate the search of practice databases to identify patients with risk factors that may indicate severe asthma. These patients can then be invited for an asthma review by their primary care team.

Box 2: How to access the SPECTRA Clinical System resources

To access clinical system resources and reporting you can register via the website at www.suspected-severe-asthma.co.uk

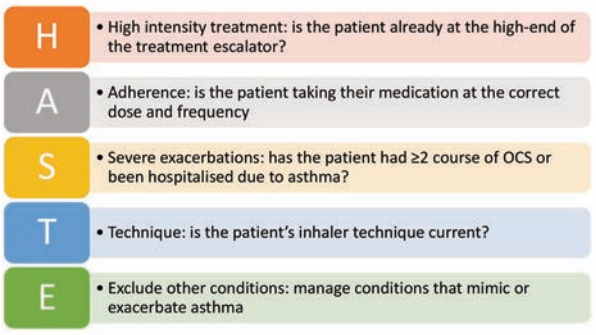
Additional information and support is available:
Telephone: 01332 546 909
Email: support@suspected-severe-asthma.co.uk

When to suspect severe asthma

The role of primary care is to identify those patients whose asthma is not well controlled and understand the reasons for their poor symptom control. Poor asthma control may be due to poor adherence to their current prescribed regimen, incorrect inhaler technique resulting in under-dosing of their prescribed medi-

cation, exposure to avoidable triggers, smoking (or exposure to second-hand tobacco smoke) or the effects of comorbid conditions which can be optimised with current treatments. The HASTE tool provides an aide memoire for healthcare professionals undertaking asthma reviews to collate the key information that may indicate a referral for specialist evaluation is appropriate (Figure 1).

Figure 1. The HASTE checklist.[16]



OCS, oral corticosteroid.

A diagnosis of severe asthma may be considered when asthma control is not achieved despite:

- Confirmation of the asthma diagnosis.
- Optimisation of asthma medication including dose of ICS and, as appropriate, addition of long acting bronchodilators, LTRAs or theophylline.
  - Consideration of maintenance and reliever therapy (MART) with appropriate ICS-formoterol inhalers.
- A review and coaching of inhaler technique.
- A review of their exposure to known and emergent triggers.
- A review of their general health to identify any comorbid conditions or aggravating problems such as smoking.

A reasonable timeframe to attempt optimisation of treatment would be 6 months.[13] Table 2 provides an algorithm for the identification, referral, and ongoing care of patients with severe asthma, highlighting the red flags indicating severe asthma requiring referral for specialist evaluation.

Pathways of care for patients with severe asthma

When severe asthma is suspected the patient should be referred for secondary care specialist review. In 2021, recommendations were made to improve referral process from primary to specialist care.[14] These include the direct referral of patients with suspected severe asthma to a severe asthma network (or service) by both primary and secondary care teams.

NHS England and NHS Improvement recommend that all adults newly diagnosed with severe asthma should receive a multidisciplinary team (MDT) review of their care by a specialist asthma MDT hosted by a designated severe asthma specialist centre.[2] Although Wales does not have a commissioning service for asthma, the All Wales Prescribing Advisory Group (AWPAG) recommended that the severe asthma specialist teams can assess the suitability of patients for biological medicines, including making use of the All Wales Severe Asthma multidisciplinary team. Similar pathways are yet to be established in Scotland and Northern Ireland. The situation is less clear for children and young people. Currently, severe asthma services for children are not formally commissioned and details are lacking of the specific requirements of a specialist difficult asthma service. Therefore, the severe asthma service provided for children and young people by specialist respiratory centres varies between providers. Referral for tertiary level specialist opinion should be considered if, despite secondary care specialist review, the patient and clinician agree that clinical improvement does not match their expectations.

Box 3: An example of a digital tool to support specialist referral decision making

One tool to support specialist referral decision making is the Asthma Referral Identifier. This is a referral decision tool developed by a panel of experts in the field of asthma care in collaboration with AstraZeneca and is based on GINA Global Strategy for Asthma Management Prevention 2020. The Asthma Referral Identifier is available via GP Notebook (https://gpnotebook.com/en-gb/asthma-refer-id/index.cfm) and uses medication history, history of exacerbations, hospitalisations, ICU care, and SABA use in the previous 12 months to generate a summary report and, for patients who might benefit from an asthma review by a specialist clinician, a referral letter.

Treatment of the patient with severe asthma

Biologic agents are prescribed in tertiary and some secondary care settings by specialist severe asthma multi-disciplinary teams.[4] In England, it is estimated that ~50,000 patients with severe asthma may be eligible for biologic therapy, although prescribing data suggests between 8,000 and 10,000 patients are currently receiving such therapy.[4,15] These agents specifically target the inflammatory pathways that drive the pathogenesis of severe asthma, reducing symptoms and exacerbations, and they reduce the need for oral steroids. Biologics approved for the treatment of severe asthma in the UK include omalizumab and mepolizumab from the age of 6 years, dupilumab from the age

Table 2. Algorithm for the identification, referral and ongoing care of patients with severe asthma.

Element	Actions and responsibilities		Useful resources/tools
Identification of patient with possible/suspected severe asthma:	• Via annual review • Via practice database search • Via follow-up after an exacerbation		SPECTRA Clinical System resources: To access clinical system resources and reporting you can register via the website at www.suspected-severe-asthma.co.uk
5-step primary care review: *Recommended maximum time to attempting optimisation: 6 months (Oxford Academic Health Science Network, April 2022)*	1. Confirm asthma diagnosis 2. Review and optimise asthma medication 3. Review inhaler technique and coach as appropriate 4. Review exposures, including smoking and second-hand tobacco smoke exposure 5. Review general health and comorbid conditions (known and emergent)		Asthma Right Care educational resources and practical tools. To access the Asthma Right Care suite of resources and tools visit the PCRS website at https://www.pcrs-uk.org/resource/asthma-right-care
Red flags indicating need for referral for specialist evaluation:	Any of the following despite confirmation of asthma diagnosis and optimisation of standard management: ▸ Two or more courses of oral corticosteroids over the past 12 months ▸ Two or more emergency attendances, admission or unscheduled hospital visit due to asthma over the past 12 months ▸ History of intubation or admission to an intensive care unit or high dependency unit due to asthma ▸ Three of more SABA inhalers prescribed and confirmed as used in the last 12 months		HASTE tool: https://www.oxfordahsn.org/wp-content/uploads/2022/05/AB-podcast-poster.pdf SPECTRA Clinical System resources To access clinical system resources and reporting you can register via the website at www.suspected-severe-asthma.co.uk
Referral to secondary/ tertiary care:	Referral should include clinical findings supporting a suspicion for severe asthma and confirmation and associated findings from the 5-step primary care review. Referral letter to include: • Reason for referral • Current asthma treatment and previously tried treatment • Number of courses of steroids (for asthma) in previous 12 months • Number of emergency department and hospital admission for asthma in previous 12 months • Number of ICS-containing inhalers prescribed in previous 12 months • Any relevant comorbidities • Results of relevant investigations (e.g. spirometry, PEFR monitoring, blood eosinophil count, FeNO, total IgE) • Smoking history and BMI		Asthma Referral Identifier available via GP Notebook: https://gpnotebook.com/en-gb/asthma-refer-id/index.cfm
Ongoing management responsibilities:	Primary care team: • Annual asthma review • Ensure SNOMED code for severe asthma is applied (once severe asthma diagnosed)	Specialist care team: • Prescribing biologics • Monitoring response to biologic treatment (annual review) • Training on self-administration of medication where appropriate • Obtaining consent and registering patients with the UK Severe Asthma Registry	AAC Consensus Pathway: Management of Uncontrolled Asthma in Adults, April 2022. Available at: www.oxfordahsn.org

AAC, Accelerated Access Collaborative; BMI, body mass index; ICS, inhaled corticosteroid; PEFR, peak expiratory flow rate; SABA, short-acting bronchodilator.

of 12 years and reslizumab and benralizumab in adults (Table 3). They are given regularly either in hospital as an injection or infusion or at home self-injected by patients.

For those patients not eligible for biologic therapy, a proportion will benefit from specialist intervention to optimise their standard medication regimen, address specific comorbidities or

Table 3. Biologics approved for the treatment of severe asthma in the UK (correct as of December 2022).

Biologic agent	Mechanism of action	Indication	Dose and administration	Eligibility criteria[a]	Most common adverse events
Omalizumab[17]	Binds to IgE thereby inhibiting IgE-mediated inflammation	For adults and children ≥6 years of age with moderate to severe persistent asthma whose asthma symptoms are not well controlled with asthma medicines called inhaled corticosteroids	Subcutaneous Every 2 week or every week (base on IgE and weight)	IgE-mediated asthma Continuous or frequent OCS (≥4 courses in the previous 12 months)	Headache and injection site reactions (pain, swelling, erythema, pruritus)
Mepolizumab[18]	Inhibits IL-5, a cytokine responsible for the growth, differentiation and activation of eosinophils, thereby reducing the production and survival of eosinophils	For adults and children ≥6 years of age with severe eosinophilic asthma	Subcutaneous Every 4 weeks	If eosinophils ≥300 cells/μL: • ≥4 exacerbations in previous 12 months OR continuous OCS If eosinophils ≥400 cells/μL: • ≥3 exacerbations in previous 12 months needing systemic CS	Headache, injection site reactions (pain, swelling, erythema, pruritus) and back pain
Benralizumab[19]	Inhibits IL-5, a cytokine responsible for the growth, differentiation and activation of eosinophils, thereby reducing the production and survival of eosinophils	For adults with severe eosinophilic asthma inadequately controlled despite high-dose ICS plus LABA	Subcutaneous Every 4 weeks for the first 3 doses, then every 8 weeks	If eosinophils ≥300 cells/μL: • ≥4 exacerbations in previous 12 months OR continuous OCS If eosinophils ≥400 cells/μL: • ≥3 exacerbations in previous 12 months needing systemic CS	Headache and pharyngitis
Reslizumab[20]	Inhibits IL-5, a cytokine responsible for the growth, differentiation and activation of eosinophils, thereby reducing the production and survival of eosinophils	Adults with severe eosinophilic asthma inadequately controlled despite high-dose ICS plus another medicinal product for maintenance treatment	Intravenous 3 mg/kg every 4 weeks	Eosinophils ≥400 cells/μL ≥3 exacerbations in previous 12 months needing systemic CS	Increased blood creatine phosphokinase and anaphylactic reaction
Dupilumab[21]	Inhibits IL-4 through the Type 1 IL-4 receptor and IL-4 and IL-13 signaling through the respective Type 2 receptors	Adults and adolescents (≥12 years) with severe asthma with type 2 inflammation who are inadequately controlled with high dose ICS plus another medicinal product for maintenance treatment	Subcutaneous Every 2 weeks	Type 2 inflammation-associated asthma Raised blood eosinophils (≥150 cells/μL), raised FeNO and ≥4 exacerbations in the last 12 months Ineligible for mepolizumab, reslizumab or beralizumab or has not responded to these agents	Injection site reactions, conjunctivitis, arthralgia, oral herpes and eosinophilia

[a] NICE Technology appraisal guidance: Omalizumab, https://www.nice.org.uk/guidance/ta278/chapter/1-Guidance; mepolizumab, https://www.nice.org.uk/guidance/TA671/chapter/1-Recommendations'; benralizumab, https://www.nice.org.uk/guidance/TA565/chapter/1-Recommendations; reslizumab, https://www.nice.org.uk/guidance/TA479/chapter/1-Recommendations; dupilumab, https://www.nice.org.uk/guidance/TA751/chapter/1-Recommendations.

FeNO, fractionated nitric oxide; ICS, inhaled corticosteroids; IgE, immunoglobulin E; LABA, long-acting beta-agonist; OCS, oral corticosteroid.

Figure 2. The AAC consensus pathway for the management of uncontrolled asthma in adults[16]

ED, emergency department; FeNO, fractiona; exhaled nitric oxide; MDT, multi-disciplinary team; OCS, oral corticosteroid; SABA, short-acting beta-agonist; SAC, severe asthma centre.

issues around adherence that may prevent optimal control. A small proportion of patients will remain poorly controlled and ineligible for biologic therapy with few alternative treatment options at this time. It is essential that these patients are identified and monitored by specialist asthma care teams in collaboration with primary care colleagues and continue to receive annual asthma reviews with their primary care providers.

Monitoring and follow-up of the patient with severe asthma

All patients with asthma should receive an annual asthma review with their primary care team.[6] Patients with severe asthma receiving biologic therapy will remain under specialist care where their response to treatment will be monitored and treatment adjusted as required to achieve optimal symptom control. Patients with confirmed severe asthma receiving shared care (primary and secondary care) or referred back to primary care for ongoing management, may require more frequent review and additional support from their primary care team. Patients receiving biologic therapy will have direct access to and regular review by their secondary care team. These patients should also continue to receive their annual asthma review with the primary care team to monitor patients from a holistic perspective, monitor prescription refills and address mental health and psychological well-being issues that may not be captured during secondary care consultations.

The AAC Consensus Pathway for the management of adults with uncontrolled asthma published in June 2022, recommends that local health care systems should consider implementing an integrated care model with the formation of a respiratory MDT that includes a respiratory consultant, a specialist nurse, a practise nurse, a GP, a district nurse, and a pharmacist (Figure 2).[16] This approach would ensure a personalised model of care enabling diagnostic clarification, complex patient discussions and identification of patients with potential severe asthma earlier.

Pragmatic Guidance

See overleaf.

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A proactive approach should be taken to the identification of patients with potential severe asthma.

- Consider a proactive search of your clinical practice database to identify patients with markers of poor asthma control for urgent review. Example metrics include:
  - Three or more SABA inhalers prescribed and confirmed as used in the last 12 months
  - Fewer than 12 preventer canisters collected in the last 12 months (assuming each canister is 1 months' supply)
- Consider using an aide memoire such as the HASTE tool to quickly review and identify patients who might benefit from specialist referral and evaluation.

Take a 5-step approach to the review of patients identified with uncontrolled asthma. If no improvement is observed despite optimised treatment, refer for specialist care.

1. Confirm asthma diagnosis and consider objective measures of (i) asthma control (e.g ACT or ACQ6 questionnaires) or evaluation of markers of Type 2 inflammation (e.g elevated eosinophils or IgE)
2. Review and optimise asthma medication
3. Review inhaler technique and coach as appropriate
4. Review exposures, including smoking and second-hand tobacco smoke exposure
5. Review general health and comorbid conditions (known and emergent)

A patient with potential severe asthma should be referred for specialist review when:

- Two or more courses of oral corticosteroids over the past 12 months
- Two or more emergency attendances, admissions or unscheduled hospital visits due to asthma over the past 12 months
- History of intubation or admission to an intensive care unit or high dependency unit due to asthma

Identify how the Severe Asthma Service operates in your locality. Asthma services are increasingly being networked with respiratory teams working collegiately to deliver uniform care across geographic regions using a hub and spoke model.

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GOLD 2023: Implications for primary care of patients with COPD in the UK

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In this article we review the major changes in the 2023 GOLD report as they impact on the initial and ongoing pharmacological management of COPD and consider the implications for primary care in the UK. Dr Fiona Mosgrove is a GP in Aberdeen and Clinical Lead for the Grampian Respiratory Improvement Programme. Dr Tracey Lonergan is the Policy Coordinator for the Primary Care Respiratory Society and Medical Writer with a special interest in respiratory disease.

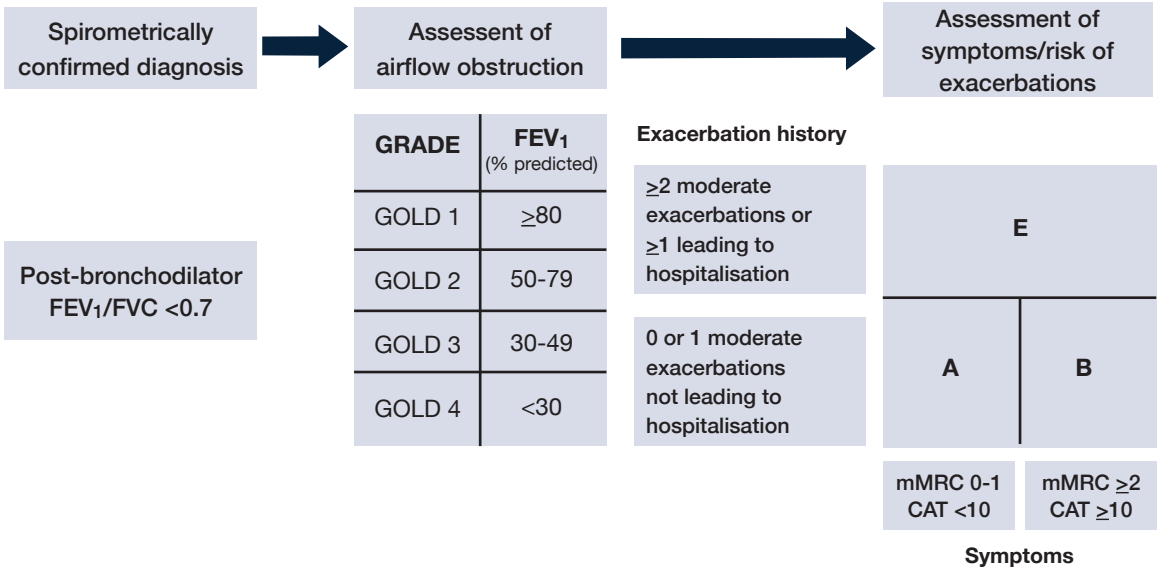
Background

Chronic obstructive pulmonary disease (COPD) is the second most common lung disease in the United Kingdom.[1] An estimated 2.2% of the adult population are living with a diagnosis of COPD in 2022, equating to more than 1.2 million people.[1] While the prevalence of COPD in the UK is comparable to that of other European countries, we have the 3rd highest mortality rate from the disease.[1,2] These figures are a stark reminder that we still have some way to go to improve the lives and outcomes of people diagnosed with COPD in the UK.

Over the past decade, the UK has been playing catch up in terms of clinical guidelines for the diagnosis and management of COPD. In an attempt to address this, from a primary care perspective, in 2017 the Primary Care Respiratory Society (PCRS) published a treatment algorithm for COPD in the UK focusing on the pharmacotherapeutic management aspect.[3] In 2018 the National Institute for Health and Care Excellence (NICE) issued updated guidance for the prevention, diagnosis, and management of COPD, the first major update since 2004.[4] Unfortunately, the 2018 revision omitted two key aspects of pharmacotherapy for COPD: the role of triple inhaled therapies and the duration of oral corticosteroid (OCS) treatment. Following a consultation process in 2018, these omissions were considered to be sufficiently significant to require an immediate update, with revised guidelines published in 2019.[5] In contrast, reports from the Global Initiative for Chronic Obstructive Lung Disease (GOLD) have been updated every 18–24 months over the past decade, adapting to emerging insights into the pathobiology of the disease and the results of clinical trials of new treatment options.[6] The latest GOLD report, issued in November 2022, includes a number of significant changes incorporating the results of recent longitudinal studies and Phase 3 drug trials.[6] These studies are changing how we view COPD at the most fundamental level and consequently how we approach the treatment of patients.

In this article, we review the major changes in the 2023 GOLD report as they impact the initial and ongoing pharmacological management of COPD. We also consider the updated recommendations from NICE published in 2019 and whether our 2017 consensus guideline for the treatment of patients with COPD in the primary care setting remains relevant.

Figure 1. The GOLD ABE Assessment Tool[6]



CAT, COPD Assessment Test; MRC, Medical Research Council; FEV_1, forced expiratory volume over 1 second; FVC, forced vital capacity.

2023 GOLD guidelines

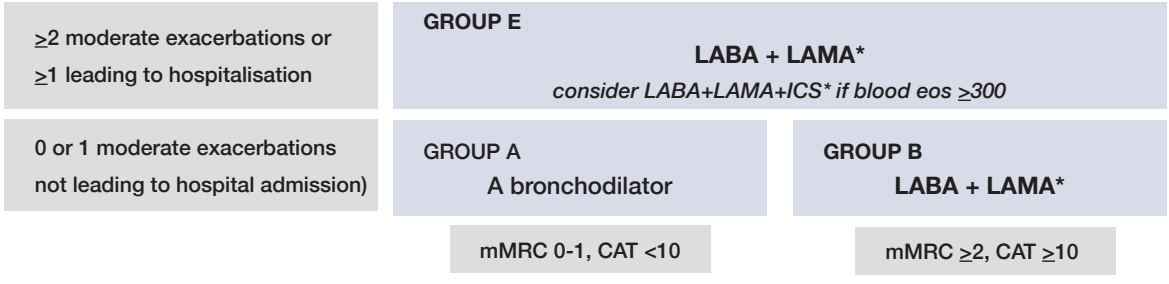
Assessment and classification of COPD

The latest GOLD guideline includes a major change in the way COPD is assessed and classified.[6] The GOLD Refined Assessment Tool, first introduced in 2017, included spirometric assessment of airflow obstruction and grouping of patients based on symptoms (primarily breathlessness) and recent history of exacerbations (as an indicator of future exacerbation risk). The original model stratified patients into four groups (A, B, C and D) based on high or low exacerbation risk and high or low symptoms. Initial pharmacological treatment was determined on the basis of these groupings. The recommendation for patients with a low exacerbation risk was a bronchodilator for those with a low symptom burden (Group A) and a long-acting bronchodilator (LABA or long-acting muscarinic agent [LAMA]) for those with a high symptom burden (Group B). For patients with a high exacerbation risk, a LAMA was recommended for those with a low symptom burden (Group C) with combination therapy (LAMA + LABA or LABA + inhaled corticosteroid [ICS]) for those with a high symptom burden (Group D).

While the assessment of severity based on spirometric evaluation remains, the grouping of patients by symptom burden and future exacerbation risk has changed in the 2023 update (Figure 1) along with the recommended initial pharmacotherapy for each group (Figure 2).[6]

Management of patients with a low risk of future exacerbations. While treatment for patients with a low exacerbation risk and low symptom burden (Group A) remains the same, a

Figure 2. Initial pharmacological treatment of COPD[6]



* single inhaler therapy may be more convenient and effective than multiple inhalers

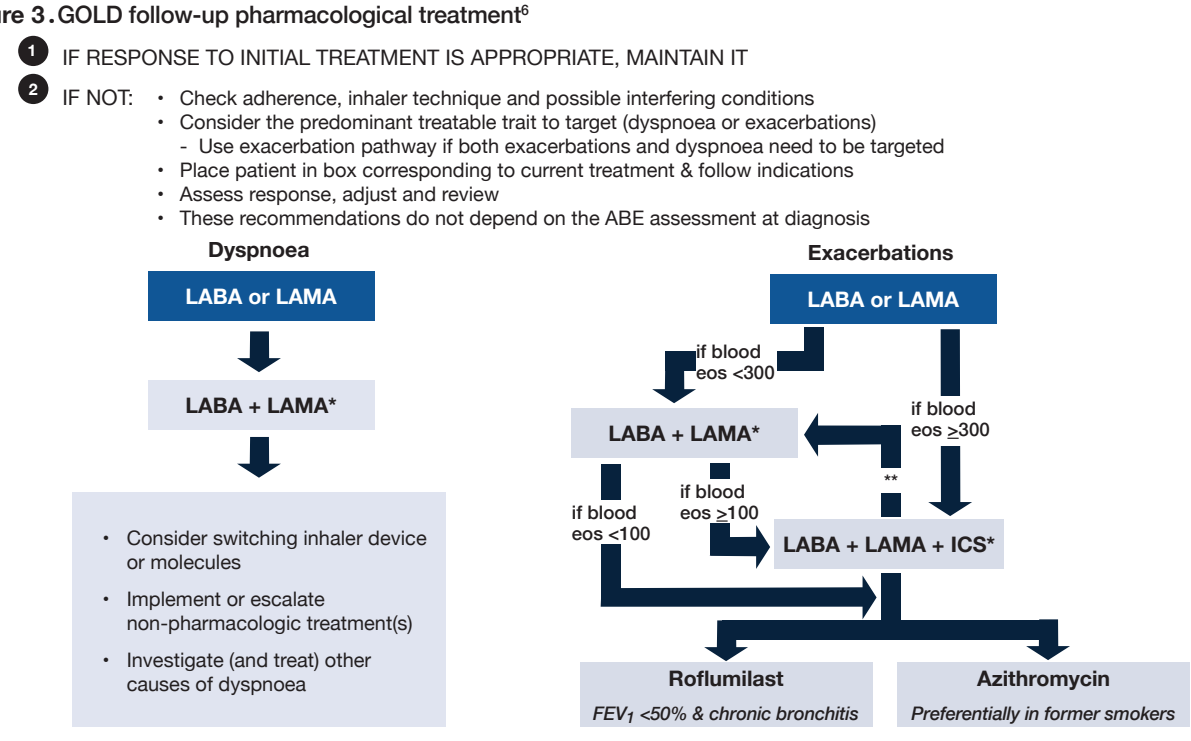
CAT, COPD Assessment Test; ICS, inhaled corticosteroid; LABA, long-acting bronchodilator; LAMA, long-acting muscarinic agent; MRC, Medical Research Council.

monotherapy approach has been abandoned for patients with a low exacerbation risk and high symptom burden (Group B).[6] For these patients, the initial treatment should be LABA + LAMA combination therapy, preferably in a single inhaler. These recommendations are based on the results of Phase 3 clinical trials of several LABA/LAMA combinations, which consistently demonstrated improved lung function and health-related quality of life compared with either agent alone, and also when compared with a LABA + ICS regimen.[7] Indeed, the 2023 report is very clear that there is no longer a role for the LABA + ICS combination for the initial treatment of patients with COPD at low risk for exacerbations.

Management of patients with a high risk of future exacerbations. Perhaps the most significant change is that patients at high risk for exacerbations are no longer stratified by symptom burden.[6] Instead, these patients are grouped together as Group E, with initial treatment being a LABA + LAMA combination (Figure 2). For these patients, a more rational approach to ICS use is recommended, guided by clinical factors and blood eosinophil levels. Patients that are unlikely to benefit from an ICS are those with a blood eosinophil count <100 cells/µL. ICS therapy can be considered for patients with a blood eosinophil count between 100 and <300 cells/µL who have had one moderate COPD exacerbation in the previous year. Patients most likely to benefit from ICS therapy are those with a blood eosinophil count >300 cells/µL, a history of hospitalisation for COPD exacerbations, ≥2 moderate exacerbations a year or with a history of, or concomitant asthma. When considering starting an ICS, blood eosinophils are not the only useful factor. There are known harms of ICS use, including an increased risk of pneumonia and of mycobacterial infection. Patients with a history of recurrent pneumonia and those with a previous mycobacterial infection should not routinely be started on ICS as the harms may well outweigh the benefits. These fundamental changes to the classification and initial treatment of patients with a high risk of future exacerbations reflect the findings of the ECLIPSE study. This study showed that eosinophil count, an indicator of underlying inflammation, was a better predictor of response to ICS therapy than was a high symptom burden.[8]

Management of patients with ongoing symptoms or exacerbations. The rational approach to the use of ICS therapy based on evidence of an underlying inflammatory process, greatly simplifies both the approach to initial treatment and the follow-up treatment decisions (Figure 3).[6] The first step for any

Figure 3. GOLD follow-up pharmacological treatment[6]



* single inhaler therapy may be more convenient and effective than multiple inhalers

** Consider de-escalation of ICS if pneumonia or other considerable side effects. In case of blood eos ≥300 cells/µl de-escalation is more likely to be associated with the development of exacerbations

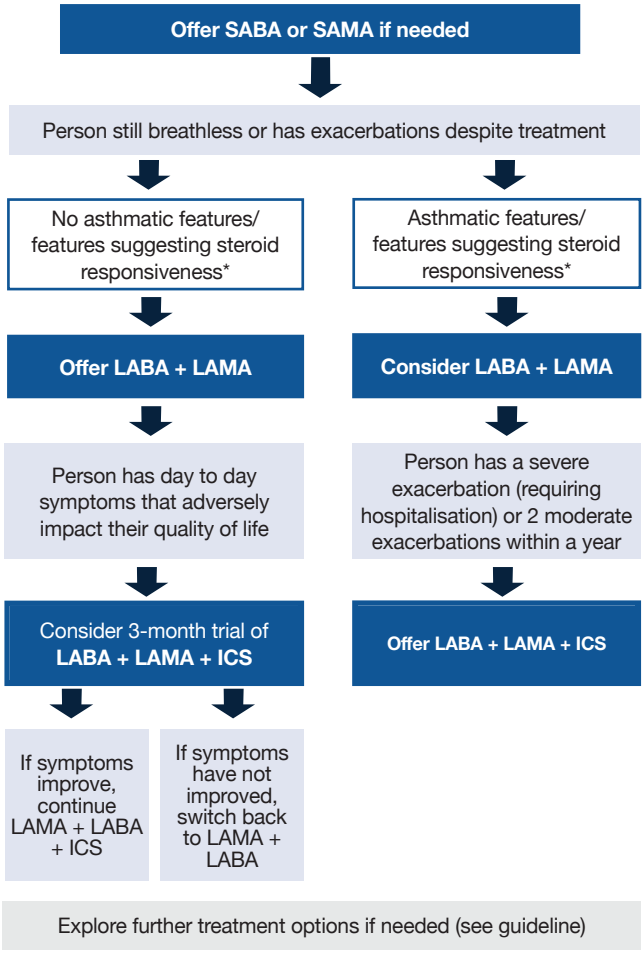
CAT, COPD Assessment Test; eos, eosinophils; FEV1, forced expiratory volume over 1 second; ICS, inhaled corticosteroid; LABA, long-acting bronchodilator; LAMA, long-acting muscarinic agent; MRC, Medical Research Council.

patients with ongoing symptoms or repeated exacerbations is to review and optimise their current treatment regimen – check inhaler technique, consider whether any comorbid conditions are present or require review. Next steps depend on whether the patient has ongoing breathlessness or repeated exacerbations, regardless of their initial grouping.

Patients with ongoing breathlessness who were receiving bronchodilator monotherapy can be escalated to combination LABA + LAMA therapy.[6] For those already on combination therapy, switching to an alternative device or molecule can be considered alongside a focus on treatment optimisation, non-pharmacological management, and investigation of alternative causes of breathlessness.

Patients with ongoing exacerbations can be escalated to triple therapy including an ICS if elevated eosinophils to >300 cells/µL, or to roflumilast (for those with an FEV_1 <50% and chronic bronchitis) or azithromycin (preferentially in former smokers).[6] However, the reliance on elevated blood eosinophils as the single biomarker for ICS initiation in exacerbating patients has its critics, not least because the question remains as to when to assess for eosinophils as a patient with a recent exacerbation who has received oral steroids (prescribed or via their emergency pack) may not meet the 300 cells/µL cut-off.

Figure 4. NICE inhaled therapies algorithm[5]



* Asthmatic features/features suggesting steroid responsiveness in this context include any previous secure diagnosis of asthma or atopy, a higher blood eosinophil count, substantial variation in FEV_1 over time (at least 400ml) or substantial diurnal variation in peak expiratory flow (at least 20%)

2019 NICE guidelines

So where are we with our UK guidelines? Initial therapy for all patients with COPD remains single bronchodilator therapy with a short-acting bronchodilator (SABA) or short-acting muscarinic antagonist (SAMA) (Figure 4).[5] Patients limited by symptoms or exacerbations can then be treated more aggressively if asthmatic features are present.

Patients with asthma symptoms or exacerbations can then be treated more aggressively if asthmatic features are present.[5] This is the first and major difference from the 2023 GOLD guidelines. Whereas GOLD focuses on symptoms and future exacerbation risk as the 'treatable traits' guiding pharmacotherapeutic decision making, NICE has continued to focus on the presence of asthmatic features as the main 'treatable trait'.

Management of patients with asthmatic features. For patients with features suggestive of an asthmatic component (secure diagnosis of asthma or atopy, higher blood eosinophil count, substantial variation in FEV1 over time or substantial diurnal variation in peak expiratory flow), a combination LABA + LAMA can be considered.[5] A limitation here is that the cut-off for 'higher eosinophil count' is not specified although it is generally accepted as >300 cells/µL. Triple therapy with the addition of ICS can subsequently be offered for patients who experience a severe exacerbation (requiring hospitalisation) or who experience 2 moderate exacerbations within a year.

Management of patients without asthmatic features. Patients without asthmatic features can be offered a LABA + LAMA and, if symptoms continue to impact their quality of life, a 3-month trial of triple therapy with LABA + LAMA + ICS can be considered.[5] This approach differs from the 2023 GOLD report as it still allows for a trial of treatment with ICS even in the absence of a single point of evidence of underlying inflammation – blood eosinophils >300 cells/µL required by GOLD.

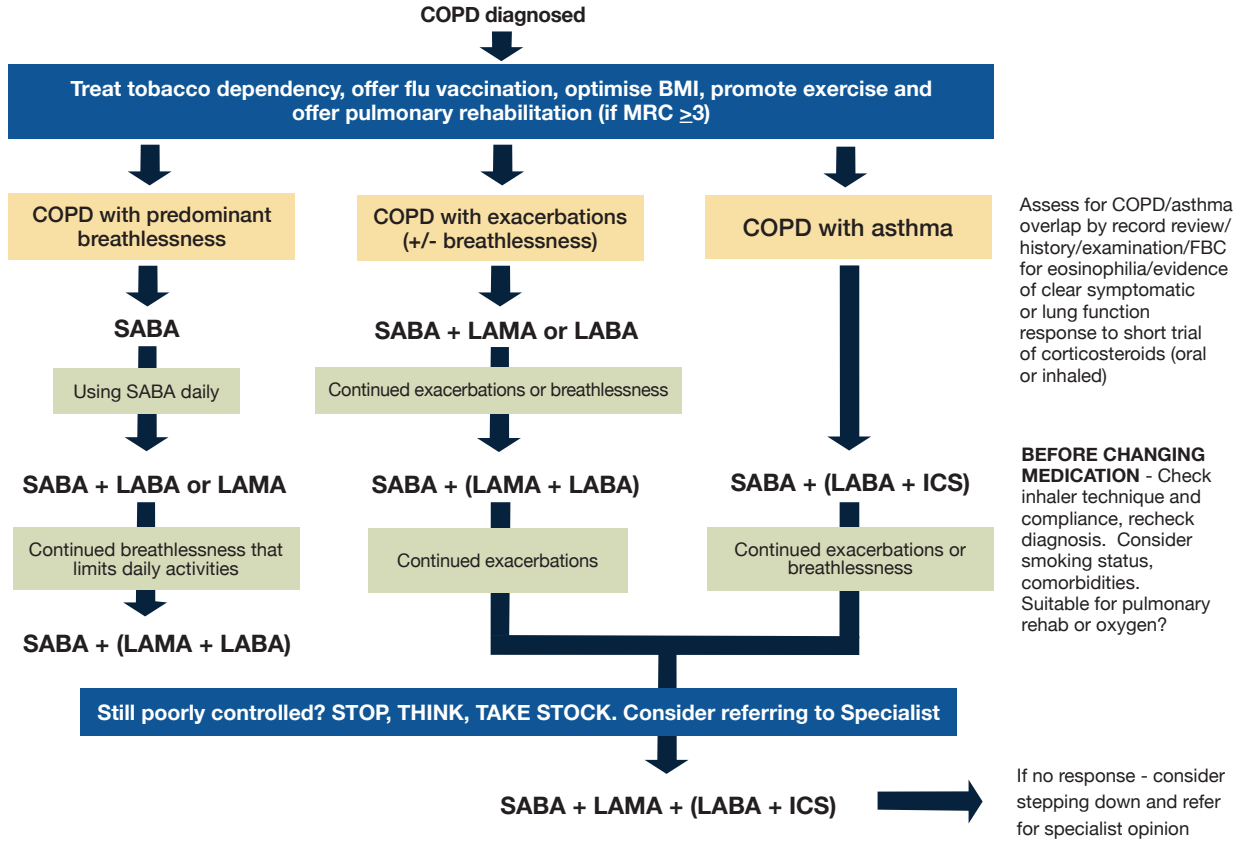
Unfortunately, the 2019 update did not address the concern

around including an option for a 3-month trial of triple therapy for patients with ongoing breathlessness but no evidence of an increased risk for future exacerbations. As we have seen from the ECLIPSE study, ongoing breathlessness is not a good indicator for response to ICS therapy and it was for this reason that the 2023 GOLD update elected to require elevated eosinophils as a marker of underlying inflammation as a pre-requisite for ICS initiation.[6] Allowing triple therapy as an option for patients with ongoing breathlessness is concerning as it is unlikely to prove benefit in relieving their breathlessness and may cause a delay in seeking alternative causes for their chronic breathlessness. This approach will mean that a proportion of patients will be escalated to triple therapy and receive an ICS from which they will gain no clinical benefit and which may place them at increased risk for pneumonia. While the NICE 2019 update recommends that patients whose symptoms do not improve after a 3-month trial of triple therapy should step down to a dual bronchodilator regimen without an ICS, whether this is feasible and currently part of routine practice is unclear.

PCRS 'Keeping it Simple' approach

In 2017, PCRS issued their consensus guidance on the management of patients with COPD in the context of UK primary care (Figure 5).[3] Indeed, the recent updates to the GOLD and NICE guidance reflect the approach, laid out in the 2017 document, to initial and follow-up pharmacological management of COPD. Our guidance on treatment decision-making considers the treatable traits targeted in the 2023 GOLD guidance – breathlessness and exacerbations – as well as the asthmatic component targeted in the NICE guidance. Three treatment pathways reflect the different clinical needs and likely underlying pathology associated with these treatable traits. Patients with an asthmatic component are likely to benefit from ICS and this should form a part of their initial treatment regimen. Patients with breathlessness as their major clinical feature and without asthma will not benefit from ICS therapy and their treatment should focus on bronchodilation, SABA, LABA or LABA + LAMA depending on the impact of their breathlessness on their daily activities. Patients who are exacerbating can start on a SABA in addition to single agent

Figure 5. PCRS 'Keeping it Simple' approach[3]



bronchodilation with a LAMA or LABA. If breathlessness is still impacting activities of daily living then dual long-acting bronchodilator therapy (LABA + LAMA) can be commenced. ICS (triple therapy) can be used in addition to dual bronchodilation if they continue to experience exacerbations. At each stage, medication optimisation should be undertaken, including checking the patient's inhaler technique and their adherence. In addition, ongoing monitoring of patients should include reviewing for comorbidities (especially alternative causes of breathlessness) and whether pulmonary rehabilitation has been offered and attended, as well as treating tobacco dependency and offering appropriate vaccinations.

Conclusions

Overall, both GOLD and NICE appear to be catching up with the pragmatic recommendations PCRS made in 2017. Steroid stewardship, both OCS and ICS, remains relevant to avoid exposing patients to treatments that will not benefit them and which may in fact place them at risk for side effects. Looking back over the last decade, we have come a long way in our understanding of the heterogeneity of COPD and this has informed how best to manage patients according to the treatable traits that are most significant for them. While a cure for COPD remains elusive and treatment is largely reactive to clinical presentation, there is much we can do to ensure patients receive treatments that relieve their most impactful daily symptoms, optimise their lung function, and reduce their risk for life-threatening exacerbations.

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COPD: Challenging Perceptions

The right treatment: The right approach

Our campaign aims to challenge the negative perceptions that exist in COPD aiming to promote a more proactive approach to treatment to improve outcomes for patients.

- Reduced COPD symptoms
- Increased physical activity
- Improved emotional health
- Improved daily functional ability

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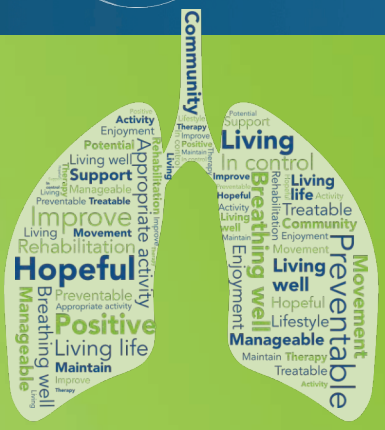
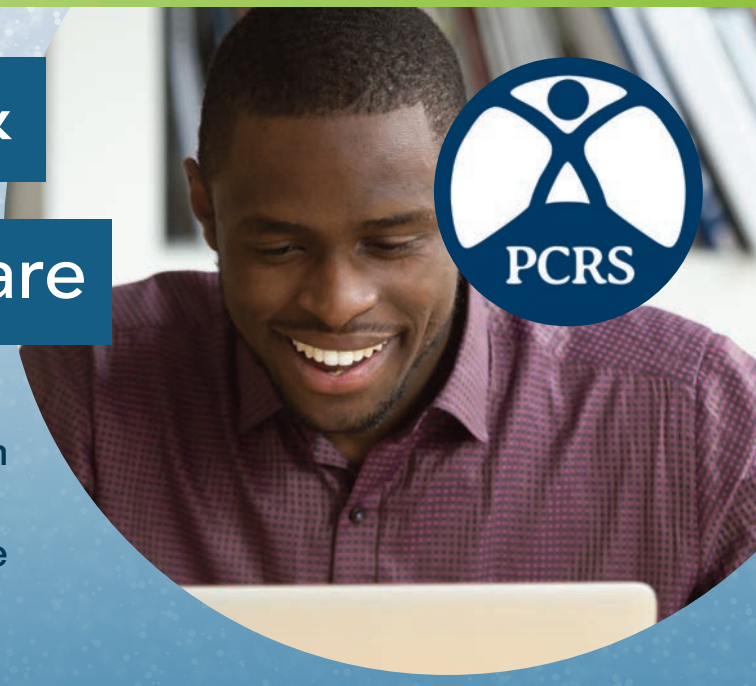
This programme has been supported by an educational grant from AstraZeneca Ltd. The sponsor has had no input into the course programme or content.



Digital Technology & Respiratory Healthcare



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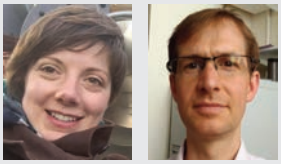
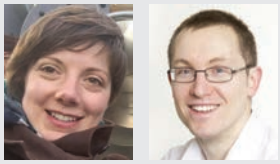


Interstitial Lung Disease (ILD)

Let's Talk Inhaler Technique

Fit to Care



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Non-tuberculous mycobacterial (NTM) infections – and their relevance to general respiratory practice

Steve Holmes,[1] Paul Whitaker[2]

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Background and prevalence

Non-tuberculous mycobacteria (NTM) are a group of bacteria that are capable of causing opportunistic lung infections and the development of NTM pulmonary disease (NTM-PD). They are distinct from Mycobacterium tuberculosis (TB) and Mycobacterium leprae and are found in the natural environment and water supplies such as taps and shower heads. Nearly 200 different species of NTM have been identified; Mycobacterium avium complex (MAC) is the most common to cause infections in the UK. NTM can be inhaled into the lungs via aerosols and pulmonary disease accounts for the majority of infections caused by NTM. For healthy people, they rarely cause a problem; however, in immunocompromised patients or those with underlying lung disease, they can lead to serious lung infections.[1,2] The overall prevalence of NTM is around 7 cases per 100,000 population; in patients with chronic lung disease the prevalence is 16.5 times higher.[3]

It is agreed that the prevalence globally and in the UK is rising significantly over time in respiratory patients.[4-7] Indeed a recent systematic review and meta-analysis suggests that 10% of people with non-CF bronchiectasis have NTM infections.[8] At the current time, NTM is not a notifiable disease like TB, which has perhaps hindered more accurate prevalence rates in the UK.[1]

Which of my patients are at increased risk?

NTM-PD is worth considering in people who are immunocompromised (linked to medical conditions or their treatment) and in people with pre-existing chronic lung disease such as COPD, bronchiectasis, and cystic fibrosis.[9] Indeed, current national guidance suggests that people with cystic fibrosis[10] and those with clinically active bronchiectasis[11] should be screened for NTM on an annual basis with the use of three early morning sputum specimens for Acid Alcohol Fast Bacilli (AAFB) culture.

In some patients, the NTM can be the primary insult, with the infection causing lung damage and bronchiectasis without any prior history of pre-existing lung disease.[12,13]

How does it affect the lungs?

NTM-PD has two main patterns of pulmonary disease. The first is a nodular bronchiectatic form with features of “tree-in-bud” nodularity and bronchiectasis on a CT scan. The second pattern produces more extensive lung damage with fibrocavitary disease; this typically occurs in the upper lobes and can often mimic TB.[14] The nodular bronchiectatic form is associated with a certain body type, particularly tall, lean, and post-menopausal women.[15] Fibrocavitary disease is more commonly seen in men, smokers, and those with underlying structural lung disease, in particular COPD.[14]

How might I identify this as a more general clinician?

The symptoms of NTM-PD are often non-specific. It is something that should be considered if our patient is not responding to treatment as we would expect. In general, this is often increasing breathlessness or cough and sputum, recurrent ongoing infections and evidence of overall deterioration (functional ability, weight loss, sweats etc.).

What else might we want to think about?

In this group of patients, the differential diagnosis can be quite wide, both in terms of infection and other comorbidities. In patients with symptoms suggestive of ongoing infection, other persistent pathogens have to be considered, including Aspergillus fumigatus, Pseudomonas aeruginosa, Staphylococcus aureus, and Haemophilus influenzae. TB may be considered if there are sweats, fevers, and weight loss, particularly in a patient born in a high TB prevalence area. Many patients have a heavy smoking history; lung cancer and cardiac failure can also present with many of the symptoms of NTM pulmonary disease. Fortunately, many of the investigations are common to diagnose all of these conditions.

Investigations

Once the symptoms are identified as being suspicious for NTM-PD, then both sputum and radiology investigations are required to make the diagnosis. Often the diagnosis can be suspected on a chest x-ray (sometimes performed for other reasons) or CT scan. Plain chest x-rays are not usually diagnostic as many of the changes are non-specific; however, they can pick up cavities in patients with fibrocavitary pattern disease.

Standard sputum cultures will not normally identify NTM, but they will identify other bacteria that can present in a similar fashion. For NTM, three morning sputum samples for AAFB are required to try to identify the organism. If an AAFB sample is found to be positive on either microscopy or culture, then further specialist assessment is recommended and usually your local respiratory consultant physician will be able to investigate or forward to a colleague with a more specialist interest in this area. In the UK, the initial laboratory report usually states 'Mycobacterium culture positive'. This could represent either TB or NTM infection. Physicians have to make a judgement as to whether this could be TB based on clinical and radiological features whilst waiting for full differentiation by the reference laboratories. It is important to identify the NTM species as some are highly pathogenic whilst others are more likely to represent an incidental finding.

Diagnosis

The diagnosis can be complex as other causes have to be excluded and it is important to establish that the NTM present is causing disease rather than just an incidental finding. If only a single sputum culture is positive for NTM, then repeat sampling is usually required.

Guidelines require three components to be present in order to make a diagnosis of NTM-PD. These are (1) two or more positive sputum cultures (or a single positive bronchoscopy washing), (2) radiology showing changes consistent with NTM-PD, and (3) symptoms that are in keeping with NTM-PD.

Treatment

The treatment for NTM-PD involves multiple antibiotics given over an extended period of time, often 18 months or more in duration. The treatment burden, together with drug toxicities, often means that the decision to treat is not always straightforward. Patients are often monitored in clinic until the risk-benefit assessment is favourable towards treatment; however, over half of patients will show radiological progression if they are not treated.[16] The decision to treat involves MDT discussions involving a wide range of specialities. When on treatment, the sputum is monitored every 1-2 months to ensure a response to treatment. If NTM cultures remain positive after 6 months, then a diagnosis of refractory disease is made, and treatment regimens need to be reconsidered.

Other aspects to consider include chest physiotherapy, encouragement of regular activity/exercise, maintain adequate nutrition, and optimise any underlying lung diseases. There is now a NTM charity that supports patient education (https://www.ntmaction.com).

Prognosis

NTM pulmonary disease can be progressive and often fatal if left untreated. A recent meta-analysis in patients with MAC pulmonary disease found an overall five-year mortality to be 27%.[17] Patients with fibrocavitary disease are at higher risk of mortality than those with nodular bronchiectatic disease,[18] and survival time may also differ according to the NTM species.[19]

Even after successful treatment the recurrence of NTM-PD is as high as 50% and should be considered if symptoms developed in a patient with a history of NTM-PD.[20] In most patients this is reinfection with a new organism, but relapse of an existing infection may occur in patients with fibrocavitary pattern disease.

Conclusions

Non-tuberculous mycobacterium, though a rare problem in primary care, is a not inconsiderable cause of morbidity and mortality in high-risk patients. It is worth considering in the clinical work up of people who have progressive respiratory symptoms despite treatment with an established diagnosis – and in people who are immunocompromised. NTM is an important part of the differential diagnosis in non-resolving symptoms in people with respiratory symptoms, is complex to diagnose and treat – which would be in a specialist environment.

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Service Development and Delivery

The One-Minute Sit to Stand Test Protocol

Siobhan Hollier, *PCRS Respiratory Leaders Programme Board Chair*

The one-minute sit to stand test (1-MSTST) has become the test of choice during the pandemic for measuring exercise capacity, both at in-person and virtual appointments, due to the inability to conduct robust six-minute or incremental/endurance shuttle walk tests (6MWT/ ISWT/ ESWT). A systematic review of 17 studies[1] concluded that it 'appears to be a practical, reliable, valid, and responsive alternative for measuring exercise capacity, particularly where space and time are limited.' It can easily be conducted in the patient's home or a small clinic room, requires little equipment, is quick to undertake, and yields useful information about the patient's physiological response to exercise.

In primary care settings, often a functional walk test is undertaken to gain information indicating a patient may need referral for an ambulatory oxygen therapy assessment; however, this type of test has no standardisation and is not reproducible. Crook *et al*[2] found that if observations in the 1-MSTST are extended to 1 minute post recovery, patients who showed desaturation on their 6MWT also showed desaturation on the 1-MSTST. Whilst larger studies are still required, and the nadir of desaturation does not seem to be as low as on the 6MWT, the 1-MSTST gives a more reliable indication of whether someone is likely to meet the criteria for AOT.

It is important to note that the 1-MSTST is not a replacement for validated field walking tests for the prescription of exercise or AOT, as it is a submaximal test.

The following pages provide information on how to prepare, undertake and record the one minute sit to stand test.

You can also view a one minute sit to stand test being carried out in this short video https://vimeo.com/manage/videos/662662918/33fa6b3f55

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One-Minute Sit to Stand Test Protocol

What is it? The one-minute sit to stand test is a validated and reliable field exercise test for quantifying exercise capacity that can be undertaken quickly and in a small space.

The one-minute sit to stand test is preferable to the 30 seconds test x 5 as it correlates more reliably with the 6 minute walking test and is a more accurate measure of fitness

Why is it done? This test helps with treatment planning by providing a baseline of fitness, information about the participant's response to exercise and about the participant's recovery from exertion and use of dyspnoea coping strategies.

Equipment checklist

- ☐ Standard height chair (45-48cm) - no wheels, straight backed with a hard flat seat and ideally no armrests
- ☐ 2m squared of floor space
- ☐ Stopwatch or timer
- ☐ Means of recording performance e.g. a pen and paper or electronic record
- ☐ Test instructions
- ☐ Borg dyspnoea scale
- ☐ Pulse oximeter, if available

Safety

The test should not be completed if the participant:

- Has a health condition which contraindicates exercise of this nature
- Is feeling more unwell than usual
- Has new or unusual joint or muscle pain
- Is abnormally tired or fatigued
- Has a current or possible infection / exacerbation
- Feels dizzy, light-headed, unsteady, or nauseous
- Is under the influence of alcohol or drugs
- If the environment is too hot or too cold e.g. during a heat wave

The test should be stopped if:

- The participant experiences any adverse effects, such as chest pain or dizziness
- There are concerns for safety, such as poor balance or poor spatial awareness when sitting
- The patient uses their hands to push up

[redacted]

Borg Dyspnoea scale

The Borg Dyspnoea Scale is a tool for measuring breathlessness on exertion. A score of 3 to 5 is considered normal on the scale during exercise.

[redacted]	Nothing at all
[redacted]	Just noticeable (v, v slight)
[redacted]	Very slight
[redacted]	Slight
[redacted]	Moderate
[redacted]	Somewhat severe
[redacted]	Severe
[redacted]	
[redacted]	Very severe
[redacted]	
[redacted]	Very, very severe
[redacted]	Maximal

Instructions (for in-person testing)

Equipment set up:

- Stabilise the chair by placing the backrest against a supportive surface (e.g. wall)
- If able, record the chair height

Participant instructions:

Starting position: seated upright but forward on the seating surface to ensure:

- Hip and knees flexed to 90 degrees where possible
- Calves well forward of the seat
- Feet placed flat on the floor, shoulder width apart

Participants hands should be on hips, or arms loose by side or crossed over chest

Encourage participant to maintain a gap between their knees during sit to stand cycle if able (note if unable to achieve this)

Notes for clinicians

- Start the stopwatch on 'Go'
- Count aloud each full stand
- The score is the number of full stands completed in 1 minute
- Continue to monitor the participant for at least 2 minutes after test completion

✗ Do not give encouragement

✗ Do not count incomplete stands

✓ You may give reminders to stand up fully

If the test is being performed pre- and post- treatment or intervention as an outcome measure, use the same (or an identical) chair for standardisation.

Remote testing

If remote testing via telephone or if the test is being conducted by the participant alone remember:

- This method is less accurate as you will be unable to check technique and you rely on their honesty/accuracy for the score
- Risk assess to check whether the participant is safe to undertake the test
- The participant will need to undertake monitoring of their own HR & SpO2 as equipment allows. Equipment should ideally be CE kite marked

Participant's whose resting SpO2 is below 92% should be seen in a supervised clinical setting.

Interpreting the results

Age group (years)	Number of STS repetitions										
	p2.5		p25		p50		p75		p97.5		
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	
20-24	27	31	41	39	50	47	57	55	72	70	p5 2.5th percentile
25-29	29	30	40	40	48	47	56	54	74	68	
30-34	28	27	40	37	47	45	56	51	72	68	
35-39	27	25	38	37	47	42	58	50	72	63	p25 25th percentile
40-44	25	26	37	35	45	41	53	48	69	65	
45-49	25	25	35	35	44	41	52	50	70	63	p50 median
50-54	24	23	35	33	42	39	53	47	67	60	p75 75th percentile
55-59	22	21	33	30	41	36	48	43	63	61	
60-64	20	20	31	28	37	34	46	40	63	55	p95 97.5th percentile
65-69	20	19	29	27	35	33	44	40	60	53	
70-74	19	17	27	25	32	30	40	36	59	51	
75-79	16	13	25	22	30	27	37	30	56	43	

Age-related reference figures: (Based on 7000 Swiss patients – Strassman, A. et al, 2013). The Minimal Important Clinical Difference (MCID) for the STS is +3 repetitions (Crook, S et al, 2016

Example of a One minute Sit to Stand test performance record sheet:

Date:		***Time:***			
Purpose of test: Practice test / Baseline or pre-intervention test / Post-intervention test / other:					
Location of test:			***Face to face / Remote***		
Height of chair: Low / Medium / High - __ cm			***Does the chair have arms?*** Yes / No		
Smoked within the last 4 hours? Yes / No			***AO2:*** Yes / No		
AO2: Litres			Continuous / Pulsed		
Delivery Device:			Placed on floor / Worn by patient		
Oximetry Probe used: Finger / Earlobe / Both ***Device used:*** Medical device / Participant's own device					
Practice cycle completed: Yes / No					
Pulse Oximeter	***Finger***		***Ear***		**Borg Dyspnoea Score**
Time	**SpO2**	**HR**	**SpO2**	**HR**	
Pre					
Post					
1 min Post					
2 mins Post					
No. of rests:		**Time of final stop (if less than 1 min)**	**Secs**	**Recovery time to baseline SpO2:**	
Upper Limb position used:	Arms crossed ☐ Hands on hips ☐ Hands loose at sides ☐			**Total number completed:**	
Limiting factor: SOB Low SpO2 Leg fatigue Joint pain Other: **Reason for stopping test (if applicable):**					
Coping strategies used: **Additional Comments:**					

Service Delivery

A guide to current NHS architecture across the UK nations

Prepared by members of the PCRS service development committee including Frances Barrett, Daryl Freeman and Joanne King

It can be a challenge to keep up with the rapid changes in how the NHS is governed and organised across all the nations of the UK. It is, however, important to understand where to look to understand strategic plans for respiratory, where future plans are made, and at what level you might need to target, or find someone to listen to you, if you aspire to influence for better primary and community respiratory care.

Each of the four countries have their own NHS governance structure and terminology because health is a devolved matter for the Scottish, Welsh and Northern Irish governments.

This guide will bring you up to speed and make you more confident with the new structures and jargon.

NHS England

In July 2022, the new NHS Health and Social Care Act came into being, replacing the previous act of 2013 that had been notable for creating clinically led CCGs. CCGs had a relatively short life span with many having already been merged in anticipation of a new Health and Social Care act in 2020. However, this timeline coincided with the peak of the first wave of COVID-19 resulting in the delayed legislation by 2 years.

NHS England leads the national health service in England and is divided into seven regions:

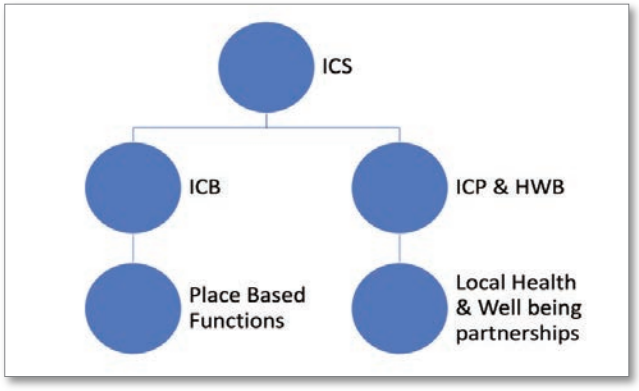
- East of England
- London
- Midlands
- North East and Yorkshire
- North West
- South East
- South West

Each NHS region now supports and develops:

Integrated care systems (ICSs)

ICSs are partnerships that bring together NHS organisations, local authorities, and others to take collective responsibility for planning services, improving health, and reducing inequalities across geographical areas. There are 42 ICSs across England, covering populations of around 500,000 to 3 million people.

A key aim of the ICS development was making the joint working between health and local authority sectors statutory to ensure that funding and strategy for common responsibilities such as child and adolescent mental health or elderly care services was utilised to achieve best value for money.



The ICS is informed and advised by a number of structures that sit below it, from the same geographical area and also more locally at borough or council level. The ICS role is to deliver NHS England national and regional policy by assimilating and acting on the local knowledge and expertise that exists from health, social care, voluntary, and community sectors.

The ICS then asks these local boards to deliver on their strategy by working collaboratively for local needs.

Integrated care boards (ICBs)

The ICBs replaced CCGs. There are also 42 ICBs which reflects the merger of the over 200 CCGs that occurred in the few years prior to the pandemic and finally being abolished in July 2022. The ICB has an NHS health responsibility across the ICS geographical area. From a respiratory perspective, here you might see hospital trusts, community trusts, and GPs collaborating to improve COPD pathways, where all three parts of the health system have a role in the diagnosis and management of COPD. The ICB here should want to enable better pathways to ensure they can report better performance on, e.g., admissions or quality diagnosis and show effective use of finance. It is at this level that health commissioning and performance monitoring will sit, dictated by the ICS strategy.

Integrated Care Partnership and Heath & Well Being Board (ICP & HWB)

The ICP&HWB will have members from the ICS geographic area representing the NHS, local government, and public and community sectors, with each having an equal say in solving local problems. From a respiratory perspective, a common area where strategy and services may be discussed would be childhood asthma and the effects of indoor or outdoor air pollution. Local authorities have responsibility for housing and roads, and their actions could have a great impact on asthma attendance and outcomes, reducing the need for health expenditures.

Place boards (PBs)

These boards operate at a smaller geography than ICSs, ICBs and ICP&HWBs. This would be at borough or council level or equivalent to the geographies of the old CCGs. Here, the ICS strategy is delivered by using joint NHS and local authority budgets with joint local planning and decision making. From a respiratory perspective, this might mean greater targeting of smoking cessation services to areas of a local authority with higher smoking prevalence as a means to impact respiratory attendance and admissions.

Local Health and Wellbeing Partnerships boards (LHWBs)

Health and wellbeing boards were established in 2013 and were a key mechanism for driving joined-up working at a CCG level. Following the Health and Care Act 2022, they still have a role in the new architecture and this smaller geographic level. Their duties and powers in this new system are still being decided. They will play an important role as a key mechanism for joint working across health and care organisations and setting strategic direction to improve the health and wellbeing of people locally. They have a particular role in engaging with the local population and addressing inequalities through local knowledge.

Delivering the health strategy within an English ICS

Once the ICS and local boards have agreed a strategy and operational plan for improving health, the key mechanisms for delivery are:

- Primary and community care services and Primary Care Networks
- Mental Health Services
- Adult Social Care Providers
- Hospital and other health care services

Primary Care Networks (PCNs)

These are groups of primary care providers delivering services in their community, usually to a population of around 30-50,000 patients. Each PCN has a Clinical Director who is responsible for the granular design and delivery of services asked of it by the Place boards. These locality-based services would be designed to be flexible to the needs of their individual patient group. From a respiratory perspective, there are opportunities to improve respiratory diagnostics through concentrating expertise in fewer diagnostic clinics or providing remote support in rural situations rather than expecting all primary care sites to achieve the same standards when they may have different resources, skills, and knowledge.

HSC Northern Ireland

In Northern Ireland the NHS is referred to as Health and Social Care (HSC). It provides healthcare as well as home care services, family and children's services, day care services, and social work services.

Department of Health (DoH)

The DoH is one of the 9 devolved NI government departments within the NI Executive. The DoH was formally known as *The Department of Health, Social Services and Public Safety – (DHSSCS)* until 2016. The DoH is responsible for health and social care (HSC) services in conjunction with Public Health & Public Safety.

DoH Strategic Planning and Performance Group (SPPG)

The SPPG is an office within the DoH and is responsible for commissioning services based on the strategy of the NI executive's DoH. It also has responsibility for achieving value for money as well as measuring outcomes and reporting this back to the executive. This board commissions for delivery through health and social care trusts, GPs, dentists, opticians, and community pharmacy.

The SPPG replaced the Health and Social Care Board (HSCB), which closed in March 2022 following new legislation enacted because of its complex and bureaucratic structures and lack of clarity in accountability and decision making.

A key aim of the new structure is to develop integrated care systems. The SPPG achieves locally relevant commissioning through local commissioning groups and integrated care partnerships.

Local Commissioning Groups (LCGs)

There are 5 LCGs in NI:

- Belfast
- Northern
- South-eastern
- Southern
- Western

The LCGs work together to achieve the best outcomes possible for the local community by developing a joint needs assessment and strategy for improving public health. The LCGs carry out a range of functions with respect to the commissioning of health and social care for people within their area. The membership includes AHPs, Dentists, GPs, Local Government, Nurses, Pharmacists, Public Health, and Social Workers.

Integrated Care Partnerships (ICPs)

There are 17 ICPs that cover the 5 Local Commissioning Groups (LCGs) – and serve approximately 25–30 practices covering 100,000 population. The ICPs focus on improving services for the frail elderly and LTCs (including respiratory, diabetes, and stroke) and address the entire care pathway for each patient cohort, from prevention of the LTC through accurate diagnosis, assessment, and management right through to end-of-life care, considering how improvements can be made at all stages of the patient journey.

Public Health Authority (PHA)

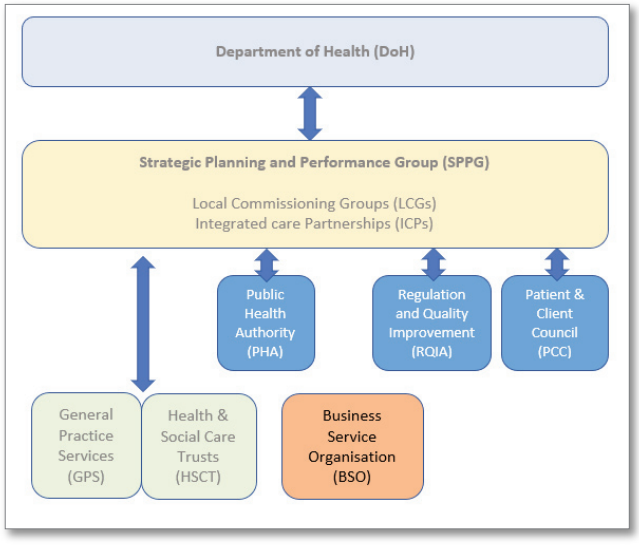
The PHA was created in 2009 as part of the Health and Social Care Trust (HSC) reform and works directly with the DoH. The PHA is responsible for health protection and health and social wellbeing improvements. The PHA is responsible for protecting public health by identifying inequalities in health and addressing areas like preventable diseases.

Regulation and Quality Improvement (RQIA)

The RQIA was established in 2003 and is the independent body responsible for monitoring and inspecting the availability and quality of health and social care services across Northern Ireland to ensure they are accessible to patients and clients and meet the required qualitative standard.

Patient and Client Council (PCC)

The PCC was also created in 2009 as part of the Health and Social Care Trust (HSC) reform; its purpose is to act as an independent voice for patients, clients, and carers and communicates directly with the DoH.



Delivering Northern Ireland's health strategy

General Practice Services (GPS)

GPs are located and embedded in the communities they serve; they are responsible for the initial diagnosis, assessment, and management of common acute and long-term conditions, in conjunction with the onward referral to secondary, specialist or other services as indicated.

The NI Health and Social Care trust (HSCT)

There are 5 HSCTs aligned with each of the LCG regions, with a sixth trust covering ambulance services in NI. They are responsible for providing a range of health and social care

services to their geographic populations. The services are delivered from hospital sites, local community hospitals, health centres, social services, a community network, and home care.

Business Service Organisation (BSO)

The BSO was established in 2009 and provides a broad range of support functions to the health and social care sector in Northern Ireland that include, among a long list of services, helping people register with a GP, supporting health and social care staff, analytics, and procurement.

NHS Scotland

Within the Scottish government, health and social care policy is the responsibility of the **Health and Social Care Directorates**, which include the primary care, population health, and vaccine directorates, amongst others. These directorates communicate their relevant strategies to a number of **Health Boards**, that are divided into those that cover geographic regions and those with specific functions, such as Public Health, Ambulance, NHS 24, and Healthcare Improvement, amongst others.

Primary care services, which include GPs, dentists, opticians, and pharmacists, sit within the population health and primary care directorates and are directly contracted to provide their services.

At a more local level, Scotland has structures for the planning and delivery of the integrated health and social care that requires local authorities and health boards to work together to deliver for local priorities as well as national strategy.

Regional Boards

In Scotland there are 14 health boards that cover different geographical areas. Unlike in England and NI, the regional boards are responsible for both the regional commissioning and management decisions as well as delivery of health care through their hospitals, and community services, such as district nursing.

Integrated Joint Board (IJB)

Thirty-one local authorities in Scotland have an IJB and it is the decision-making body responsible for the strategic planning of integrated health and social care activity for that locality. The membership comprises local authority councillors, non-executive NHS directors, as well as representation from primary care, secondary care, nursing, the care sector, and members of the public. Their strategic priorities can include prevention, shifting the balance of care from hospital to community, and enabling independent living, among others.

Health and Social Care Partnership (HSCP)

There are 31 HSCPs spread across the 14 health boards, and they deliver the strategy and are managed by the IJBs. All Partnerships are responsible for adult social care, adult primary health care, and unscheduled adult hospital care. Some are also responsible for children's services, homelessness, and criminal justice social work.

GPs and General Practice Clusters

While GPs are individually contracted, there are structures to connect them to the rest of the health and social care system and with each other. The HSCPs that deliver integration are further divided into localities, based on geography. Each locality contains several clusters that comprise 5-8 practices. Each practice has a practice quality lead and each cluster has a cluster quality lead. The aim of these is to facilitate quality improvement and to allow contribution of practice level activity to the design of local healthcare services. The quality work of these clusters replaces the Quality and Outcomes Framework (QOF) activity, which was considered in Scotland to be bureaucratic and risked disproportionate emphasis on certain conditions over others.

NHS Wales

There is a department for health and social services in Wales that sets the policy and strategy for the NHS in Wales.

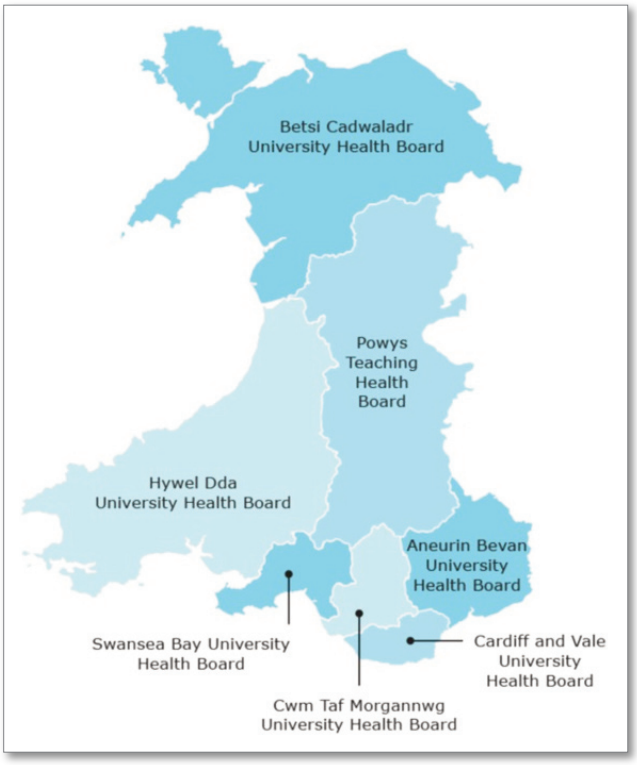
In Wales, as with Scotland, the commissioning and management as well as delivery of health is the joint responsibility of **Health Boards**. These are divided into regional boards, defined by geography, and 3 other boards that work at a national level.

Wales does not have a health and social care integration system per se but has agreed a 5-year fund in 2022 to develop models of integrated care.

Wales is working towards aligned models of clinical service delivery across its boards through the 2021 **National Clinical Framework** using valuebased healthcare principles.

Regional Boards

There are seven health boards that cover different geographical areas (see page 36). They are responsible for primary care, community and hospital services within their geographic boundaries.



National Boards

1. Ambulance services
2. Velindre NHS Trust - They provide specialist cancer services to the people of Wales and the Welsh Blood Service. It also hosts the **NHS Wales Shared Services (NWSSP)** that is responsible for business support functions and **Health Technology Wales (HTW)** that aims to improve the quality of care in Wales through technological advancement.
3. Public health Wales - They work to protect and improve health and well-being and reduce health inequalities for the people of Wales.

GPs and General Practice Clusters

In 2010 the Welsh government set out a concept of GP services being delivered on a locality basis. There are now 64 primary care clusters that serve between 30-50,000 population. Together with other primary care services, such as pharmacies, they can plan and deliver locally.

Common pitfalls of effective integration/ transformation to ICBs/ICSs and how to avoid them

Daryl Freeman, Joanne King, Carol Stonham

The formation of Integrated Care Systems in July 2022 has given us as healthcare professionals an opportunity to improve and shape respiratory care in our area for patients with respiratory disease.

However, for many the focus has appeared to have been on protecting and improving secondary care – prompted by stories of 12 hour ambulance waits outside emergency departments and long surgery waiting lists.

It is imperative, however, that the role of primary and community care is raised to the forefront in the delivery of care to patients with respiratory disease (and other long term conditions); as set out in the Long Term Plan (https://www.longtermplan.nhs.uk/) and to meet the desire of patients to be treated locally.

Improving access to care closer to home for patients meets many needs:

- Reduce cost and time for the patient
- Reducing the greenhouse gas emissions associated with NHS transport (which in itself is responsible for 5% of traffic on our roads - https://www.england.nhs.uk/greenernhs/wp-content/uploads/sites/51/2020/10/delivering-a-net-zero-national-health-service.pdf)
- Ensuring we start to reduce health inequalities and inequalities in access to treatment – often seen in more rural areas.

The transformation of services away from a secondary care led model to a more integrated model is key to achieving these aims. Services should be designed with the needs of the patient front and centre, and we have asked some of our PCRS members to describe where their services have gone well and in the interest of a balanced review, to describe some of the barriers to providing their services.

Daryl Freeman

CASE STUDIES

We asked two HCPs from across primary and secondary care to tell us about their experiences of transformation.

Carol Stonham *NHS Gloucestershire ICB*

What did you have in place before the transformation started?

We had an established community team consisting of nurses and respiratory physiotherapists dealing mostly with patients with COPD, an established specialist team in the acute trust, and healthcare professionals in primary care who manage the majority of the patients. We have had an active respiratory work stream within the transformation directorate of what was then the CCG.

Was this a new project or building on existing work?

We started to look in depth at integration in 2016. We mapped our COPD pathway as a starting point, including a broad range of stakeholders including A&E staff, ambulance services, primary, community and secondary care, diagnostics and imaging, etc.

It was clear from this exercise that there was replication and the potential to offer a better service to patients including admission avoidance with enhanced care at home. An integration

lead joined the team and was jointly employed between the community provider organisation and the CCG (this was complicated in itself). We worked on communication between secondary and community care, shared pathways, but hit a hurdle on staff rotation as the staff had different employers and contracts. Aligning working hours was also troublesome. The integration lead completed her contract just before COVID-19 hit, and the view was that we could just continue with the programme, but COVID stopped us in our tracks. There was a big part of the project still to do to integrate primary care.

If they did succeed - how ?

We picked this up again and worked to actively get things moving. It was in part the drive from one of the respiratory consultants, and the need to link things up. We have respiratory champions in place at PCN level which has broadened the original brief to include primary care. The move to digital also allowed us to hold regular virtual MDT meetings. This works to up-skill primary care and break down the barriers between primary, community and specialist care with attendees from different professional backgrounds and parts of the system collaborating regularly. This has led to a great improvement in communication and mutual understanding. One of the consultants, having been inspired by the MDT meetings, has started community clinics in the area, working with primary care staff to see patients together, which has also had a positive effect.

I think there was a combination of factors that moved this forward:-

- the ICB could see the benefit and were prepared to support the move
- the driving force of a consultant
- the improved communication
- having a very active, forward thinking respiratory clinical programme group

What advice would you give to others hoping to achieve the same.

Communication is key. The 'them and us' attitude across boundaries and across professional groups is very limiting. I would also suggest that finding the passionate people to drive with enthusiasm and a 'can do' attitude is vital, and a commissioning system (or people within it) that supports positive change which improves patient care. Getting everyone on board and seeing the shared vision is critical.

Joanne King *Respiratory Nurse Consultant – Frimley Health, covering predominantly Berkshire East. Working across Frimley ICS – Berkshire East, North East Hampshire and Farnham and Surrey Heath.*

What did you have in place before the transformation started?

We had a very tight network in the North of the ICS, where we worked closely between secondary, community, and primary care to deliver projects, education, and priorities. The south of the ICS had private providers so engagement was limited. It was easier to achieve engagement and collaboration before the ICS was born as it was a smaller tight knit group who worked together for local provision of respiratory care. However, ensuring there is consistent care across the area is a positive impact of ICS working.

Was this a new project or building on existing work?

We are fortunate to be the smallest ICS which joined up North and South of the patch. We had already merged some years ago as one acute trust and so are privileged that we only have one acute trust to 'deal with'. The disparity of services at either end of the ICS was tricky to navigate as the South had private providers for their community respiratory services and no integration with community and acute services. Since the birth of Frimley ICS providing the community respiratory services, we are closer to integration with acute and community, but primary care engagement is a challenge. In the North of the patch the services are more established and had always had CCG / PC involvement and the relationship was more solid, but it has been difficult to engage the south of the patch as they are not used to strong leadership of respiratory services.

We have a fantastic respiratory network group who meet monthly and has representation from acute, primary care, and community teams, and we come together to discuss issues surrounding respiratory care in our ICS; it was a challenge to obtain commitment from an additional GP to the group. The focus of those discussions has been on restarting spirometry in primary care, development of local 'Hublets', and the community diagnostic hubs alongside development of sleep services and virtual wards. The challenges are predominantly around the differences between how secondary/community services are commissioned and delivered and how primary care deliver services.

One of the steepest learning curves for me, as a predominantly secondary care provider, is how the contracts work in primary care. For example, in secondary care, there appears to be more 'scope in leniency' on how services are delivered with patients being referred and accepted for services that don't really exist but can be funnelled into a clinic and reviewed. For example - secondary care in my area doesn't provide a spirometry service and during the height of pandemic we offered a limited amount of spirometry testing to primary care, this wasn't taken up to the maximum, but now things have returned to 'normal', primary care continue to refer to secondary care for spirometry. When these requests are rejected there are questions of what should happen when spirometry is needed. However, some primary care providers do not perform this as they are not contracted to do so, but secondary are not 'contracted' to provide this service either. As a consequence, patient access to this service can be delayed or is not available at all.

I was unaware of the nuances of primary care practitioners in terms of expectations for their attendance at meetings, etc. This can have significant implications for the work of the practice where a team member is required at meetings but is also needed for clinical work within the practice. There needs to be consideration for the additional workload so that there can be effective cover at the practice. In secondary care we are expected to attend relevant meetings, such as respiratory network meetings, and any workload missed will need to be made up; however, our salaries are not dependant on the volume of workload and work is not measured in the way QOF does. This leads to disharmony between secondary and primary care providers as their way of working, pay and reward are very different. To me, this is one of the most challenging areas of trying to work between primary care and secondary care, as we have conflicting interests.

If they did succeed - how ?

It has been slow to create a consistent group of health care practitioners who are committed to moving respiratory care forward in our ICS, but I feel we are there now. The difficulty I see is that the GPs in our group are committed, but they seem unable to persuade their colleagues to move care in the direction suggested. This makes me wonder, "How can we influence when their own colleagues can't?"

What advice would you give to others hoping to achieve the same.

Take some time at the beginning to learn about each other's structures and ways of working that may avoid misunderstanding and disharmony. Explore the best ways of collaborating within the limitations of the working structures. It is vital to have this understanding and build the network to support engagement from all parties.

Virtual wards – Friend or foe?

Dr Daryl Freeman, *PCRS Service Development Committee*

The transformation of out of hospital services has been identified as a key element of the NHS recovery plan. Patient care delivered closer to or in their own homes was identified as a priority in the NHS Long Term Plan.

It is envisaged that NHS funding will increase to support systems to increase the capacity of community services, address waiting lists and expand models of care in the community to aid hospital discharges.

Virtual wards (VW) have been identified as a potential solution to the bed pressure within the acute sector and as a way of caring for patients in their own communities.

The definition of a virtual ward is as follows:

A virtual ward is a safe and efficient **alternative** to NHS bedded care. They provide acute care, support, and treatment to people who would **otherwise be in an acute hospital bed,** and are often enabled by digital technologies.

Virtual wards can support people as an **alternative to admission** into hospital settings, and can also help **support early discharge.**

Following the COVID-19 waves, the NHS has had significant success in establishing virtual wards, over 53 VW are providing over 2,500 "beds" nationwide, not just for patients with COVID, but patients with acute respiratory infections, urinary tract infections, frailty, and COPD exacerbations.

NHSE has prioritised the roll out of further VW beds to alleviate pressure on the acute sector, free up beds, and enable the NHS recovery phase to begin.

The delivery of virtual wards should, according to NHSE, be developed across systems rather than individual institutions, building partnerships between secondary, community, and primary care. Where the independent sector can help, further spare capacity should be used.

The aims are ambitious

By December 2023 it is hoped that there will be 40-50 Virtual Ward beds per 100,000 population. The hope is that these beds will be a combination of step-up and step-down beds across a variety of clinical specialties. There is a substantial funding stream associated with this and for primary care there are both threats and opportunities.

Up to £200 million will be available in 2022/23 and up to £250 million in 2023/24 (subject to progress of systems) to support the implementation of these plans. We expect plans to cover two years. The scale of funding awarded in 2022/23 will depend on credible ambition for delivery of virtual wards by December 2022 to provide capacity for next winter.

The concern for primary care is that these services will be designed without consultation from primary, community, and social care and without consideration to the potential increased workload when patients are cared for in their own communities. The opportunities are, however, not inconsiderable. Not only are primary care physicians best placed to design and deliver these services; but in addition;

- They are generally less risk averse than their secondary care colleagues
- They know how to access community and social services to improve the care of the patient in their own home
- They have a knowledge of the patients' ability to cope at home before they became unwell.

Arguably of more importance, primary care has, for a long time, had computerised patient records and good links with community and social care, so should consider designing and developing Virtual Wards to enhance funding, staff engagement and retention.

The Development of 2 workstreams are seen as a priority by NHSE at present:

- Frailty
- Acute respiratory infections

Both of these have good guidelines published on the NHSE VW web site

https://www.england.nhs.uk/publication/guidance-note-acute-respiratory-infection-virtual-ward/

https://www.england.nhs.uk/publication/guidance-note-frailty-virtual-ward-hospital-at-home-for-those-living-with-frailty/

More interest is being developed in "step up" virtual wards, and it is recognised that primary and/or community care may be better placed to deliver this part of the VW pathway than secondary care.

The importance of keeping patients in their own homes is being recognised as more than simple "admission avoidance":

- It reduces the risk of hospital acquired infections.
- It keeps the patient in their own community (especially important for the frail patient, those with learning difficulties, and/or those reliant on formal or informal carers).
- It reduces unnecessary travel to acute hospitals, reducing carbon emissions as well as cost.
- It may be especially important in rural communities with poor public transport links, thus addressing some of the many health inequalities suffered by rural populations.
- It helps patients to retain their own routines, mobility and habits especially important for the elderly e.g. getting dressed, preparing meals, etc.

So virtual wards are here to stay – at least for the foreseeable future, they are funded and supported by NHS England, so what are the benefits of being involved as a primary or community care clinician?

- Being involved is a chance to shape the services to benefit local communities and needs; for example, a very elderly rural population would benefit from a frailty step up virtual ward. The process of setting up and running the virtual ward may facilitate the development and planning of enhanced services for this group of patients.
- Being involved is a chance to access some development work with real money behind it.
- Being involved is an opportunity work across boundaries and develop new collaborations and pathways.
- Being involved is an opportunity to identify gaps in supporting services (an example would be noting a high incidence of patients with asthma in the virtual ward, and developing an enhanced asthma review service as a result).

Overall, from a primary care respiratory point of view, it is an opportunity to improve services.

A patient admitted to a virtual ward requires the same enhanced review as they would need if admitted to a hospital bed or seen in ED. Developing the virtual ward should enable the constructive conversations around whether a community respiratory service is needed, if one needs developing, or if a service already exists, ensuring that it is an integral part of the VW design process.

In summary, virtual wards may be seen as a threat to primary care, but I believe robust involvement from an early stage can help improve primary care's influence in the development of local services and help to ensure that where virtual wards are developed, they serve to improve the care of patients living in our communities.

MEMBER CONTRIBUTIONS

Post-pandemic holistic breathless recovery - a social prescription for respiratory care

Heather Henry, *Queens Nurse, Founder BreathChamps CIC*

Given the direct impact of COVID-19 on those with existing breathing difficulties, the 'newly breathless' – those whose lung function has been impaired by COVID – as well as rising levels of air pollution,[1] the need for social prescribing solutions in respiratory healthcare has never been greater.

BreathChamps CIC is a two-year-old innovative social enterprise, helping people and communities to learn and share breathing knowledge in fun and social ways. This article describes the learning from a range of research-based holistic social prescribing solutions for adults with long term respiratory conditions, funded by Trafford Housing Trust (THT).

Activities are complementary to clinical solutions, creating an extension to the current respiratory care pathway in Trafford, Greater Manchester. These include singing, walking, nature activities called forest bathing, crafting, creative writing/performing, and breath awareness workshops.

Building on strengths

BreathChamps was built upon my lived experience of respiratory issues. Following years of uncontrolled asthma, two spontaneous pneumothoraces, a pleurectomy, and excision of emphysematous bullae, at 21 years old, I only had a third of my right lung capacity remaining. I trained as a cardiothoracic nurse to help others like me, followed by a career in primary care, both as a nurse and a senior manager.

Twelve years ago, I retrained in asset-based community development with a charity called Connecting Communities (https://www.c2connectingcommunities.co.uk/), which was then hosted by Exeter University Medical School. I worked nationwide alongside many communities experiencing multiple disadvantages which reshaped my entire approach to nursing.[2,3] BreathChamps changes the perception of 'patients', to citizen-partners who have agency and can become effective vectors of clinical and social knowledge,[4] becoming the enabler of change, rather than the solution, connecting assets together and creating more resilient communities.

Evidence base

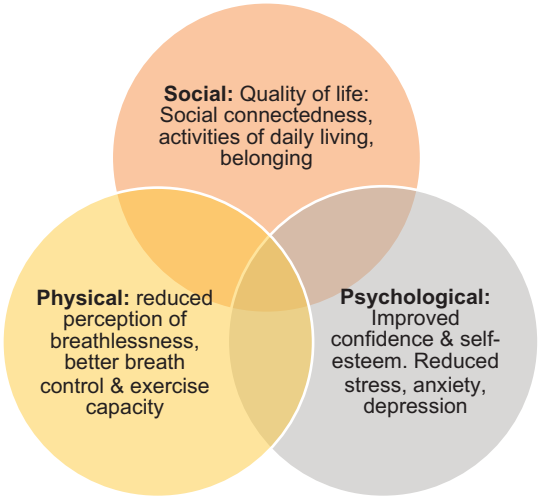
There is a strong psychosocial element to breathlessness. Like pain, it is subjective, involving both the person's perception of the sensation and their reaction to the sensation.[5] The programme is based on the Life of Breath Project[5] and the 'breathing thinking functioning' model[5]. These describe how respiratory disease changes how we feel and subsequently act. Essentially, objective measurement can be misleading and the perception of dyspnoea trumps reality (Figure 2).

Objectives

Solutions therefore focus on both the mind and the body. The objectives of the programme are to improve wellbeing associated both with breathlessness and also the legacy of the pandemic by:

- offering activities to get people out and moving more
- addressing anxiety
- enabling people to make social connections
- restoring meaning and purpose in life.

Figure 1. The benefits of singing for lung health[7]



Box 1: Benefits of nature-based activities ('green care' or ecotherapy)[8]

- Reduced depression, anxiety and stress related symptoms
- Improved in dementia-related symptoms
- Improved self-esteem, confidence and mood
- Increased attention capacity and cognition
- Improved happiness, satisfaction and quality of life
- Gave a sense of peace, calm or relaxation
- Increased feelings of safety and security
- Increased social contact, inclusion and sense of belonging
- Increased work sills, meaningful activity and personal achievement

Source: Natural England 2016

The Recovery Programme

Trafford Housing Trust administer grants to organisations like BreathChamps that offer community-based solutions to help the population recover from the effects of the COVID-19 pandemic. Table 1 summarises the components of the BreathChamps recovery programme.

Learning by doing

BreathChamps uses an improvement cycle of plan-do-study-act (PDSA), conducting rapid tests to learn what works and what doesn't.

Through this we discovered that:-

- Wellbeing and dyspnoea scores have improved, apart from life satisfaction (table 1), which could be down to other factors, such as the cost of living.
- People are keen to partner and to volunteer. We exceeded our targets for volunteering, including for our board members, where we received 12 applications for 2 posts. Managing and enabling many volunteers to flourish is time-consuming but worthwhile, especially when we are all learning together.
- People are naturally reticent about joining things that they have never experienced, like forest bathing, singing or poetry, so we bring taster sessions to groups, so they know what to expect and have met staff or volunteers.
- Breathless people, sensitive to many environmental triggers, don't turn up for 'mini walks'. They will however push themselves to come to a nature activity that they have to walk to get to.
- Marketing via social media is limited. Direct contact, visiting and demonstrating activities to existing groups is more successful.
- Even though Trafford is perceived as more affluent than other parts of Greater Manchester, it still has low-income communities and many older people living on limited means. Activities need to be local as transport problems and digital exclusion occur often. Many rely on contact by phone, lifts, and community transport.
- We don't charge for any activity (funded by THT), and this is sometimes interpreted as having less value, so dropouts occur, for example, on singing courses. BreathChamps is considering whether making a small charge of £1-£2 or

Figure 2. The perception of breathlessness[6]

Table 1. BreathChamps Holistic Breathless Recovery Programme

Activity	Description	Progress	Measures	Outcomes to date
Singing for lung health courses co-located in a 3rd sector mental health or sheltered/ extra care housing settings	6-week courses, delivered by 1 nurse and 2 professional singing leaders trained to Asthma and Lung UK standards. Accessible venues across Trafford	Delivered in partnership with Simply Singing CIC, who have received training. 6 courses completed, 2 to complete.	Office for National Statistics personal well-being score (ONS4). Dyspnoea 12 score Modified Medical Research How far participants feel connected to their community	Scores at month 0 and month 3 (month 6 figures being collected) show: Marginally less • Levels of dyspnoea • Emotionally troubled by breathing • Satisfaction with life • Anxiety Similar • Life is worthwhile • Happy Marginally more • Connected to their community
Forest bathing (Shinrin Yoku) originating from research in Japan involving mini walks of 1/3 mile or less. Open to everyone especially those with life limiting illness and mental health issues	A form of ecotherapy, that uses all our senses to connect to, or 'bathe' in nature. A mindful practice that improves immunity and reduces the stress response by reducing cortisol levels and increasing natural killer cell activity[9]	10 local volunteers recruited, including a GP and 3 nurses, who are completing an online diploma in forest bathing. One weekly and two monthly forest bathing sessions available in local parks	ONS4 How far participants feel connected to their community	Started later than singing. No hard data as yet. Observable changes – examples: Gentleman with idiopathic pulmonary fibrosis, on home oxygen therapy: has to stop twice and sit down on the journey of 900 paces from the meeting point to the wood. On the way back, he does not stop to rest. Lady with advanced kidney cancer: Had to be accompanied by social prescriber, very socially anxious and did not want to speak to anyone. She befriended another forest bather, a retired teacher who declared she was lonely. She now smiles, chats and tells us that 'I can really breathe here.'
Creative writing and speaking events that help people express their feelings	A resident poet visits community groups or hosts events to help people to express their feelings	Monthly events held with vulnerable groups across Trafford	Not formally measured	Don't tell me Don't tell me I can't smile Don't tell me I can't run a mile Don't tell me that you'll soon be well Don't tell me that things will be swell Don't tell me to keep my feet on the ground Don't tell me that a cure will one day be found Don't tell me that you understand Don't tell me to stay on the land Don't tell me to put on a brave face Don't tell me to accept things with grace Do tell me be who you want to be Do tell me that I'm like you and you're like me. *By Steve Moritz, with severe asthma (with permission)*
Crafting activities	Bring breathless and anxious people together, facilitating an open discussion about what	Activities include: 'Decorate and bag and save a life' – Children are invited to decorate cotton bags that	Not formally measured	'Decorate and bag and save a life' was run in partnership with Sale and District Lions Club in Sale Town Square, whose members had been

Continued opposite...

Table 1. BreathChamps Holistic Breathless Recovery Programme continued

Activity	Description	Progress	Measures	Outcomes to date
	matters to them. Used as a way to share self-help information. Often happen in very public spaces like town centres	can be used to store inhalers and spacers. 'Make a model lung' from a plastic bottle and 'Bee Asthma Friendly' crafting activity focusing on pollen and hay fever.		trained to share correct inhaler technique and asthma first aid. Not unexpectedly during over 70 engagements with the public, we discussed • Over reliance on reliever inhalers • Incorrect technique • Device switching without advice
Breath awareness workshops	BreathChamps is invited to local voluntary groups and statutory agencies to cascade breath awareness knowledge and listen to the 'wisdom of the community'	A 1-hour session typically includes The size of the respiratory problem in UK The National Review of Asthma Deaths Asthma first aid Q&A on inhaler technique/demonstrations Over-reliance on reliever inhalers Breathing exercises: relaxed breathing, breathing rectangle.	Evaluation of how confident people feel about supporting someone else with a breathing problem before and after the workshop	100% of attendees have reported improved confidence. Some knew 'some things' already and for others the knowledge they got was brand new.

donations may address this. We also text people to explain the full cost of activities.

- Having fun is important – the work is highly relational and if people like the leader and enjoy an activity they are more likely to benefit and to come back.

Next Steps

We hope that the BreathChamps business model, over time, will become a national demonstrator site for our holistic programme. We plan to offer educational events to enable others to replicate our activities.

We also aim to consolidate our partnership with Trafford people and cascade our knowledge via train-the-trainer programmes, for example, by teaching Trafford primary school teachers how to sing for lung health or match forest school activities with forest bathing. We will continue our work to enable the citizens of Sale, where the company is based, to make it the first 'breathing-friendly' town in the UK, where everybody looks out for and helps everyone else.

Do you have a project or programme you'd like to share with our membership. Simply submit your item to us via info@pcrs-uk.org. Please include the following sections in your document and make sure you send us a portrait photo to include with the article along with your affiliation details:-

- Background/Introduction
- Project outline
- Objectives
- Methods
- Results
- Conclusions
- Next Steps
- Implications for clinical practice/service delivery
- Implications of your project on the environment/greener healthcare

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South West Respiratory Champions

Marieke Strange, *Practice Nurse* and **Angela Wixey,** *Practice Respiratory Nurse*

Introduction

In early 2022, trained respiratory healthcare practitioner nurses in general practice were invited to participate in the South West Primary Care Respiratory Champions Project funded by the South West Respiratory Network. The programme offered structured respiratory education, networking, and leadership skills. The programme was delivered by the respiratory network clinical leadership team.

Participants were paid additional hours to attend virtual fortnightly training sessions and were provided with access to a network of nursing peers and allied experts in the field. They were asked to provide respiratory leadership within their PCN and to increase standards of the respiratory care patients received.

A significant attraction of the programme is that participants were encouraged to register based on their respiratory interest, knowledge, and enthusiasm rather than their curriculum vitae and academic qualifications.

Project outputs and outcomes

This exciting new project attracted 48 champions from across the South West region with more than 45 nurses attending the meetings on a regular basis. Each meeting featured clinical updates and an opportunity to share and debate best practice based on personal experiences. The nature of the meetings was open and friendly; which facilitated and nurtured a group who continue to meet regularly beyond the programme completion through email and via a telephone support group (WhatsApp). Prior to the project taking place many of the participants felt isolated with nowhere to share ideas or seek advice/opinion. Since the programme the participants now feel that they have a robust network of contacts and champions with appropriate expertise with whom they can share information and reliably seek advice and support. They also feel more confident and respected in their PCN.

POLICY NEWS

What is healthcare policy, why does it matter, and how can we influence it?

Carol Stonham,[1] Tracey Lonergan[2]

[1] Executive Policy Lead, Primary Care Respiratory Society; [2] Policy Coordinator, Primary Care Respiratory Society

In this article, we explore what healthcare policy is, why it matters, how we as healthcare professionals can influence UK healthcare policy, and why we should. Carol Stonham is our immediate past Executive Chair and leads the PCRS Policy Forum. Dr Tracey Lonergan is the PCRS Policy Coordinator and a Medical Writer with a special interest in respiratory disease.

What is healthcare policy?

The World Health Organization (WHO) defines healthcare policy as "*decisions, plans, and actions that are undertaken to achieve specific healthcare goals within a society*".[1] Essentially, healthcare policy is the framework of priorities and goals that determines fundamental issues such as which services are provided, how, where and by whom those services are provided, which medications are approved and made available through formulary lists, and local and regional access to healthcare services.

Why is healthcare policy important?

Healthcare policy helps to shape and protect the health and well-being of our population. Fundamentally, it directs the flow of funding for our health service according to the perceived areas of greatest need for our society. Healthcare policy for England is laid out in the NHS Long Term Plan, issued in January 2019.[2] The plan highlighted a number of major health conditions that were identified as of highest priority to improve the health of the nation – cancer, cardiovascular disease, stroke care, diabetes, respiratory disease, and adult mental health services. These are in addition to the broader policy aspirations of boosting out of hospital care, reducing pressure on emergency hospital services, giving people more control over their own health, and striving for a strong start in life for children and young people. Similar documents are in place for Scotland,[3] Wales[4] and Northern Ireland.[5] Each document reflects the national healthcare priorities. In Scotland the policy priorities are focused on boosting GP numbers, investing in general practice and district nursing, and investing in training additional healthcare professionals, including advanced nurse practitioners, paramedics, and link workers.[3] The Welsh healthcare policy priorities include striving for longer healthier and happier lives for all, enabling people to remain active and independent in their own homes for as long as possible, and to deliver an equitable system which achieved equal health outcomes for all.[4] The healthcare priorities for Northern Ireland include more support in primary care to enable more preventive and proactive care, and earlier detection and treatment of physical and mental health problems.[5] Building capacity in communities and reducing inequalities to ensure the next generation is healthy and well has also been identified as a healthcare policy priority in Northern Ireland.

As a respiratory charity, our focus is of course on the healthcare policies related to respiratory health. The NHS Long Term Plan for England defines the policy priorities for respiratory health and healthcare as being to:[2]

- Do more to detect and diagnose respiratory problems earlier.
- Increase the number of patients with COPD who are referred to pulmonary rehabilitation.
- Do more to support those with respiratory disease to receive and use the right medication.
- Improving our response to pneumonia.
- Enable more people with heart and lung disease to complete a programme of education and exercise-based rehabilitation.

Healthcare policy defines a vision for the future of healthcare

provision. This is important because it means that healthcare policy can change, for example, in response to major health emergencies such as a global pandemic, but also in response to input and influence from healthcare practitioners, the organisations that represent them and other healthcare organisations and charities. Indeed, input from the non-government sources is essential to bridge the gap between the priorities perceived in Westminster, Holyrood, the Senedd, and Stormont and the lived experiences of healthcare practitioners and their patients.

Role of the PCRS Policy Forum

As an organisation, PCRS has a dual role in relation to healthcare policy. On the one hand we are policy influencers. We are the national voice representing respiratory expertise across primary and community care. We engage with the NHS to try to ensure the right standards, supported by the appropriate policy levers, incentives and mechanisms to cascade them, are in place nationally. This is crucial to the practical delivery of high value patient-centred respiratory care by primary care health professionals locally.

Through our Policy Forum, a core team of PCRS members appointed to a place on the committee, we identify and articulate health considerations from the primary care perspective, ensure they are heard by policy makers and promote (campaign for) their integration into national and regional policies and plans. To achieve this, we undertake 5 key activities:

- Evaluating current policies that relate to primary care provision and suggest improvements or alternatives that will better meet patient needs.
- Raising awareness about what we believe are the most pressing healthcare challenges in primary care.
- Articulating new policy proposals where none exist, or they are inadequate to address healthcare issues we believe are relevant.
- Meeting with policymakers to provide clinical insight into policy proposals.
- Collaborating with other policy influencing groups to ensure a united, consistent, and impactful message is delivered to policy makers.

On the other hand, we work to translate healthcare policy into clinical practice by reflecting and communicating the PCRS position and recommendations on relevant health topics in the form of PCRS Position Statements in which we describe the evidence and emphasize what we believe best practice for the NHS should be. We also work to highlight areas of educational need and form recommendations for changes to service provision or delivery in the form of PCRS Pragmatic Guides and Consensus Statements. All these materials are available via the PCRS website.

How you can get involved

If you are interested in more information about the PCRS position on respiratory health topics, you can visit our Policy page

at https://www.pcrs-uk.org/policy. Here you will find all our current Position Statements and Pragmatic Guides.

We always welcome input from our members to alert us to emerging policy-related issues and challenges. Indeed, we rely of our Policy Network of around 25 to 30 members who are our 'ear to the ground' across the four nations and who input to and help shape our policy influencing work. Also from the Policy page, you can contact Tracey Lonergan, our Policy Coordinator, if you have a policy-related issue for the Policy Forum to consider, would like to be involved in the Policy Network, or would like to be alerted when positions become available on the Policy Forum.

There is nothing mystical about policy influencing, all you need is an opinion on how care is delivered and how it could be delivered better. It is only by speaking up that we can bring about change.

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National Asthma and COPD Audit Programme (NACAP)

Wales primary care audit – So what…now what?

Rachael Andrews, Katherine Hickman

[1] Royal College of Physicians (RCP) and NACAP, [2] Chair of PCRS Executive, Respiratory Lead for West Yorkshire ICB and Primary Care Lead for National Asthma and COPD Audit Programme (NACAP)

National audit data on the care and management of people with asthma and COPD by Welsh general practices is routinely collected and reported on every 18 months by the National Asthma and COPD Audit Programme (NACAP). This audit is called the Wales primary care audit and NACAP recently released its 2021 audit report (https://www.rcp.ac.uk/projects/outputs/wales-primary-care-clinical-audit-report-2021) covering care between April 2020 – July 2021.

As many of us will know, it is all well and good collecting and reporting on audit data but relating that data to actual people living with asthma and COPD, who are routinely seen in general practice, is much more challenging.

This is where quality improvement (QI) comes in.

The Health Foundation states that QI is 'about giving the people closest to issues affecting care quality the time, permission, skills and resources they need to solve them'. In doing this, people are empowered to look at audit data differently, and start to think of it as people they see, rather than numbers on a page.

Although NACAP cannot assist with the time and permission elements mentioned in this quote, it can support practices with the skills and resources they need for QI.

QI and the Wales primary care audit

The Wales primary care audit recommends six improvement priorities. Supported by national standards and guidance, these come with measurable targets to support small steps of change.

Individual practice level data is also available via the Data Health and Care Wales (DHCW) GP information portal (http://isdapps.wales.nhs.uk/pcip). The portal presents participating Welsh practices with their own audit data alongside national, local health board (LHB), and cluster results to provide a better idea of performance and, most importantly, to identify areas where improvement is needed.

In addition to this, NACAP has also worked with the Institute for Clinical Science and Technology (ICST) to develop a set of six open-source QI project videos and a bespoke on-demand NACAP QI toolkit (https://icst.org.uk/casestudies/the-official-nacap-quality-improvement-toolkit/) that general practices in Wales and West Yorkshire can access and use to plan, implement, and track QI projects.

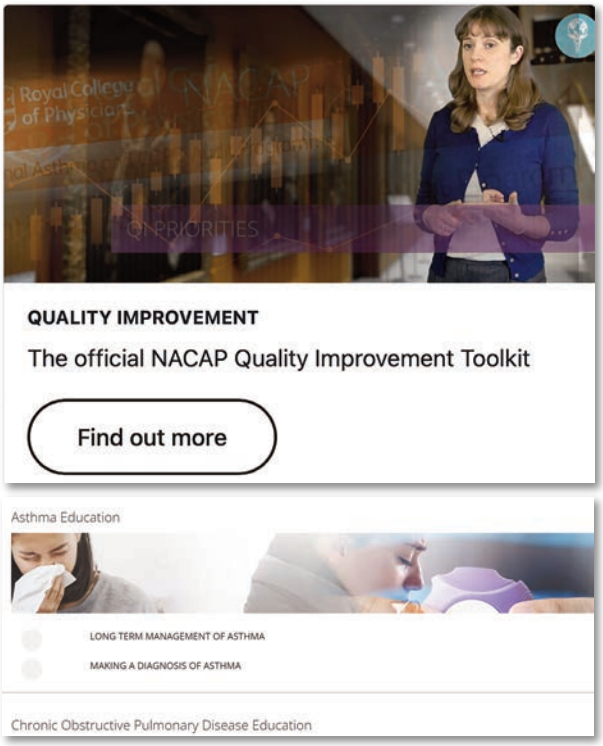
Recommended quality improvement priorities*

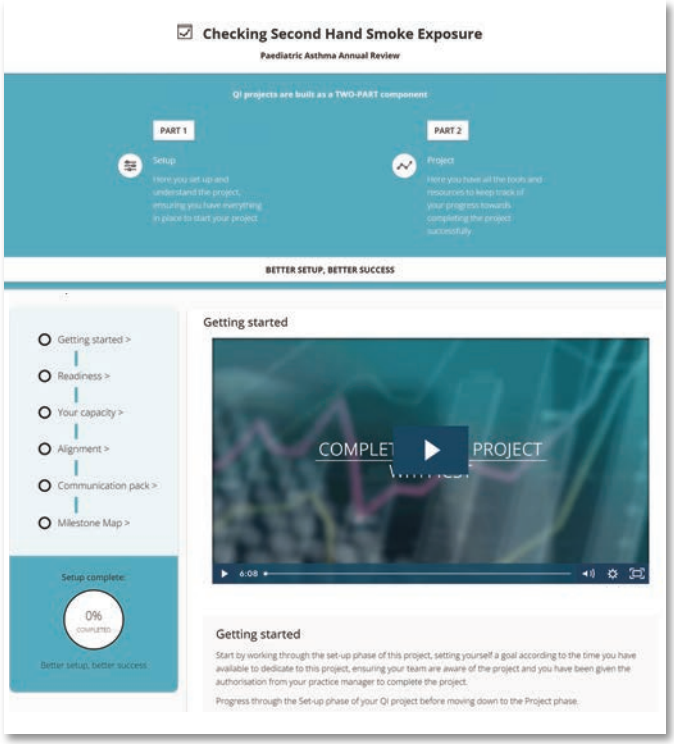
Primary care practices in Wales should:

1. Record **post-bronchodilator spirometry** ratio <0.7 for 40% or more of people on the COPD register by November 2021. Ensure they have an accurate record in their notes including a spirometry trace, correct ratio and appropriate SNOMED code. †
   www.icst.info/nacap_qi1/
2. Evidence and code appropriately **objective variability** for 80% or more of people diagnosed with asthma as demonstrated by at least one of the following by November 2021:
   - Spirometric evidence of a significant FEV1 response to a short-acting beta-agonist (SABA) or after a trial of treatment with inhaled corticosteroids (ICS)
   - Oral corticosteroids (OCS) or prescription for ICS using medication codes in conjunction with significant reversibility
   - Evidence of significantly variable peak expiratory flow rate (PEFR)
   - Positive fractional exhaled nitric oxide (FeNO) result.

   www.icst.info/nacap_qi2/
3. Ask 20% or more parents about **second-hand smoke exposure** and provide very brief advice (VBA) at their children's asthma review. Evidence with the appropriate SNOMED code in the child's notes by November 2021.
   www.icst.info/nacap_qi3/
4. Refer 70% or more of people with a Medical Research Council (MRC) score 3–5 to **pulmonary rehabilitation (PR)** and evidence this with the appropriate SNOMED code in their notes by November 2021.
   www.icst.info/nacap_qi4/
5. Provide 50% or more of people with asthma a **personalised asthma action plan (PAAP)** and evidence this with the appropriate SNOMED code in their notes by November 2021.
   www.icst.info/nacap_qi5/
6. Evidence **inhaler technique check** in the last year for 70% or more of people with asthma and/or COPD with the appropriate SNOMED code in their notes by November 2021.
   www.icst.info/nacap_qi6/

There is a myriad of information and resources available via the toolkit, including template QI projects focussing on the audit improvement priorities (and projects on other areas of asthma and COPD care can be self-set by the individual or practice). Project targets and timescales can also be set to suit the individual or team working on them, depending on their resources and capacity.





Where to start?

National targets can seem challenging to meet, particularly when services are still trying to navigate the post-COVID landscape. NACAP therefore recommends that Welsh general practices make use of their own data via the GP information portal to identify one or two key areas where they think they can realistically make change.

The QI toolkit then gives the ability to take the 'one person at a time' approach and supports the user to do something rather than nothing (particularly if time is short). A user can say to themselves 'I have some time – what does this look like in terms of my patients?' and then plan the project based on that. Making these small changes for two or three patients a week can then create positive habits in care, building confidence, which then creates a ripple effect in the care being provide to others.

For English general practices not involved in the Welsh audit and whom do not have access to the toolkit, we suggest using the data from your own systems in conjunction with the audit reports to gauge performance against national Wales averages (where appropriate) and to identify where asthma and COPD care could be better. All codes and analysis scripts used to analyse the data are in the public domain (https://github.com/NationalAsthmaCOPDAudit/primary_care2021), allowing others to replicate this work in their locality.

The Primary Care Respiratory Society (PCRS-UK) also has resources available for general practices to use for QI in the delivery of asthma and COPD care. Please see examples below or go to www.pcrs-uk.org/resources for more information.

Strength in numbers

As with most things, there is strength in numbers when it comes to QI. Practices wishing to initiate QI projects on their asthma and COPD care should involve the GPs, practice managers, nurses, pharmacists, and the reception and administrative staff. They should also work with someone with asthma or COPD who can provide a patient perspective and involve them in a wider project team to support each other, discuss and resolve challenges and, most importantly, celebrate success. This again will facilitate positive habits, build confidence, and create the ripples of QI change.

Lastly, but by no means least, we encourage practices and their teams to enjoy it. You are working to make a difference – an important difference. A difference that people with asthma and COPD deserve.

If you would like more information about NACAP and its Wales primary care audit, please contact the NACAP team at nacap@rcp.ac.uk.

Acknowledgements

Data for the Wales primary care 2021 audit made use of anonymised data held in the Secure Anonymised Information Linkage (SAIL) databank and was accessed and analysed by the BREATHE data hub and Imperial College London (ICL) teams. We would like to acknowledge the data providers who make anonymised data available for research.

Reporting outputs including the GP information portal, ISCT platform and national reports were produced with the support of Data Health and Care Wales (DHCW), Institute for Clinical Science and Technology (ICST) and Royal College of Physicians (RCP) corporate communications and publications teams respectively.

Quality assured spirometry	https://www.pcrs-uk.org/resource/spirometry
Very Brief Advice for Tobacco Dependency	https://www.pcrs-uk.org/resource/tobacco-dependency-pragmatic-guide
Pulmonary Rehabilitation & addressing deconditioning	https://www.pcrs-uk.org/assessing-and-reversing-effects-deconditioning
Personal Asthma Action Plans	https://respiratoryacademy.co.uk/resources/how-to-complete-a-personalised-asthma-action-plan-clin/
Inhaler Technique	https://www.pcrs-uk.org/resource/inhaler-devices

Professional development

What three things?

Ren Lawlor, *Education Lead and Deputy Chair, PCRS*

The Fit to Care document was initially developed to guide and support clinicians working with patients with respiratory disease. Since its first publication, primary care has seen huge changes in the dynamics of the workforce providing this care. The document now applies equally to doctors, nurses, pharmacists, physiotherapists, paramedics, and other allied healthcare professionals involved in the care of people with respiratory conditions. This variation in disciplines aligns with national programmes aimed at improving patient care, such as Getting it Right First Time – GRIFT (NHS England & NHS Improvement) and the Primary Care Improvement Portfolio (Health Improvement Scotland), both of which work to the principle that a patient should expect to receive equally timely and effective investigations, treatment, and outcomes wherever care is delivered, irrespective of who delivers that care, improve sharing of responsibility within practice teams and the wider primary care system, and promote effective multidisciplinary working.

As this diversity of healthcare professionals continues to grow within primary care, it is essential that those who have responsibility for the delegation and supervision of clinical interactions between members of staff and patients, not only have sufficient knowledge and expertise to do so safely, but are also willing to provide education, updates, and support to ensure accurate approaches to safe practice. The skills of supervision are often easier for clinicians in your own professional speciality, but with many other disciplines working in primary care, good supervision requires an understanding of the training and skills of other professional groups as well as understanding the experience that each individual brings. It is easy but dangerous to assume that clinicians have all been trained in and think in similar ways.

In the last issue of *Primary Care Respiratory Update,* we introduced a new section called "What Three Things" where we introduce three areas of work that can be supported with clinical supervision, whole team meetings, or protected learning times.

1. Vaccine Hesitancy

With flu season underway and the autumn COVID-19 booster programme continuing across the country, practices may be aware that some of their higher risk patients are reluctant to receive potentially lifesaving vaccines. There has been documented hesitance in the Black, Asian and Minority Ethnic (BAME) communities in particular due to myths about vaccines and historical misgivings.

A poll commissioned by the Royal Society of Public Health published in December 2020[1] found that only 57% of respondents from BAME backgrounds were likely to accept a COVID-19 vaccine, compared to 79% of white respondents. Black Women in Health undertook an exploratory survey and observed that myths, misconceptions, and outright fallacies were the barriers to engagement in the vaccine programme amongst the BAME community. That said, there was encouraging information from the survey that suggested respondents who were not willing to be vaccinated were especially receptive to offers of further health information from their GP. Over one third (35%) said they would likely change their minds and get the jab if given more information by their GP about how effective it is – almost twice as many as the 18% of white people who were initially unwilling.[2] As such, a practice wide approach to contacting

and encouraging patients to book their vaccine appointment or to just have a discussion around their concerns can be helpful. Involving members of the team, from reception and administration staff to all clinicians, can ensure the same message is given at each opportunity, making every patient contact count. Evidence shows that the use of the **4 A's plus** approach can encourage vaccine uptake.

- Acknowledge concern
- Address the problem
- Answer: get answer from reliable source
- Act on information you get
- Verify before you amplify

Making sure all members of your team are educated and up to date is imperative, there may well be vaccine hesitancy among your own team and this will also need to be addressed if we are to improve coverage in our practice populations, reduce morbidity and mortality, and to reverse the worrying trend of vaccine refusal.

2. Deteriorating indoor air quality during winter

With the rise in cost of living many people will struggle to keep their homes warm enough to maintain health. Cold homes are one of the factors that contribute to poor indoor air quality with impacts on respiratory health. Other factors include poor ventilation due to closed windows and the consequent high humidity, for example from drying laundry, and greater accumulation of harmful gases and dusts from plastics, paints, and cleaning agents inside the home.

Contrary to popular belief this does not just affect old or 'poor' housing. A study commissioned by the Department of Communities and Local Government (MHCLG) investigated ventilation and indoor air quality in 80 new homes during winter 2015/16 and found that the risk of poor ventilation in these properties was high. This was due to a number of factors including the fact that homes are built to be more 'air tight' now that heating efficiency standards are mandatory. But the second reason was 'occupant behaviour', and this is where we can educate our patients about the importance of air circulation and reducing the risk of humidity, damp, and mould. PCRS already has guidance available about how best to do this. People are reluctant to open windows in cold weather or to reduce outside noise from traffic, etc., but this can be beneficial in terms of air circulation. Putting the heating on regularly for shorter periods can ward off humidity and damp, and utilising trickle vents where available are simple strategies for people to employ. Practice staff should advise people that the following lead to poor air quality indoors and to increase ventilation when in use:

- Gas cookers
- Open fires
- Candles
- Gas heaters
- Cleaning products, sprays and paints
- Baths and showers
- Drying clothes

Other actions could include:

- Encouraging people not to smoke indoors
- Advising that indoor pollutants can trigger asthma
- Asking about housing as part of a respiratory review if control is not achieved or worsening
- Tell people with asthma to avoid sprays, air fresheners, and aerosols
- Advise pregnant women and people with children under one of increased risks of indoor air pollution and make a referral for a housing assessment if relevant.

3. Who on Your Practice List will be Homeless this Winter?

The 2022 NICE guidance on care for people experiencing homelessness[3] includes within the definition:

- Sleeping rough
- Temporary residence e.g. bed and breakfast properties
- Using homeless day centres
- Are obliged through necessity to stay with others
- Squatting
- Newly homeless
- Past history of homeless with health and social needs making them high risk for a new episode

Patients are often not considered as homeless if they are in transitional accommodation, however they have worse health outcomes from the perspective of health-related quality of life and premature mortality. Children and young people in unstable accommodation are more likely to suffer from asthma and to be exposed to indoor pollutants which can make asthma harder to manage.

Whilst practices will always aim to record an address for a patient, what is equally important is the type of accommodation it is and whether this has implications for respiratory health. This is important for receptionists and administration staff to comprehend to ensure that the correct information is added to the patients notes, and as such highlighting to clinicians the added risks to health that the patient may be facing.

References
1. Tull, K. (2019). Vaccine hesitancy: guidance and interventions. K4D Helpdesk Report 672. Brighton, UK: Institute of Development Studies.
2. NICE (2021) Available at: COVID-19 vaccine hesitancy – debunking the myths using a community engagement approach underpinned by NICE guidance | NICE (accessed 31/10/22)
3. NICE (2022) Integrated health and social care for people experiencing homelessness Available at: https://www.nice.org.uk/guidance/ng214

PCRS News round-up

At this year's conference, Carol Stonham handed over the baton of PCRS chair to Dr Katherine Hickman. Carol has been a trailblazer for the organisation in many ways (see https://www.pcrs-uk.org/sites/default/files/pcru/2019/2019-Spring-Issue-17-CarolStonham-Trailb.pdf); the first female chair of the PCRS Executive, the first nurse to lead the PCRS Executive, and we are all so grateful for her leadership and sound direction delivered through the COVID-19 pandemic. Here are just a few quotes from her colleagues at PCRS:-

"Carol is a personal inspiration to me. As a primary care nurse myself she has so often made me feel so proud to be in the profession and served as a beacon for good practice. Her passion for high standards of care is so important; and she has campaigned passionately to have our profession and primary care recognised and included in national plans. She is both uncompromising when it comes to what she asks of care standards and realistic in understanding the challenges professionals face." **Nicola Standring-Brown**

"I took over as Service Development Committee Lead just before Carol took over as Chair of PCRS - and who would have predicted what followed? Not only has Carol been the first Nurse Chair of PCRS but she had to steer the stormy seas brought by the pandemic, meet and work with a new CEO and adapt to the role herself. She has been the calm we have all needed in the midst of the storms and I am grateful for her capable skippering skills" **Dr Daryl Freeman**

"Carol has made an enormous contribution to respiratory primary care and to PCRS over many years. As the first nurse to act as Chair of the Executive - and this during a time of unprecedented challenge and change - her wisdom and enthusiasm, her good humour, and her talent for getting the best from a multidisciplinary team have been hugely appreciated by everyone in the organisation." **Dr Duncan Keeley**

"The Trustees of PCRS were incredibly grateful to Carol for her superb work as Chair of the Executive during a very testing time. Absolutely professional, very hard working, utterly reliable and also knowledgeable and a very safe pair of hands. Carol was correctly viewed with great respect and her work enhanced the way in which others viewed PCRS." **Professor Martyn Partridge**

"Carol arrived as chair of PCRS at a time of a new CEO. She had to cope with the challenge that none of us had been involved in before in our clinical lifetimes - a global serious respiratory pandemic (COVID-19). What has been the result…. Carol has helped steer PCRS through the adaptations needed for communication (virtual executive committees), through a time that has greatly increased our profile nationally with involvement in many rapid guidelines used to help clinicians across the UK cope with the pandemic. If that is not enough, she has led us through virtual conferences (arranged at speed) and kept a national profile for PCRS going with breathlessness, spirometry, severe asthma and COPD as well as the green agenda. I am aware of the role of chair from a considerable time ago - and take my hat off to Carol. Amazing leadership, kept the ship afloat and made it safer at a time when it would have been easy for PCRS to sink. We are all very grateful for such incredible leadership." **Dr Steve Holmes**

"What can one say that others have not already said? I believe that Carol is an amazing ambassador and role model for non-doctors in the PCRS (and probably for doctors too). Carol has risen in the ranks of the PCRS to eventually lead the organisation, and has done so brilliantly. She has shown that if you have the drive, the enthusiasm and the desire to do what is best for our patients, then you can rise to the top. Common sense and sense of humour have made working with her a real pleasure." **Dr Vince Mak**

"Carol is one of the most approachable and down to earth people you'll ever meet; a really good friend who I look up to. What she has achieved is remarkable. She's an amazing team leader, a strong voice for primary care who has shown to be more than capable to stand her ground in challenging situations. She respects the valuable role that pharmacy plays and inspires me to voice my opinions. It's easy to assume, to lead PCRS you need to be a GP and have an XY chromosome; we now know these are not essential." **Darush Attar Zadeh**

"Carol chaired the organisation at a time of significant change both internal and external to the organisation. She has a focus and knowledge that I am in awe of. Carol has delivered over multiple and complex challenges with great efficiency and really drives positive change for the organisation. Her impact on the Greener Respiratory Pathway showcases her passion for improvement and collaboration. She is a kind and welcoming chair who has supported others to develop their potential while working alongside her. She is truly person-centered in her leadership holding the respiratory population and the workforce in her heart as she leads. She has championed schemes to increase membership participation in many aspects of the organisation and has significantly invested in the development of others, who share the passion for Primary Care and Respiratory services." **Clare Cook**

"Carol was one of the reasons why I joined the PCRS family. A great mentor who always inspired me with her energy and enthusiasm. She has been always approachable and ready to answer all my beginners questions. An amazing leader who took over the role at a difficult time and we are so grateful for her incredible leadership. It's amazing to learn that she is the first nurse and women chair of the PCRS." **Dr Maisun Elftise**

"Carol is an inspirational leader and has led PCRS successfully though an unprecedented level of challenge and rapid transformation. She is a fabulous ambassador for both respiratory care and a role model for all respiratory professionals. On a personal note, throughout my early meetings with Carol as a delegate on the respiratory leader's programme, to my 1st days on the education committee, Carol has always been approachable and encouraging. I also highly value the support and wisdom she provided through the PCRS leader's support group in the 1st wave of the pandemic. Thank you, Carol, for your dedication, resilience, support and talented leadership." **Siobhan Hollier**

"Carol provided mentorship to me early on in the development of my respiratory career. She provided amazing support and advice and has continued to do so. She has steered PCRS through probably their most challenging time, during the pandemic. To have done so is a testament to her passion and commitment to respiratory care and her skills in motivating the multidisciplinary team." Dr Fiona Mosgrove

"When I think of Carol - this quote comes to mind, ***"If your actions inspire others to dream more, learn more, do more and become more - then you are a leader" John Quincy Adams*** *- and this epitomises Carol in my opinion - she is not just a 'Nurse Specialist per se' she is a leader and a wonderful ambassador for not only the nursing profession but respiratory care and of course the PCRS - Carol is a true inspiration! "* **Frances Barrett**

After many years of service to PCRS, Dr Duncan Keeley has also recently retired. Duncan has been a calming port in the stormy seas and always been valued for his sage and practical advice. Duncan has served on many committees, most recently the PCRS Policy committee. Said Carol Stonham, "Duncan has always been a font of knowledge and the voice of reason but above all else has always offered sensible, pragmatic and considered advice. He has always advocated for better patient care delivered by competent, compassionate healthcare professionals. He is the person that sits quietly but when he speaks people listen, and for good reason. To me, Duncan is someone I have looked up to as a role model and has supported me to shape and develop my career. I wish him a long, healthy, happy retirement", and Dr Kevin Gruffydd-Jones added, "Duncan has never been a person to seek the limelight, but been a key member of PCRS since soon after it's inception as the GP's in Asthma Group in the late 1980's. He has served on the Executive Committee on several occasions and is ex policy lead. He really is someone who is passionate about promoting high quality respiratory care in general practice. In addition to his work with PCRS, he has served on NHS respiratory board, been an active member of RCGP and provided incisive editorials on respiratory topics for the *BMJ*. It has been a pleasure to work with Duncan and thank him for his immense contribution to PCRS over many years".

At this time PCRS would also like to take this opportunity to thank and acknowledge the hard work of all our committee members and trustees both past and present. Without the hard work and dedication of these inspiring and talented individuals we would not be able to deliver the work that we do. If you are interested in getting more involved with the organisation why not consider applying for one of our committees in 2023.

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