Primary Care Respiratory Update

Spring/Summer 2026 Issue 32

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

Primary Care Respiratory Society

npj | primary care respiratory medicine

Call for Papers

npj Primary Care Respiratory Medicine is an open access, online-only, multidisciplinary journal dedicated to publishing high-quality research in all areas of the primary care management of respiratory and respiratory-related allergic diseases. Papers published by the journal represent important advances of significance to specialists within the fields of primary care and respiratory medicine. We are particularly interested in receiving papers in relation to the following aspects of respiratory medicine, respiratory-related allergic diseases and tobacco control:

- Epidemiology
- Prevention
- Clinical care
- Service delivery and organisation of healthcare (including implementation science)
- Global health

Published in partnership with

PCRS

International Primary Care Respiratory Group IPCRG

EDITOR-IN-CHIEF

Dr. Ioanna Tsiligianni
Assistant Professor, Department of Social Medicine, University of Crete, Greece

All content is indexed within PubMed, PubMed Central, MEDLINE, Scopus and Web of Science

Part of the Nature Partner Journals series

npj nature partner journals

Primary Care Respiratory Update

The Primary Care Respiratory Update is published twice yearly and distributed to members of the Primary Care Respiratory Society.

www.pcrs-uk.org/pcru

Editorial Office, Publishers, Advertising and Sales

Primary Care Respiratory Society
483 Green Lanes
London,
N13 4BS
Tel: +44 (0)1675 477600
Email: sales@pcrs-uk.org

Supplements and reprints

From time to time PCRS publishes supplements to the regular journal, which are subject to review by the editorial board.

PCRS also offers licencing opportunities for bulk reproduction of this journal.

For further information, contact:
Primary Care Respiratory Society
483 Green Lanes
London,
N13 4BS
Tel: +44 (0)1675 477600
Email: sales@pcrs-uk.org

Printed and mail fulfilled by HMCA Services on 100% recycled paper

Competing interests are declared to PCRS and this information is kept on file.

The Primary Care Respiratory Society UK is a registered charity (Charity No: 1098117) and a company limited by guarantee registered in England (Company No: 4298947). VAT Registration Number: 866 1543 09. Registered offices: PCRS, Tennyson House, Cambridge Business Park, Cambridge, England, CB4 0WZ. Telephone: +44 (0)1675 477600 Email: info@pcrs-uk.org Website: http://www.pcrs-uk.org

The Primary Care Respiratory Society is grateful to its corporate supporters including AstraZeneca UK Ltd, Chiesi Ltd, GlaxoSmithKline (GSK) plc, Lupin Healthcare Limited, and Trudell Medical Ltd for their financial support which supports the core activities of the Charity and allows PCRS to make its services either freely available or at greatly reduced rates to its members.
See http://www.pcrs-uk.org/sites/pcrs-uk.org/files/files/PI_funding.pdf for PCRS statement on pharmaceutical funding.

This publication includes promotional material provided to us by our industry partners and intended for healthcare professionals only. Industry partners have had no input into the rest of the journal's educational content.

education for health

SUPPORTING **HEALTH** IMPROVEMENT

40 YEARS

For 40 years, we have been helping people like you develop their knowledge, advance their career and improve care for people with long-term conditions

Our key areas include:

- CARDIOVASCULAR DISEASE
- DIABETES
- ASTHMA
- COPD AND SPIROMETRY
- DIAGNOSTICS
- PROFESSIONAL SKILLS AND LONG-TERM CONDITION MANAGEMENT

Our courses are:

- **Expert led** – all our tutors have specialist knowledge in their field
- **Recognised** – CPD-accredited workshops and courses accredited by the University of Hertfordshire
- **Online** – interactive online learning supported by live sessions
- **Flexible** – fit training around your other commitments
- **Supportive** – speak to expert tutors and share best practice

Find out more and book today:
educationforhealth.org

Primary Care Respiratory Update

Contents

LUPIN HEALTHCARE

Lupin Healthcare are working to reformulate products in their pMDI portfolio with a near-zero global warming potential propellant[1]

This development programme, which we plan to complete in 2026 with subsequent regulatory filings, aims to provide patients with products that maintain the same efficacy and safety profile, while significantly reducing their environmental impact compared to existing options.[2,3]

This is a critical part of Lupin Healthcare's sustainability efforts, and aims to support the NHS in its goal of becoming net zero.[4,5]

To read more about Lupin Healthcare's net zero journey, scan the QR code or visit **www.lupinhealthcare.co.uk**

Carbon footprint standard™ CO_2e Assessed Organisation

UK-RESP-2401-00005. November 2024

References: 1. Lupin Ltd. Integrated Report 2023-2024. https://www.lupin.com/wp-content/uploads/2024/07/integrated-report-consolidated.pdf. Accessed: November 2024. **2.** Lupin Healthcare. Data on File: Low Global Warming Propellant Development. UK-RESP-2410-00001. **3.** Buttini F, Glieca S, Sonvico F, et al. Metered dose inhalers in the transition to low GWP propellants: what we know and what is missing to make it happen. Expert Opin Drug Deliv. 2023;20(8):1131–1143. **4.** NHS Delivering Net Zero Health Service https://www.england.nhs.uk/greenernhs/a-net-zero-nhs/ Accessed: November 2024. **5.** Lupin Healthcare. Carbon Reduction Plan. https://www.lupinhealthcare.co.uk/wp-content/uploads/2023/12/PPN-0621-Carbon-Reduction-Plan_Lupin-Healthcare-CY22.pdf. Accessed: November 2024.

Opening Editorial

Darush Attar Zadeh, *Chair, PCRS Executive*

It has been an exciting few months in my role as Primary Care Respiratory Society (PCRS) Chair, with important developments underway across the society.

As part of the Respiratory Transformation Partnership (RTP), PCRS is supporting the development of new primary care referral pathways for chronic cough, breathlessness and sleep services, ensuring these are aligned with primary care systems. Alongside this, we are building on our much-loved infographics and developing practical resources to support clinicians in everyday practice. It was also a privilege to attend the RTP launch on behalf of PCRS, alongside partners from the NHS, life sciences, industry and patient groups.

It feels like only yesterday that we came together for our 2025 conference, and already preparations for 2026 are well underway. The programme is shaping up to be excellent, and I would encourage you to register early and take advantage of the premium membership discounts and early bird rates.

I am also delighted to introduce our vice chair, Dr Maisun Elftise. Since starting as Chair, Mai has been an invaluable support. We meet regularly with our project manager, Rachael Andrews, and executive director, Tricia Bryant, to review progress and shape the strategic direction we take to our committees. These discussions are collaborative and focused on strengthening our work.

Mai brings extensive experience as a GP and consultant in integrated and community care, alongside a strong commitment to health equity—a priority shared across many of our committee leads and members.

Having previously held the vice chair role myself, I know it has not always been clearly defined. It was therefore important to me that the role is now active and meaningful. Mai embodies this—she supports, deputises, and leads when needed, playing a key role in driving our work forward.

I also had the pleasure of working with Mai as the PCRS Conference Organising Committee lead, where she consistently contributed ideas and remains an active and valued member.

As PCRS continues to grow, it is reassuring to see strong leadership across our committees, supported by a committed Board of Trustees and executive team. I feel fortunate to be working alongside such dedicated colleagues and look forward to what we will achieve together.

Join us at the PCRS Conference

24th - 26th September 2026 | Telford International Centre

The UK's leading respiratory conference for clinicians working primary, community and integrated care.

Our conference programme is devised and developed by healthcare professionals for healthcare professionals.

Hear from experts and key opinion leaders on topics that matter to you:

- Asthma
- COPD
- Neighbourhood health
- Diagnostic tests
- AI
- Greener healthcare
- Health inequalities
- Respiratory research

Register now

Early bird rates end on the 30th June 2026

Learn from the experts

Be inspired

Take back best practice

Discounted rates for premium and standard members

The conference has been instigated and organised by PCRS. We are grateful to sponsors (https://qrco.de/confsponsors) and exhibitors (https://qrco.de/confexhibitors) who have contributed funding towards this event in return for exhibition space. Neither sponsors or exhibitors have had any input into the agenda or the selection of speakers with the exception of any sponsored satellite symposia which are clearly indicated.

PCRS conference 2026: Why you should be there

Healthcare professionals who are passionate about improving respiratory care are invited to attend the **PCRS Respiratory Conference from 24th to 26th of September 2026 at the Telford International Centre.** This is the UK's leading respiratory conference for clinicians working in primary, community and integrated care.

A multi-disciplinary team of respiratory experts have designed a conference programme that offers something for everyone. Featuring nationally recognised speakers and key opinion leaders, join us for thought-provoking plenaries, interactive workshops and practical sessions grounded firmly in everyday clinical practice.

Highlights include comprehensive clinical respiratory updates on hot topics such as taming uncontrolled asthma with Stephen Fowler, Professor of Respiratory Medicine. His session will explore how you confirm or rule out asthma in someone already on treatment, what the alternative possibilities are, and when to refer.

James Chalmers, Professor of Respiratory Medicine, will encourage us to "Think bronchiectasis!" in a joint session with Fiona Mosgrove, GP, that highlights how good bronchiectasis care, from investigation to treatment and ongoing management, can make a huge difference for patients.

Viv Marsh, Asthma Nurse Specialist and passionate advocate for children and young people with asthma and allergy, will demonstrate how to deliver high-quality evidence-based care to patients impacted by these common and often debilitating conditions in a joint session with Elizabeth Angier, GP, on asthma and allergy.

This year's conference will end on an inspiring note as Katherine Hickman, GP and past PCRS Executive Chair, explores what it means to be a respiratory warrior in a resource-constrained system. Drawing on leadership and behaviour science, the session will reflect on how we can protect our own capacity, set clear boundaries, and continue to advocate for respiratory patients without burning out.

Scan the QR code to learn more about these sessions and to browse the wider programme

Previous attendees consistently praise the quality and relevance of the sessions:

Excellent programme with a variety of topics. All well presented and engaging.

Thoroughly enjoyed all the sessions… lots of take home ideas to implement in practice

This by far, is the best conference I have ever attended and cannot wait to take my learning back into practice

Whether you are a GP, nurse, pharmacist, physiotherapist or paramedic, you'll gain evidence-based insights and inspiration to take best practice back to your teams and networks. What truly sets PCRS apart is its welcoming, supportive environment. One delegate described it as "like a family reunion," while another said, "It really is a friendly conference, even going solo!"

For those attending independently, Team Solo ensures no one feels alone, with reserved seating, a dedicated dinner table and a morning meet-up. Approachable committee members and faculty make networking easy, and the social programme creates valuable opportunities to connect with like-minded professionals from across the UK.

Katherine Hickman, Nazir Hussain and Laura Rush share what they are most looking forward to at PCRS 2026. Scan the QR code to watch their videos.

The conference provides an ideal platform to share innovation, research and quality improvement projects with our abstract poster walkaround sessions. This is an excellent opportunity to grow your network and to get recognition for your work.

Scientific research, best practice and service development abstract submissions are open until the 30th June.

With registration from just £170 for Premium Members and a £100 bursary available, the conference delivers outstanding value.

REGISTER BY THE 30TH JUNE
to save with our early bird rates.

We look forward to welcoming you to PCRS 2026!

The conference has been instigated and organised by PCRS. We are grateful to our sponsors and exhibitors who have contributed funding towards the event in return for exhibition space, sponsored symposia and/or other marketing opportunities. Neither sponsors nor exhibitors have had any input into the agenda or the selection of speakers with the exception of sponsored satellite symposia which are clearly indicated. The conference social programme - dinner and drinks - is not covered by sponsorship or exhibition fees.
View the full list of sponsors (https://qrco.de/confsponsors) and exhibitors (https://qrco.de/confexhibitors).

Consensus guide: Implementing the 2024 asthma guidelines in all healthcare settings, including unplanned care.

Introduction

People with asthma may seek care in any setting, including unplanned care, which includes acute and urgent care, out of hours, emergency departments, paramedics etc. This document offers practical guidance on delivering evidence-based asthma care, particularly when it takes place in these settings. It focuses on the management of asthma in adults and young people aged 12 and over.

It is essential that any clinician providing asthma care is aware of recent changes to national guidance, and feels supported and able to implement them. The changes are outlined in this document.

For more information on diagnostic and treatment pathways for all ages, care of children under 12 years old, and recommendations on stepping treatment up or down for those already on asthma medication, please refer to the PCRS First Steps to Implement the new BTS/NICE/SIGN Asthma Guideline.

Asthma care has changed

The 2024 BTS/NICE/SIGN guideline [1] marks a major shift in asthma management. It emphasises that every patient, whether newly diagnosed, under investigation, or previously undertreated **MUST** have access to the *right treatment from the very first point of contact*, including in **unplanned care settings.**

From September 2025 certain inhaled corticosteroid (ICS)-formoterol inhalers were licensed for children of 6-years of age and older. Please see the PCRS summary on this for more information:


New BTS/NICE/SIGN asthma guideline 2024

First steps to implement the guidance

Introduction

This is a high-level summary of what the new BTS/NICE/SIGN Asthma: diagnosis monitoring and chronic asthma management guideline means for you as a primary healthcare professional and what steps you need to take to implement it effectively. The full guideline is available here.

This document is a distillation of the new guidance to provide distinct advice on the changes on the diagnosis and management to asthma. It is not intended to be a comprehensive guide of the new guideline, neither does it cover all non-pharmacological treatments or on-going monitoring. We recommend you use the links to resources provided throughout to obtain more detailed information and guidance.

It focuses on the following aspects of the patient journey for both adults and children and young people:

Diagnosis of asthma	Treatment of asthma	Management and treatment of asthma	Management and treatment of asthma	Monitoring and self-management
In newly diagnosed patients		*In adults and CYP (5+) with an existing diagnosis*	*In children under 5*	*In all patients*

Monitoring and self-management for all patients

All adults, young people and children with diagnosed or suspected asthma must have:

- An **asthma action plan** which includes treatment regime, triggers, warning signs and who to contact when they need help.
- Regular (at least annual) **asthma reviews*** which are conducted by appropriately trained healthcare professionals. At these:
  - Consider using age-appropriate validated tools e.g **Asthma Control Test (ACT)**
  - Confirm adherence to prescribed treatment and review **inhaler technique**
  - Identify any risk associated with short-acting beta-agonist **(SABA) overuse**
  - A review/update of their asthma action plan
- A review of **smoking**/vaping status, and referral to smoking cessation if appropriate
- Access to **education** and self-management programmes/information. This includes working alongside schools and community workers to ensure support in all settings.

**Use proactive alerts to ensure routine reviews of asthma, involve the multidisciplinary team in asthma care and optimise the use of telephone, email and IT to support asthma management.*

Implementation in unplanned care settings means:

Recognising asthma presentations early - even when diagnostic testing is not yet complete.

Starting inhaled corticosteroid (ICS)/ formoterol treatment promptly - to address airway inflammation.

Providing safety-netting and follow - up - ensuring patients are reviewed in primary care or by a healthcare professional trained in asthma management (see page 3 'Onward Referral')

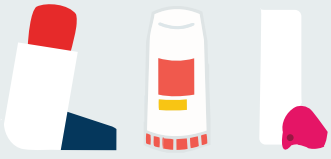
Supporting long-term control with inhaler technique checks and a personalised asthma action plan.

Attention! – be mindful not to inadvertently step down the patients already established on an ICS when switching to AIR or MART therapy unless it is agreed appropriate as part of a considered medication review. For example, patients on a high dose ICS containing inhaler or a triple therapy inhaler (ICS/LABA/LAMA).[3] Any concerns patients have about steroids should also be explored. See the BTS/NICE/SIGN asthma guideline on ICS doses for more information:

This approach ensures that asthma care is safe, equitable, and aligned with current best practice:

Asthma treatment/inhaler should be based on individual patient criteria and part of a shared decision-making process with the patient.

The NICE/BTS/SIGN asthma guideline[1] now recommends short-acting beta 2 agonist (SABA) free pathways to reduce the risks associated with SABA overuse.



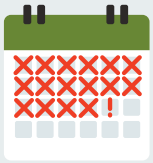
SABA free regimens include anti-inflammatory reliever (AIR) and maintenance and reliever therapy (MART) which use a combination of inhaled corticosteroid (ICS) and formoterol.

Only certain ICS/formoterol inhalers are licensed for AIR reliever therapy.

See the RightBreathe site for more information on inhaler licensing scan here:

Treating suspected, new and undertreated asthma
Consider and address possible factors contributing to symptoms. This includes:

Alternative diagnoses or comorbidities.



Suboptimal inhaler adherence and/or inhaler technique.

Smoking.

Psychosocial factors.

Seasonal factors.

Environmental factors e.g. air pollution, indoor mould exposure.

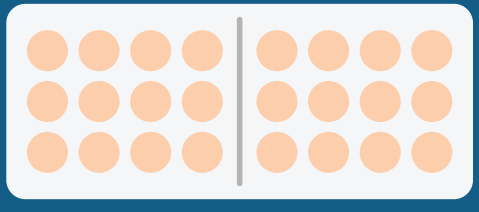
Management with separate preventer & salbutamol (blue) reliever inhalers is no longer recommended.

Most importantly, a SABA (blue) inhaler should never be prescribed alone. In April 2025, the Medicines and Healthcare products Regulatory Agency (MHRA)[2] issued a warning to healthcare professionals and patients reminding of the risks of SABA overuse. It also highlighted the need for healthcare professionals to be aware of the NICE/BTS/SIGN asthma guidelines.

Instead, offer a low-dose ICS/formoterol combination inhaler to be taken as needed (AIR therapy) or if asthma is uncontrolled (highly symptomatic or if there are severe exacerbations) offer low-dose MART

Uncontrolled asthma: Any exacerbation requiring oral corticosteroids **or** frequent regular symptoms (such as using reliever inhaler 3 or more days a week or night-time waking 1 or more times a week)

In patients presenting with acute symptoms, ensure any acute exacerbation of asthma is treated as per usual guidelines.



- Review the patient's current treatment regimen (if they have one) and discuss with them what changes are potentially needed. If they are not on any asthma medication, talk to them about what is available and what might work best for them (be mindful not to inadvertently step down ICS)
- Start AIR if there is a clinical history of asthma.
- If asthma is uncontrolled (exacerbations requiring oral steroids or frequent, regular symptoms), offer low-dose MART, rather than AIR alone.
- **Start treatment promptly and sure the patient understands and can use their inhaler correctly.**

Shared decision making that reflects the patient's wishes on treatment and encourages self-management with an asthma action plan (see PCRS resources at the end of this document) results in more effective asthma management.

Reinforce/educate that asthma is an inflammatory disease with ICS central to disease management. The combined ICS/formoterol inhaler ensures ICS is never missed.

Discuss any potential lifestyle changes and provide trigger avoidance advice.

Onward referral[4]

Ensure those presenting with acute asthma exacerbation have a clinical review with a healthcare professional trained in asthma management scheduled within 4 weeks. Check what your local pathway is.

Ensure all clinical presentation, treatment and investigation results are communicated to the patient's GP practice. Highlight any CHANGE to inhaler management and plan for follow up.

Ensure appropriate referral for specialist review (suspected severe asthma) e.g.
- Patients on **high-dose ICS/LABA** (with or without extra controllers) who have needed **2+ courses of oral steroids in the past year.**
- Patients on **moderate-dose MART** with evidence of **Type 2 inflammation** (blood eosinophils ≥0.3 × 10⁹/L, or FeNO ≥50ppb in adults / ≥35ppb in ages 12–17) and who have needed **2+ courses of oral steroids in the past year.**
- Patients on **moderate-dose MART** without Type 2 inflammation, but already taking **LTRA + LAMA**, and who have needed **2+ courses of oral steroids in the past year.**

Depending on your area of practice, it may be appropriate for you to complete this referral. Otherwise a referral should be recommended in communication to the GP.

LABA = long-acting beta-2-agonist, LAMA = long-acting muscarinic antagonist, LTRA = leukotriene receptor antagonist

PCRS resources

PCRS AIR and MART asthma action plans and top tips articles:

- AIR asthma action plan: **https://shorturl.at/2lgkn**
- MART asthma action plan: **https://shorturl.at/vsPTB**
- Allowing more AIR in asthma care: **https://shorturl.at/DnQo9**
- MART top tips article: **https://shorturl.at/634n6**

Tailoring Inhaler devices:

- **https://shorturl.at/yiQJj**

A PCRS summary: The new MART license for children aged 6-11:

- **https://shorturl.at/UA0Yd**

Supporting people with asthma in the 21st century: Animations:

- Ensuring optimal treatment for asthma management: **https://shorturl.at/BiNHw**
- Maintaining effective asthma treatment: **https://shorturl.at/VLdoh**

On-demand webinars:

- Implementing AIR & MART in children (6+), young people & adults: **https://shorturl.at/lrjk9**

Authorship and acknowledgements

Authors:
Alicia Piwko, Respiratory Pharmacist, London.
Helena Cummings, Advanced Clinical Practitioner with Specialist Interest in Respiratory, Yorkshire.

We are grateful to AstraZeneca Ltd for providing PCRS with sponsorship funding to develop this resource. The sponsor has had no input into the resource content.

[1] BTS/NICE/SIGN asthma guideline. Asthma: diagnosis, monitoring and chronic asthma management. NG245. November 2024. **https://shorturl.at/lPMyG** Accessed October 2025.

[2] Medicines and Healthcare products Regulatory Agency. Short-acting beta 2 agonists (SABA) (salbutamol and terbutaline): reminder of the risks from overuse in asthma and to be aware of changes in the SABA prescribing guidelines. April 2025. **https://shorturl.at/0oDxw** Accessed October 2025.

[3] BTS/NICE/SIGN. Inhaled corticosteroid doses for the BTS, NICE and SIGN asthma guideline. **https://shorturl.at/Kjn3l** Accessed October 2025.

[4] British Thoracic Society (BTS). The Asthma 4: a new asthma attack care bundle. **https://shorturl.at/XEhG8** Accessed October 2025.

ipcrg | Desktop Helper

A practical guide to improve rhinitis diagnosis in primary care

Rhinitis is a highly prevalent problem in all age groups that significantly impairs the lives of people with the condition, including their cohabitants. Underdiagnosis and misdiagnosis are common, which leads to under or inappropriate treatment, economic impact, and potential harm.[1]

Most people with rhinitis manage the condition episodically, either with self-management or over-the-counter medications (OTC). Many underestimate and neglect their symptoms and often do not bring this to the attention of their general practitioner (GP). However, as this is a common problem and a frequent comorbidity affecting the management of other conditions, it needs to be recognised and managed appropriately in primary care.

The size of the problem

The overall median prevalence of allergic rhinitis (AR) and nonallergic rhinitis (NAR) are 18% and 12%, respectively, and appear to be increasing over time.[2] Allergic rhinitis affects approximately 500 million people worldwide[3] while displaying considerable geographical variation.[4]

Rhinitis affects all ages, although the frequency of symptoms is higher in children and adolescents.[5] AR is more frequent than NAR and has more persistent and moderate-to-severe symptoms.[3] The frequency and severity of nasal and ocular symptoms with AR, together with sleep disturbances, result in a marked reduction of quality of life,[4] and an economic burden resulting from medication costs, clinic visits, absenteeism, presenteeism, impact on academic and work performance and on family members.[6-9]

What is rhinitis and what are its causes?

Rhinitis is inflammation of the nasal mucosa, characterized by at least 2 symptoms, more than one hour per day on most days:

1. runny nose (rhinorrhoea)
2. blocked/stuffy nose (congestion)
3. sneezing
4. itchy nose
5. itchy throat
6. itchy eyes*

* This is a symptom of allergic conjunctivitis, which is present in at least 50% of the patients with AR

There are three widely accepted distinct rhinitis subgroups: allergic rhinitis (AR); non-allergic, non-infectious rhinitis (NAR); and infectious rhinitis.[10] AR refers to symptoms triggered by an immune-mediated response following exposure to allergens, while NAR refers to symptoms without allergic sensitisation.[11] Sometimes both types (NAR and AR) coexist at the same time (mixed rhinitis). Identifying the cause of rhinitis is important for successful management.

Allergic rhinitis (AR) is caused by aeroallergens, including exposure to occupational allergens. According to Allergic Rhinitis and its Impact on Asthma (ARIA): https://www.euforea.eu/aria/ it is classified based on the duration and severity of symptoms (Table 1). At least 50% of patients have persistent symptoms, and 40-60% have moderate-to-severe AR, which markedly impacts their quality of life. The diagnostic approach to AR is similar across all age groups. AR typically starts appearing in children around 4–6 years old, with incidence peaking at 14–16, but it can develop at any time in life.[12,13] NAR is less common in children, except for infection-related NAR.

AR is often underdiagnosed or misdiagnosed, and is frequently untreated.[14] As the presenting symptoms are similar to other conditions, especially viral (e.g. common cold, rhinosinusitis, influenza, COVID-19, NAR), people with AR may think they have an infection or another respiratory condition.[15,16] This may lead them to expect an antibiotic prescription from their GPs[17] (see below). In addition, people with AR often self-diagnose and self-

Table 1: Classification of allergic rhinitis (duration and severity)[20,21]

Intermittent < 4 days per week or < 4 consecutive weeks	**Mild** (All of the following) - Normal sleep - Normal work and school - Normal daily activity - No disturbing symptoms
Persistent > 4 days per week and > 4 consecutive weeks	**Moderate / Severe** (One or more) - Disturbed sleep - Problems at work and school - Impairment of daily activities - Troublesome symptoms

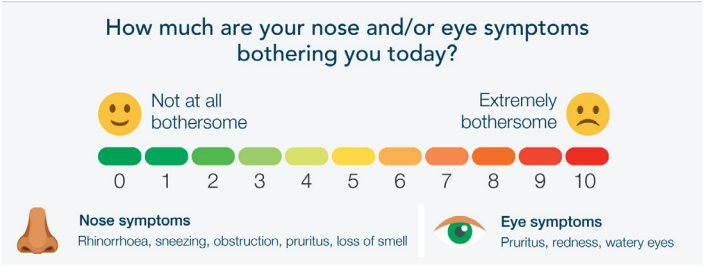
manage with OTC treatment at community or online pharmacies for symptom relief without seeing their GP.[18] This can lead to medication overuse, lack of established diagnosis, inadequate treatment, poor medication adherence, and poor self-management.[19] OTC requests are an opportunity for pharmacists to identify probable rhinitis and to advise or direct individuals to a primary care consultation, where the diagnosis can be based on clinical and family history, physical examination and, in selected cases, referral.

Severity of AR and NAR symptoms are frequently assessed using a Visual Analogue Scale (Figure 1), which ranges from 0 (not bothersome) to 10 (extremely bothersome). A score of 5 or more identifies moderate to severe disease. Using a VAS to assess the rhinitis severity enables measurement of any change after treatment.

Non-allergic rhinitis (Table 2) is triggered by a variety of factors that inflame or irritate the nasal mucosa, such as certain medications e.g. aspirin, NSAIDs, food ingredients (capsaicin, spices, sulphites and dietary salicylates), hormones (pre-menstrual, oral contraceptive, HRT), chemicals (e.g. perfume, hair spray, cosmetics, antiperspirants/deodorants, bleach and household cleaning agents), sawdust, cigarette smoke, occupational factors and smog.[22] Systemic diseases may also cause nasal symptoms (autoimmune disorders, immunoglobulin deficiencies, ciliary dyskinesia) as well as anatomical nasal deformities such as deviated nasal septum.[23] Infections, especially respiratory viral infections, are a common cause of NAR, as are lack of sleep, fatigue, stress and extreme cold. In mixed rhinitis, NAR can be complicated by the presence of AR.

Sinus pain, acute bacterial rhinosinusitis, and otitis media may occur with any of these forms of rhinitis. This is due to excess mucous production coupled with blockage of the sinus ostia and /or eustachian tube leading to increased pressure in the sinuses/middle ear which causes the pain. Typically, acute bacterial rhinosinusitis occurs after a viral infection which has worsening of symptoms 5-7 days after the onset of the symptoms. It is characterised by sinus pain, fever of greater than 38C and often with systemic symptoms such as headache, muscle pains, fatigue, shivering and sweating. Unnecessary antibiotics may cause more harm than good, but topical nasal steroids may be beneficial.[24,25] Identifying the underlying cause of rhinitis is essential for correct diagnosis and appropriate management. NAR is primarily managed

Figure 1. Visual Analogue Scale



Adapted from: Sousa-Pinto B, et al. Validity, reliability, and responsiveness of daily monitoring visual analog scales in MASK-air®. Clin Transl Allergy. 2021 Sep 19;11(7):e12062. doi: 10.1002/clt2.12062.

Table 2: Differential diagnosis of rhinitis

Rhinitis	**Allergic**	**Non-allergic**	
		Non infectious	**Infectious**
	Allergic rhinitis (AR)	Non allergic rhinitis	Common cold viruses COVID Flu
Causes	Immune response to allergens	Diverse: pharmacological, chronic use of decongestants	Infection
Onset	Early in life	Any age	Any age
Duration	Intermittent/ Persistent	Intermittent/ Persistent	Intermittent, episodic
Family history	Rhinitis, atopic dermatitis, asthma	Irrelevant	If family member infected
Comorbidities	Allergic conjunctivitis, asthma, atopic dermatitis		
Triggers	**Outdoor**: pollens from trees, weeds and flowers, and mould (climate change may increase allergen levels) **Indoor**: house dust mite, cockroaches, animal dander and mould	- food additives (capsaicin, spices, sulphites dietary salicylates, occupational causes - hormonal changes (HRT, premenstrual) - sexual arousal - alcohol	
Exacerbating factors	- viral infection, - tobacco smoke, - environmental irritants: smog, air pollution		

by eliminating the triggering factor, whereas AR can be effectively treated with a range of pharmacological therapies once accurately diagnosed.

How to make a diagnosis

History taking

Taking a detailed personal and family history is essential in the evaluation of AR, and questions should focus on the types of symptoms, their onset, duration and frequency, suspected exposures, exacerbating/alleviating factors, and seasonality [see Questions Box]. History should also assess for associated conditions such as allergic conjunctivitis, asthma, atopic dermatitis, sleep-disordered breathing, rhinosinusitis, and otitis media.

Physical examination

Findings may include clear, sticky mucus and pale, swollen inferior turbinates. Mouth breathing, frequent sniffing and/or throat clearing are often apparent, together with signs such as dark circles under the eyes ("allergic shiners"), infraorbital skin fold, and a transverse nasal crease (from the “allergic salute”, which is more common in children). It is important to exclude other causes of nasal obstruction, such as significant septal deviation, polyps, or sinonasal masses and, especially in children, foreign bodies, characterised by unilateral smelly nasal discharge. The sinuses might be tender to touch in people with chronic symptoms.

Red flags

Certain ‘red flags’ warrant immediate attention and indicate the need for referral to an otolaryngologist and/or allergist. These include persistent unilateral nasal obstruction, progressive blood-stained discharge, malodorous nasal discharge, persistent sinus pain or nasal polyps (suggested by severe persistent nasal congestion and anosmia). Such signs suggest more serious underlying conditions that require further evaluation.

Evaluation

If history taking and clinical assessment suggest AR, and this is supported by a positive response to empiric treatment with a nonsedating H1-antihistamine and/or a nasal glucocorticoid (or a fixed combination of nasal glucocorticoid and nasal antihistamine in moderate to severe cases), history driven allergen confirmation is possible with either serum testing for allergen-specific immunoglobulin E (SIgE) or allergy skin prick testing, although these tests are usually negative in local allergic rhinitis.[26,27] Local allergic rhinitis is typified by good treatment response but negative detection of systemic IgE, as this resides only in the nasal mucosa. Serum testing (SigE) is frequently available in primary care, does not require trained technicians, and does not require antihistamine cessation. Skin prick testing requires a trained professional to perform testing and interpret findings. It is rarely available in primary care, however results are available immediately. These tests are best reserved when there is diagnostic uncertainty or non-response to treatment, but also if allergen immunotherapy is to be considered.[28,29]

Radiographic imaging is not recommended for the diagnosis of AR.[20]

Questions to help identify AR:

- Are you aware of anything or any place that triggers your symptoms? For example, house dust or pollen exposure, contact with animals, certain tasks at work or home or school, or exposure to chemicals.
- What symptoms are causing you the most trouble? (check for rhinorrhoea, sneezing, itchy nose, nasal congestion, loss of smell, watery or itchy eyes).
- How long have you had these symptoms? Did you have the same this time last year?
- Has any member of your family ever had similar symptoms?
- Were they ever diagnosed with allergic rhinitis (patients may know it as hay fever), allergic conjunctivitis, asthma or atopic dermatitis?
- Do your symptoms come and go, or are they always present? Can you relate symptoms to a particular season / time of the year?
- Is your nasal discharge clear and watery?
- Are you experiencing any wheezing or shortness of breath? (“Yes” may indicate asthma, but may also indicate difficulty in breathing through the nose).
- Do you have an earache or any pain in your face? (“Yes” may indicate otitis media or rhinosinusitis. This does not indicate bacterial infection, but is due to a combination of increased mucus production, accompanied by reduced drainage, leading to pressure (pain) in the middle ear or sinus (see above).

References

1. Braido F, Baiardini I, Scichilone N, Musarra A, Menoni S, Ridolo E, et al. Illness perception, mood and coping strategies in allergic rhinitis: are there differences among ARIA classes of severity? Rhinology. 2014 Mar;52(1):66-71. doi: 10.4193/Rhino13.040.
2. Savouré M, Bousquet J, Jaakkola JJK, Jaakkola MS, Jacquemin B, Nadif R. Worldwide prevalence of rhinitis in adults: a review of definitions and temporal evolution. Clin Transl Allergy. 2022 Mar;12(3):e12130. doi: 10.1002/clt2.12130. PMID: 35344304; PMCID: PMC8967272.
3. Bousquet J. Allergic rhinitis and its impact on asthma (ARIA) 2008 update (in collaboration with the World Health Organization, GA(2)LEN and AllerGen). Allergy. 2008 Apr;63:8–160.
4. Akdis CA, Hellings PW, Agache I, editors. Global atlas of allergic rhinitis and chronic rhinosinusitis. European Academy of Allergic Rhinitis and Chronic Rhinosinusitis; 2015.
5. Meltzer EO. Allergic rhinitis: burden of illness, quality of life, comorbidities, and control. Immunol Allergy Clin North Am. 2016 May;36(2):235-48. doi: 10.1016/j.iac.2015.12.002.
6. Bédard A, et al. Correlation between work impairment, scores of rhinitis severity and asthma using the MASK-air() App. Allergy. 2020 Jul;75(7):1672-1688. doi: 10.1111/all.14204. Epub 2020 Mar 22.
7. Dierick BJH, van der Molen T, Flokstra-de Blok BMJ, Muraro A, Postma MJ, Kocks JWH, et al. Burden and socioeconomics of asthma, allergic rhinitis, atopic

Practical tips[30]

- People may experience acute symptoms without having AR or NAR, most often as a result of incidental, momentary and non-pathological exposure to environmental irritants (e.g., extreme cold during winter, exposure to cigarette smoke or perfume). These causes frequently do not require medical care and will resolve once the cause is removed.
- Environmental causes of AR vary widely on a global scale as allergen exposures differ by region. Moreover, climate change is making aeroallergen patterns increasingly unpredictable. Therefore, all patients should be assessed based on local climatic conditions and allergen exposure.
- Symptoms suggestive of AR (when related to allergen exposure) are 2 or more of the following for >1 h on most days:
  - Runny nose
  - Sneezing, especially paroxysmal
  - Nasal obstruction
  - Nasal itch
  - Ocular symptoms like itch, redness or tearing (think of allergic conjunctivitis)
- Symptoms less suggestive of AR:
  - Unilateral symptoms
  - Discoloured secretions
  - Facial or nasal pain
  - Recurrent epistaxis
  - Smell disorder (anosmia)
  - Posterior rhinorrhoea (post-nasal drip) with thickened mucus
  - Isolated rhinorrhoea
  - Snoring / sleep apnoea

dermatitis and food allergy. Expert Rev Pharmacoecon Outcomes Res. 2020 Oct;20(5):437-453. doi: 10.1080/14737167.2020.1819793.
8. Smith P, Hellings P, Scadding G, Harvey R, Carney S, Price D, et al. Impact of allergic rhinitis on health-related quality of life: results from an Australian survey. Intern Med J. 2016;46(Suppl 4):22. Article ASCIA-P57. doi: 10.1111/imj.57_13197.
9. Cardell LO, Olsson P, Andersson M, Welin KO, Svensson J, Tennvall GR, et al. TOTALL: high cost of allergic rhinitis—a national Swedish population-based questionnaire study. NPJ Prim Care Respir Med. 2016 Feb 4;26:15082. doi:10.1038/npjpcrm.2015.82.
10. Liva GA, Karatzanis AD, Prokopakis EP. Review of rhinitis: classification, types, pathophysiology. J Clin Med. 2021 Jul19;10(14):3183. doi: 10.3390/jcm10143183. PMID: 34300349; PMCID: PMC8303640.
11. Savouré M, Bousquet J, Jaakkola JJ, Jaakkola MS, Jacquemin B, Nadif R. Worldwide prevalence of rhinitis in adults: a review of definitions and temporal evolution. Clin Transl Allergy. 2022 Mar;12(3):e12130.
12. Hardjojo A, Shek LP, van Bever HP, Lee BW. Rhinitis in children less than 6 years of age: current knowledge and challenges. Asia Pac Allergy. 2011 Oct;1(3):115-22. doi: 10.5415/apallergy. 2011.1.3.115. Erratum in: Asia Pac Allergy. 2012 Jan;2(1):90. PMID: 22053307; PMCID: PMC3206246.
13. Asher MI, Montefort S, Björkstén B, Lai CK, Strachan DP, Weiland SK, et al. Worldwide time trends in the prevalence of symptoms of asthma, allergic rhinoconjunctivitis, and eczema in childhood: ISAAC Phases One and Three repeat multicountry cross-sectional surveys. Lancet. 2006 Aug 26;368(9537):733-43. doi: 10.1016/S0140-6736(06)69283-0. Erratum in: Lancet. 2007 Sep 29;370(9593):1128. PMID: 16935684.
14. Grønhøj Larsen C, Gyldenløve M, Linneberg A. Allergic rhinitis is often undiagnosed and untreated: results from a general population study of Danish adults. Clin Respir J. 2013 Oct; 7(4):354-8. doi: 10.1111/crj.12015.
15. Montnémery P, Svensson C, Adelroth E, Löfdahl CG, Andersson M, Greiff L, et al. Prevalence of nasal symptoms and their relation to self-reported asthma and chronic bronchitis/emphysema. Eur Respir J. 2001;17(4):596-603.
16. Larsson LG, Lindberg A, Franklin KA, Lundbäck B. Symptoms related to obstructive sleep apnoea are common in subjects with asthma, chronic bronchitis and rhinitis in a general population. Respir Med. 2001;95(5):423-9.
17. Mainous AG 3rd, Zoorob RJ, Oler MJ, Haynes DM. Patient knowledge of upper respiratory infections: implications for antibiotic expectations and unnecessary utilization. J Fam Pract. 1997;45(1):75-83.
18. Tan R, Cvetkovski B, Kritikos V, Price D, Yan K, Smith P, et al. Identifying the hidden burden of allergic rhinitis (AR) in community pharmacy: a global phenomenon. Asthma Res Pract. 2017 Nov 21;3:8. doi: 10.1186/s40733-017-0036-z.
19. Scheire S, Germonpré S, Mehuys E, Van Tongelen I, De Sutter A, Steurbaut S, et al. Rhinitis control and medication use in a real-world sample of patients with persistent rhinitis or rhinosinusitis: a community pharmacy study. J Allergy Clin Immunol Pract. 2024 Jul;12(7):1865-76.e6. doi: 10.1016/j.jaip.2024.04.031.
20. DynaMed. Allergic rhinitis. Available from: https://www.dynamed.com/condition/allergic-rhinitis#GUID-5F4112FD-1A2F-4207-892A-0023F2708CA9
21. Klimek L, Bachert C, Pfaar O, Becker S, Bieber T, Brehler R, et al. ARIA guideline 2019: treatment of allergic rhinitis in the German health system. Allergol Select. 2019 Dec 30;3(1):22-50. doi: 10.5414/ALX02120E. PMID: 32176226; PMCID: PMC7066682.
22. Baroody FM, Gevaert P, Smith PK, Ziaie N, Bernstein JA. Nonallergic rhinopathy: a comprehensive review of classification, diagnosis, and treatment. J Allergy Clin Immunol Pract. 2024; 12(6):1436-47.
23. Schatz M, Zeiger RS, Falkoff RJ. Nasal manifestations of systemic conditions. Immunol Allergy Clin North Am. 1987 Apr 1;7(1):159-74.
24. Fokkens WJ, Lund VJ, Hopkins C, Hellings PW, et al. European position paper on rhinosinusitis and nasal polyps 2020. Rhinology. 2020 Feb 20;58(Suppl 29):1-464.
25. Ryan D. Management of acute rhinosinusitis in primary care: changing paradigms and the emerging role of intranasal corticosteroids. Prim Care Respir J. 2008 Sep;17(3):148-55. doi: 10.3132/pcrj.2008.00050. PMID: 18695848; PMCID: PMC6619892.
26. Rondón C, Campo P, Galindo L, Blanca-López N, Cassinello MS, Rodriguez-Bada JL, et al. Prevalence and clinical relevance of local allergic rhinitis. Allergy. 2012 Oct;67(10):1282-8. doi: 10.1111/all.12002. PMID: 22913574.
27. Bousquet J, Heinzerling L, Bachert C, Papadopoulos NG, et al. Practical guide to skin prick tests in allergy to aeroallergens. Allergy. 2012;67(1):18–24. doi: 10.1111/j.1398-9995.2011. 02728.x.
28. Clinical Practice Guideline: Allergic Rhinitis. Otolaryngol Head Neck Surg. 2015;152(1 Suppl):S1-S43. doi: 10.1177/ 0194599814561600.
29. Kakli HA, Riley TD. Allergic rhinitis. Prim Care. 2016;43(3):465-75.
30. EUFOREA. Allergic rhinitis pocket guide. Available from: https://www.euforea.eu/news/allergic-rhinitis-pocket-guide/

Authors: Dermot Ryan, Ee Ming Khoo, Fletcher Charlton, Ian Charlton, Jaime Correia de Sousa, Juan Trujillo, Kerstin Romberg, Luís Carvalho, Osman Yusuf, Siân Williams
Reviewers: Bárbara Kong-Cardoso, Mário Morais-Almeida (WAO president) **Editor**: Ian Wright

Endorsed by the World Allergy Organization (WAO) - www.worldallergy.org

Funding statement: This desktop helper was funded from an educational grant from ALK-Abelló who provided a grant to support the development, typesetting, printing and associated costs but did not contribute to the concept or content of this document.

Date published: April 2025

ipcrg | Desktop Helper

A practical guide to improve rhinitis management in primary care

Allergic rhinitis (AR) is a common condition affecting between 15-25% of the general population; its symptoms significantly reduce quality of life and pose a high economic burden, including indirect costs related to lost school and workdays.[1,2] Studies of people consulting general practitioners for AR found that 18–48% had symptoms uncontrolled by pharmacotherapy.[3-5] Despite the bothersome nature of symptoms, AR is often trivialised by those with AR – only 45% seek medical advice or treatment, which results in under-treatment and poor symptom control.[6] AR is strongly associated with an increased risk of developing asthma – approximately 20–30% of people with AR also have asthma.[7,8] These persons tend to be sensitised to multiple allergens.[9] Anybody with confirmed AR should be screened for asthma. Those with AR are more likely to have frequent asthma exacerbations and poorer symptom control than those with only asthma.[6] People with both asthma and AR also frequently have more persistent and severe AR symptoms and therefore experience a greater loss of school and work productivity.[10-12]

Introduction

Accurate diagnosis of rhinitis is crucial as underdiagnosis and misclassification lead to ineffective treatment, unnecessary costs and impaired quality of life (see Desktop Helper No.19 pg 14-17). Rhinitis is broadly classified into allergic (AR): IgE-mediated, triggered by allergens such as pollen/dust mites; non-allergic (NAR): not triggered by allergens, e.g., vasomotor, drug-induced, or infectious; and mixed phenotypes.[13] The Allergic Rhinitis and its Impact on Asthma (ARIA) guidelines emphasise the unified airway link between AR and asthma, advocating for:

1. Phenotype-driven management (intermittent or persistent; mild or moderate-severe)
2. Combined pharmacotherapy (for moderate-severe cases)
3. Allergen immunotherapy for refractory cases.

This desktop helper translates these principles into actionable steps for primary care.

Perceptions and concerns of persons with rhinitis

1. An under-recognised condition: rhinitis – whether AR or NAR – is often viewed as an everyday part of life. People generally see nasal symptoms like sneezing, congestion, a runny nose, and itching as temporary and harmless, often linked to weather changes, dietary triggers, or dust exposure. Rhinitis is frequently accompanied by disregarded ocular symptoms such as itching, tearing (or lacrimation) and injected conjunctivae (bloodshot eyes). AR is often mistaken for a common cold that does not go away, or as a "summer" cold, especially during seasonal changes. NAR, such as irritant-induced symptoms from pollution or strong odours, is often viewed as unavoidable. Infectious rhinitis, typically viral, is commonly self-treated with over-the-counter medications without seeking care. Although increasingly relevant in urban and industrial settings, occupational rhinitis is rarely recognised or linked to workplace exposure.

2. People with rhinitis tend to seek rapid symptom relief, often resorting to OTC self-medication and stop treatment once they feel better. They don't necessarily expect a structured diagnosis or management plan and only tend to seek help when symptoms are no longer tolerable.[14] Therefore a considered diagnosis, preventive care, allergen identification, and long-term medication use are uncommon.

However, many express concerns about the side effects of corticosteroid nasal sprays, which, when used properly are negligible, whereas topical nasal decongestants may cause dependence. A Visual Analogue Scale (VAS) of 0 (no symptoms) to 10 (very severe symptoms) is the simplest validated way to assess symptoms and the impact of treatment (see Desktop Helper No.19 pg 14-17).

3. Overlooked links between rhinitis, asthma, and sinusitis: There is limited awareness of the chronic nature of certain types of rhinitis and their effects on daily life, sleep, productivity (absenteeism and presenteeism), and mental health. Additionally, the potential overlap of rhinitis or chronic rhinosinusitis with asthma or COPD is often overlooked, leading to missed opportunities for early intervention: NSAID exacerbated respiratory disease (N-ERD) is such an example.[15]

4. Reframing rhinitis as a manageable condition: addressing these perceptions requires targeted education. Healthcare providers should explain the different forms of rhinitis, their underlying causes, and the importance of appropriate care according

to the underlying type of rhinitis. Just as public awareness of oral health has improved over time, a similar shift is needed for nasal health: moving public belief from rhinitis being considered as an unavoidable "nuisance" to a "manageable condition" is essential for improving outcomes.

Rhinitis is not trivial, harmless, or unmanageable. Primary care clinicians can support people suffering from rhinitis by helping them understand that attention to triggers, symptoms, and effective treatment can significantly reduce discomfort and improve quality of life.

Patient education and self-management - see Box 1.

Management of rhinitis where self-care is insufficient (see Figure 1)

Allergic rhinitis

In the majority of the cases, people with AR symptoms self-manage and stop treatment once they feel better (particularly in mild intermittent AR), without consulting a primary care clinician.[14] However, it is important to identify those with uncontrolled rhinitis who require further care. Pharmacists could play a key role in recognising such patients and referring those with moderate/severe symptoms to primary care. Once identified, and after evaluating the person's symptoms, commence baseline treatment (see Figure 1). Reassess after 14 days and discuss with the person (or the caregiver) whether the treatment plan needs adjusting.

Medications for the treatment of rhinitis are listed in Annex 1 at: https://www.ipcrg.org/DTH20_Annex. They may be available as OTC or by

Box 1 Patient education and self-management

Consider discussing with persons struggling with rhinitis:
Rhinitis is a common condition that affects the nose (and frequently the eyes) and can make daily life uncomfortable. Learning about it and how to manage it can help you feel better and live more comfortably.

What does the nose do? Your nose is not just for smelling! It works as a gatekeeper and air conditioner for your lungs. It:

- Filters out dust and particulate matter
- Warms the air you breathe in
- Adds moisture so the air is not too dry.

When your nose is not working correctly, it can affect your breathing and overall health.

What is rhinitis? Rhinitis means inflammation (swelling) inside the nose, affecting how your nose works.

Common symptoms include:

- Sneezing
- Itchy nose
- Stuffy nose (nasal congestion)
- Runny nose or postnasal drip (a sensation of mucus at the back of the throat, causing you to clear your throat)
- Itchy eyes (present in at least 50% of the patients with AR).

Types of rhinitis

- Allergic rhinitis: triggered by pollens, dust mites, pet dander, moulds, etc.
- Non-allergic rhinitis: caused by irritants such as smoke, strong smells, cold air, or spicy food
- Infectious rhinitis: usually from viruses like the common cold
- Occupational rhinitis: caused by exposures at work, such as exposure to chemicals or dust.

How can you prevent rhinitis?

- If possible, avoid your triggers (like dust, pollen, smoke, etc.)
- Keep your nose clean: practise good nasal hygiene (see below)
- Take the correct medications for your type of rhinitis
- Learn how to manage your symptoms at home
- Ensure good indoor air quality, if possible.

Self-management tips: how to take control of your rhinitis

- Know and follow your treatment plan
- Take medications as prescribed
- Keep a diary of your moderate to severe symptoms, as this can also help you identify your triggers
- Clean your nose regularly (see below)
- Do not overuse decongestants (in nasal sprays or drops), which should not be used for more than 5 continuous days
- Go back to your doctor if things do not improve or change

Nasal hygiene is a key preventive measure. Just as brushing teeth (oral hygiene) prevents gum disease, regular nasal cleaning helps prevent rhinitis.

Daily nasal hygiene checklist

- Rinse your nose daily, gently, with normal saline; during exacerbations, you can also use a nasal douching or a squirt bottle (after being shown how).
- Clean your nose after exposure to dust or smoke.

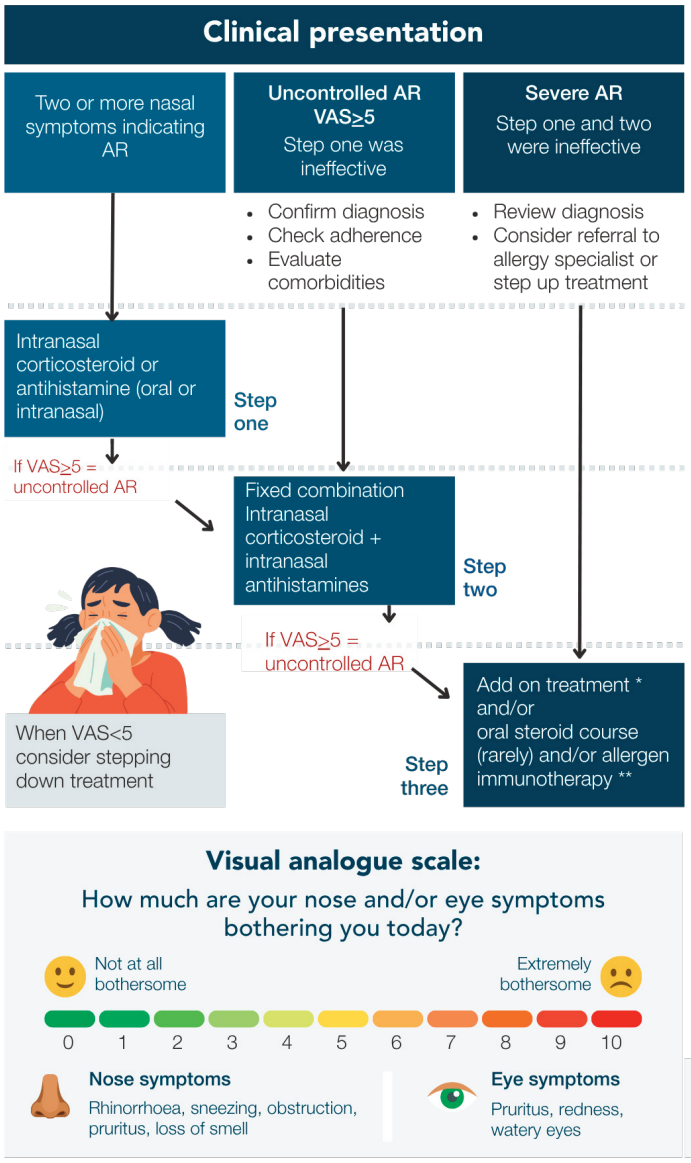
Make it a habit, just like brushing your teeth!

- Sinus Rinse Animation
  https://www.youtube.com/watch?v=IpTVVwEny30
- How to Wash your Nose
  https://www.youtube.com/watch?v=ivAQPYXaRNk

When should I see a doctor?

- Your nasal and/or eye symptoms last more than 2–4 weeks
- Medications are not helping
- You also have asthma that is getting worse
- Your sleep or daily activities are affected
- You are not sure what is causing your symptoms
- You have 2 or more of: nasal blockage and/or discharge, fever, facial pain, partial loss of smell lasting more than 10 days, or, importantly, deteriorating after 5 days.
- You are having trouble breathing (other than that caused by a blocked nose).

Figure 1. Allergic rhinitis (AR) treatment ladder when self-care is insufficient (adults)



*Possible add on treatments depending on symptom profile/diagnosis: (monotherapy often leads to greater satisfaction than combined therapy)

Runny nose: ipratropium

Rhinoconjunctivitis and asthma: leukotriene antagonist

Itchy eyes/skin: non-sedating oral antihistamines

Itchy, red, watery eyes: eye drops (antihistamines or cromones) for immediate relief; longer term use adds no benefit beyond oral AH

Nasal congestion: topical decongestants for 5 days maximum (to avoid rhinitis medicamentosa)

At step three, a short course of oral steroids may also (rarely) be considered (prednisolone 10 mg x 1 for 2-3-4 days). In such cases, follow-up is important to evaluate the need for allergen immunotherapy

For children and adolescents, dosing and medication should be adjusted according to age and weight

**If you cannot provide allergen immunotherapy, refer to a specialist

Patient education

- Involve patients in their treatment plan
- Ask which symptoms are their priority (all, nose, eyes)
- Advise them to avoid irritants and allergens, and practice regular nasal hygiene
- Costs vary globally, and should be discussed
- Consider locally produced medicine to reduce environmental impact
- Never use injectable steroids

Adapted from Sousa-Pinto B, et al. Validity, reliability, and responsiveness of daily monitoring visual analogue scales in MASK air(R). Clin Transl Allergy. 2021 Sept 19;11 (7):e 12062. doi: 10.1002/clt2. 12062.

prescription only, depending on local regulations and availability. Not all medicines are accessible in every country.

The pharmacotherapy should be adapted to the severity and frequency of symptoms:

- As-needed therapy may be sufficient for patients with mild intermittent symptoms, including those with predictable allergen exposure (e.g. pets).
- Daily therapy is most effective for intermittent bouts that typically last about 2 weeks

Intranasal corticosteroids (INCS) have been shown to be more effective than anti-histamines (oral and intranasal) for most symptoms.[16] INCS demonstrate incremental benefit over successive days. The onset of action of topical intranasal antihistamines (INAH) is more rapid than oral antihistamines (OAH). In patients with moderate/severe rhinitis, a combined formulation (e.g., azelastine-fluticasone, olapatadine-mometasone) is the preferred treatment for both speed of onset of action and greater efficacy.[16]

Oral leukotriene receptor antagonists (LTRA) are not advised as initial treatment for allergic rhinitis in adults or children, as they are less effective than INCS, INAH, and/ or OAH, and due to safety concerns, particularly neuropsychiatric side effects.[17] Their use should only be considered in patients with asthma, or if other therapies fail, or if the patient strongly prefers oral medication, especially when asthma is present.

The use of intranasal cromones is not recommended for

nasal symptoms but may be used for ocular symptoms if no other treatment is successful.

Correct administration technique is key for all topical treatments.

- **How to use a nasal spray**
  https://www.youtube.com/watch?v=S31maomo1xQ
- **Teaching patients to use nasal sprays**
  https://www.youtube.com/watch?v=_ytYj1TLojM

Local allergic rhinitis (LAR) is a nasal allergy condition where allergy symptoms are present but all specific IgE determinations or skin prick tests are negative and should be treated preferentially with nasal sprays, but oral antihistamines and allergen immunotherapy (AIT) have also proven to be effective (Annex 1 at: https://www.ipcrg.org/DTH20_Annex).[18]

Non-allergic rhinitis

One of the key parts of treatment is avoiding identified triggers, which may include tobacco smoke, certain medications, or dietary components (see Desktop Helper No.19 pg 14-17).[19] Some factors, such as a runny nose in cold or windy weather, are often unavoidable and usually cause only short-lived symptoms that do not require treatment.

Non-allergic rhinitis especially due to viral infections, can be temporarily treated (for a maximum of 5 continuous days) with decongestant nasal sprays (phenylephrine, oxymetazoline, xylometazoline, naphazoline) but are NOT recommended for regular treatment of allergic rhinitis. Longer use (>5 days) can cause rhinitis medicamentosa![20]

Not all persons with rhinitis have asthma, but approximately 80% of those with asthma have rhinitis; the more severe the rhinitis, the greater the impact on asthma control and exacerbations.[21-23]

Providing education to persons with rhinitis on how regular/daily use of medication allows maximal benefit to be achieved is important. However, similar to asthma, rhinitis is a variable disease so reducing medication when control is achieved seems a logical step and aligns with the maintenance and reliever therapy (MART) approach for asthma of varying medication according to symptoms. If patients or caregivers ask for guidance on environmentally friendly treatment options, and there is no direct evidence available, the most appropriate option is to recommend a locally produced product to minimise the environmental impact of transportation.[24]

Non-pharmacological treatment of AR, NAR, and mixed rhinitis

1. Saline irrigation: Nasal irrigation thins and removes mucus, clears proteins that induce inflammation, and flushes out irritants and bacteria from the nasal and sinus cavities. Nasal saline irrigation can be used for persons with AR, NAR, or mixed rhinitis, and is a crucial component of treatment for individuals with chronic rhinosinusitis. In patients with AR, saline irrigation reduces patient-reported disease severity compared with no irrigation.[25-27]

2. Other non-pharmacological approaches: environmental measures for managing rhinitis symptoms primarily aim to reduce exposure to allergens and irritants.

- Car filters efficiently trap airborne particles, including pollen, enhancing air quality inside vehicles.[28]
- Sunglasses protect the eyes from allergens, helping to reduce symptoms such as itching and tearing.[28]
- Air purifiers equipped with HEPA filters remove allergens from indoor air, creating a cleaner living environment.[28]
- Well-fitting masks, particularly those designed to filter allergens, help reduce pollen and irritant particles / dust inhalation when outdoors.[28]
- Pollen screens installed on windows and doors serve as fine mesh barriers that prevent allergens from entering homes and workplaces, while still allowing air circulation.
- Pollen forecasts provide valuable information on expected allergen levels, enabling individuals to plan activities and adopt preventive measures accordingly.

These cost-effective environmental interventions decrease allergen exposure and alleviate rhinitis symptoms.[29] By combining these strategies, individuals create a more allergen-controlled environment in their homes, vehicles, and outdoor settings, potentially reducing reliance on pharmacological treatments.[29]

Role of pharmacists and nurses

Nurses and community pharmacists are uniquely positioned to support people living with rhinitis and improve their quality of life by educating them on symptom management, advising on medication use, and promoting strategies to reduce allergen exposure. Through structured assessments and tailored advice, they help these persons distinguish between AR and NAR, manage their symptoms effectively, and recognise warning signs that require referral. Nurse/community pharmacist communication with GPs and specialists helps ensure continuity of care, while their role in empowering those with rhinitis supports self-management and reduces unnecessary healthcare visits.

Pharmacist-led interventions enhance adherence and clinical outcomes. Pharmacists can ensure the correct use of intranasal inhalers/sprays, which is key to achieving therapeutic efficacy and symptom relief, and support patients to manage their condition more effectively. This role becomes even more important in the context of switching from prescription to over-the-counter (OTC) therapies, where pharmacist-led guidance is likely to be the only professional support persons with rhinitis receive. Viral acute rhinosinusitis, in particular, can often be effectively managed at the pharmacy level through symptom relief and the promotion of self-care.[30-33]

Review: Monitoring and follow-up

How often should persons with rhinitis be reviewed?

In essence, this should depend on response. Full response

suggests no need to review, partial response suggests review of adherence, technique,[34] and address any non-allergic factors such as smoking or occupational aspects.[35] Non-response, especially when adherence and technique are good, suggests the need for diagnostic review and/or referral Increasingly, digital tools are likely to have a role in assisting both the patient and clinician to optimise outcomes.[36,37] The MASK-Air app (https://www.mask-air.com/) is well established. The use of a structured review improves outcomes,[38,39] as does shared decision-making.[40]

What should be reviewed?

Disease severity, as measured by the rhinitis VAS, treatment adherence and technique, the search for other factors such as NAR, change in occupation, or environmental exposure, and the shared decision-making plan.

When to consider allergen immunotherapy

Consider allergen immunotherapy (AIT), including sublingual immunotherapy (SLIT), for people with moderate to severe AR whose symptoms remain uncontrolled despite optimal pharmacological therapy. This includes regular use of INCS and INAH, OAH, and appropriate ocular treatments. Strong indications for AIT include symptoms that significantly impair daily functioning, sleep quality, school or work performance, or that persist even with low to moderate allergen exposure. A VAS score of 5 or higher typically indicates inadequate symptom control. A confirmed diagnosis of IgE-mediated allergy is essential, based on clinical history and supported by positive skin-prick testing or specific IgE to relevant allergens.

Access to AIT varies from country to country depending on the organisational model of health care and available resources.

References

1. Savouré M, Bousquet J, Jaakkola JJK, Jaakkola MS, Jacquemin B, Nadif R. Worldwide prevalence of rhinitis in adults: A review of definitions and temporal evolution. Clin Transl Allergy. 2022;12(3):e12130
2. Bousquet J, Khaltaev N, Cruz AA, et al. Allergic Rhinitis and its Impact on Asthma (ARIA) 2008 update (in collaboration with the World Health Organization, GA(2)LEN and AllerGen). Allergy. Apr 2008;63 Suppl 86:8-160. doi:ALL1620 [pii] 10.1111/j.1398-9995.2007.01620.x
3. Bousquet J, Anto JM, Bachert C, et al. Allergic rhinitis. Nat Rev Dis Primers. Dec 3 2020;6(1):95. doi:10.1038/s41572-020-00227-0 (abstract)
4. Bhattacharyya N. Incremental healthcare utilization and expenditures for allergic rhinitis in the United States. Laryngoscope. 2011;121(9):1830-3. (abstract)
5. Vandenplas O, Vinnikov D, Blanc PD, Agache I, Bachert C, Bewick M, et al. Impact of Rhinitis on Work Productivity: A Systematic Review. J Allergy Clin Immunol Pract. 2018;6(4):1274-86.e9 available here
6. Linneberg, A., Dam Petersen, K., Hahn-Pedersen, J., Hammerby, E., Serup-Hansen, N., & Boxall, N. (2016). Burden of allergic respiratory disease: a systematic review. Clinical and molecular allergy: CMA, 14, 12. https://doi.org/10.1186/s12948-016-0049-9
7. Tohidinik HR, Mallah N, Takkouche B. History of allergic rhinitis and risk of asthma; a systematic review and meta-analysis. World Allergy Organ J. Oct 2019;12(10):100069. doi:10.1016/j.waojou.2019.100069
8. Leynaert B, Neukirch C, Kony S, et al. Association between asthma and rhinitis according to atopic sensitization in a population-based study. J Allergy Clin Immunol. Jan 2004;113(1):86-93.
9. Bousquet J, Melen E, Haahtela T, et al. Rhinitis associated with asthma is distinct from rhinitis alone: The ARIA-MeDALL hypothesis. Allergy. May 2023;78(5):1169-1203. doi:10.1111/all.15679
10. Scelo G, Torres-Duque CA, Maspero J, et al. Analysis of comorbidities and multimorbidity in adult patients in the International Severe Asthma Registry. Ann Allergy Asthma Immunol. Jan 2024;132(1):42-53. doi:10.1016/j.anai.2023.08.021
11. Halpern MT, Schmier JK, Richner R, Guo C, Togias A. Allergic rhinitis: a potential cause of increased asthma medication use, costs, and morbidity. J Asthma. Feb 2004;41(1):117-26.
12. Clatworthy J, Price D, Ryan D, Haughney J, Horne R. The value of self-report assessment of adherence, rhinitis and smoking in relation to asthma control. Prim Care Respir J. 2009 Dec;18(4):300-5.
13. Bousquet J, Schünemann HJ, Togias A, Bachert C, Erhola M, Hellings PW, Klimek L, Pfaar O, Wallace D, Ansotegui I, Agache I. Next-generation Allergic Rhinitis and Its Impact on Asthma (ARIA) guidelines for allergic rhinitis based on Grading of Recommendations Assessment, Development and Evaluation (GRADE) and real-world evidence. Journal of Allergy and Clinical Immunology. 2020 Jan 1;145(1):70-80.
14. Bousquet J, Neukirch F, Bousquet PJ, Gehano P, Klossek JM, Le Ga M et al. Severity and impairment of allergic rhinitis in patients consulting in primary care. J Allergy Clin Immunol 2006;117:158–162.
15. Romano A, et al. "Updating the classification and routine diagnosis of NSAID hypersensitivity reactions: A WAO Statement." World Allergy Org J 18.8 (2025): 101086.
16. Sousa-Pinto B, Vieira RJ, Brozek J, Cardoso-Fernandes A, Lourenço-Silva N, Ferreira-da-Silva R, Ferreira A, Gil-Mata S, Bedbrook A, Klimek L, Fonseca JA, Zuberbier T, Schünemann HJ, Bousquet J. Intranasal antihistamines and corticosteroids in allergic rhinitis: A systematic review and meta-analysis. J Allergy Clin Immunol. 2024 Aug;154(2):340-354.
17. Lo CW, Pathadka S, Qin SX, Fung LW, Yan VK, Yiu HH, Bloom CI, Wong IC, Chan EW. Neuropsychiatric events associated with montelukast in patients with asthma: a systematic review. European Respiratory Review. 2023 Sep 27;32(169).
18. Campo P, Eguiluz-Gracia I, Bogas G, Salas M, Plaza Serón C, Pérez N, Mayorga C, Torres MJ, Shamji MH, Rondon C. Local allergic rhinitis: implications for management. Clinical & Experimental Allergy. 2019 Jan;49(1):6-16.
19. Hellings PW, Klimek L, Cingi C, et al. Non-allergic rhinitis: position paper of the European Academy of Allergy and Clinical Immunology. Allergy. 2017;72(11):1657–65. doi:10.1111/all.13200.
20. Li LJ, Wang SY, Tsai CY, Wu CJ. Rhinitis medicamentosa. BMJ Case Rep. 2021 Nov 9;14(11):e247051. doi: 10.1136/bcr-2021-247051. PMID: 34753736; PMCID: PMC8578967.
21. Clatworthy J, Price D, Ryan D, Haughney J, Horne R. The value of self-report assessment of adherence, rhinitis and smoking in relation to asthma control. Primary Care Respiratory Journal. 2009 Dec;18(4):300-5.). Managing the rhinitis with INS or INS?INAH combinations improves asthma control and QoL
22. Scichilone, N. et al. The effect of intranasal corticosteroids on asthma control and quality of life in allergic rhinitis with mild asthma. J. Asthma 48, 41–47 (2011)
23. De Jong HJ, Voorham J, Scadding GK, Bachert C, Canonica GW, Smith P, Wahn U, Ryan D, Castillo JA, Carter VA, Murray RB. Evaluating the real-life effect of MP-AzeFlu on asthma outcomes in patients with allergic rhinitis and asthma in UK primary care. World Allergy Organization Journal. 2020 Dec 1;13(12):100490
24. Vieira RJ, Sousa-Pinto B, Herrmann A, Antó J, Williams S, Bognanni A, Pereira AM, Haahtela T, Leontiadis GI, Pfaar O, Valiulis A, Zuberbier T, Piggott T, Schünemann HJ, Bousquet J; ARIA 2024-2025 Guideline Panel. A Novel Approach to Consider Planetary Health in Guideline Development: A GRADE Approach Using the Allergic Rhinitis and its Impact on Asthma (ARIA) 2024-2025 Guidelines as a Case Study. J Allergy Clin Immunol Pract. 2025 Jun 10:S2213-2198(25)00538-0. doi: 10.1016/j.jaip.2025.04.060. Epub ahead of print. PMID: 40505857.
25. Fokkens WJ, Lund VJ, Hopkins C, Hellings PW, Kern R, Reitsma S et al. European Position Paper on Rhinosinusitis and Nasal Polyps 2020. Rhinology. 2020 Feb 20;58(Suppl S29):1-464. doi: 10.4193/Rhin20.600. PMID: 32077450.
26. Head K, Snidvongs K, Glew S, Scadding G, Schilder AG, Philpott C, Hopkins C. Saline irrigation for allergic rhinitis. Cochrane Database Syst Rev. 2018 Jun 22;6(6):CD012597. doi: 10.1002/14651858.CD012597.pub2. PMID: 29932206; PMCID: PMC6513421.
27. Hermelingmeier KE, Weber RK, Hellmich M, Heubach CP, Mösges R. Am J Rhinol Allergy. 2012 Sep-Oct;26(5):e119-25. doi: 10.2500/ajra.2012.26.3787.Nasal irrigation as an adjunctive treatment in allergic rhinitis: a systematic review and meta-analysis.
28. Schutzmeier P, Kutzora S, Mittermeier I, Becker J, Bergmann KC, Böse-O'Reilly S, Buters J, Damialis A, Heinrich J, Kabesch M, Mertes H, Nowak D, Korbely C, Walser-Reichenbach S, Weinberger A, Heinze S, Steckling-Muschack N, Herr C. Non-pharmacological interventions for pollen-induced allergic symptoms: Systematic literature review. Pediatr Allergy Immunol. 2022 Jan;33(1):e13690.
29. Bergmann KC, Berger M, Klimek L, Pfaar O, Werchan B, Werchan M, Zuberbier T. Nonpharmacological measures to prevent allergic symptoms in pollen allergy: A critical review. Allergologie Select. 2021;5:349.
30. Blaiss MS, Steven GC, Bender B, Bukstein DA, Meltzer EO, Winders T. Shared decision making for the allergist. Ann Allergy Asthma Immunol. 2019 May;122(5):463-470. doi: 10.1016/ j.anai.2018.08.019. Epub 2018 Sep 7. PMID: 30201469.
31. Scheire S, Germonpré S, Mehuys E, Van Tongelen I, De Sutter A, Steurbaut S, Van Hees T, Demarche S, Lahousse L, Gevaert P, Boussery K. Rhinitis Control and Medication Use in a Real-World Sample of Patients With Persistent Rhinitis or Rhinosinusitis: A Community Pharmacy Study. J Allergy Clin Immunol Pract. 2024 Jul;12(7):1865-1876.e6. doi: 10.1016/j.jaip.2024.04.031. Epub 2024 Apr 25. PMID: 38677586.
32. House R, Kritikos V, Cvetkovski B, Rimmer J, Yan K, Cheong L, Bousquet J, Lourenco O, Bosnic-Anticevich S. The impact of implementing an allergic rhinitis clinical management pathway (AR-CMaP) in the community pharmacy. Explor Res Clin Soc Pharm. 2023 Oct 5;12:100340. doi: 10.1016/ j.rcsop.2023.100340.

PMID: 37869069; PMCID: PMC10585337.
33. Lourenço O, Cvetkovski B, Kritikos V, House R, Scheire S, Costa EM, Fonseca JA, Menditto E, Bedbrook A, Bialek S, Briedis V, Boussery K, Canonica GW, Haahtela T, Kuna P, Mullol J, Orlando V, Samolinski B, Wallace D, Duggan C, Paulino E, Pinto GS, Söderlund LÅ, Bousquet J, Bosnic-Anticevich S. Management of allergic rhinitis symptoms in the pharmacy Pocket guide 2022. Clin Transl Allergy. 2022 Oct 5;12(10):e12183. doi: 10.1002/clt2.12183. PMID: 36225265; PMCID: PMC9533218.
34. Rollema C, van Roon EN, de Vries TW. Inadequate quality of administration of intranasal corticosteroid sprays. Journal of asthma and allergy. 2019 Apr 3:91-4.
35. Mungan D. Occupational allergic rhinitis: what do we know?. Current Treatment Options in Allergy. 2015 Mar;2:10-9.
36. Zhang H, Cao Y, Jiang H, Zhou Q, Yang Q, Cheng L. The present and future of digital health, digital medicine, and digital therapeutics for allergic diseases. Clinical and translational allergy. 2025 Jan;15(1):e70020
37. Matricardi PM, Dramburg S. Digital allergology: from theory to practice. Springer Nature; 2025 Apr 21.
38. Scheire S, Germonpré S, Mehuys E, Van Tongelen I, De Sutter A, Steurbaut S, Van Hees T, Demarche S, Lahousse L, Gevaert P, Boussery K. Rhinitis control and medication use in a real-world sample of patients with persistent rhinitis or rhinosinusitis: a community pharmacy study. The Journal of Allergy and Clinical Immunology: In Practice. 2024 Jul 1;12(7):1865-76
39. Price DB, Scadding G, Bachert C, Saleh H, Nasser S, Carter V, Von Ziegenweidt J, Durieux A, Ryan D. UK prescribing practices as proxy markers of unmet need in allergic rhinitis: a retrospective observational study. NPJ primary care respiratory medicine. 2016 Jun 23;26(1):1-8
40. Steven GC. Shared decision making in allergic rhinitis: an approach to the patient. Annals of Allergy, Asthma & Immunology. 2020 Sep 1;125(3):268-72

Additional reference: Scadding GK, Conti DM, Scheire S, Backer V, et al EUFOREA meeting on defining disease states in allergic rhinitis: towards a unified language in AR. Frontiers Allergy. 2025 Feb 3;5:1531788.

Authors: Dermot Ryan, Jaime Correia de Sousa, Olga Lourenço, Björn Stridh, Stephanie Dramburg, Monsur Habib, Sarah Ben Hamida, Luís Carvalho, Siân Williams **Reviewers**: Mário Morais-Almeida, Jean Bousquet **Editor**: Ian Wright

Funding statement: This desktop helper was funded from an educational grant from ALK-Abelló who provided a grant to support the development, typesetting, printing and associated costs but did not contribute to the concept or content of this document.

This Desktop Helper is advisory; it is intended for general use and should not be regarded as applicable to a specific case.

Date published: November 2025

Rhinitis diagnosis and management

BREATHS
AN IPCRG INITIATIVE

Breaths is an International Primary Care Respiratory Group (IPCRG) initiative designed to enhance primary care providers' capability, confidence, and motivation in delivering high-quality respiratory care. It leverages structured microlearning strategies tailored to the time constraints of primary healthcare professionals.

Rhinitis Diagnosis

Learn how to recognise the clinical features of rhinitis, apply the Allergic Rhinitis and its Impact on Asthma (ARIA) classification of severity, and identify when and if further testing or referral is needed.

Rhinitis Management in Primary Care

Master using a Visual Analogue Scale to assess symptom severity and a stepwise treatment ladder to manage rhinitis, including deciding when to step up, step down, and refer.

Start learning with Breaths

Scan the QR code to access via IPCRG website.

ipcrg
International Primary Care Respiratory Group

RHINITIS RIGHT CARE
AN IPCRG INITIATIVE

A new route in anaphylaxis treatment: Intranasal adrenaline

Aleksandra (Ola) Howell,[1] Katie Johnston[2]

[1] Nuffield Department of Primary Care Health Sciences, University of Oxford
[2] NHS Lothian

Anaphylaxis is a time-critical emergency. Prompt intramuscular (IM) adrenaline remains the first-line treatment, rapidly reversing airway oedema, vasodilatation and bronchospasm (MHRA, 2023). However, barriers such as fear of needles, incorrect injection technique or hesitancy are well documented and may delay or impair its administration.[1] In real-world settings, these human factors can influence outcomes as much as the pharmacotherapy itself.

In July 2025 the Medicines and Healthcare products Regulatory Agency (MHRA) approved EURneffy, an intranasal adrenaline spray, as the first needle-free formulation of adrenaline licenced in the UK for emergency treatment of anaphylaxis.[2] It is indicated for adults and children weighing 30 kg or more and delivers a 2 mg dose of adrenaline, comparable to a 0.3 mg IM injection in the thigh.

An intranasal device presents practical advantages. Needle-free administration may reduce reluctance among some patients and bystanders and avoids sharps disposal issues. Other benefits include ease of use and carriage, and prolonged shelf life.

Available data indicate that EURneffy achieves systemic adrenaline concentrations and pharmacodynamic effects comparable to those of IM auto-injectors.[3,4] Reported adverse reactions associated with intranasal administration are generally mild and transient, including nasal discomfort or throat irritation. Nasal congestion does not appear to impair absorption in clinical studies.[5]

How to use the device

EURneffy releases its full dose automatically when activated and must not be primed. As with injectable adrenaline, it should be given at the first signs of anaphylaxis, followed immediately by a call to 999 or 112. Patients should always carry two devices. If symptoms do not improve within five minutes, a second dose should be administered into the same nostril.

Training devices to support patient education are available from the manufacturer: one simulates activation force while another is a reusable trainer enabling practice of correct insertion technique, directing the nozzle straight into the nostril towards the forehead.

Monitoring, access and positioning

As a newly authorised medicine, EURneffy carries a black triangle (▼), indicating enhanced monitoring. Suspected adverse reactions should be reported through the MHRA Yellow Card Scheme. A 1 mg formulation for children weighing 15–30 kg has been approved by the Food and Drug Administration and may soon become available in the UK.

At the time of writing, EURneffy is not listed in the British National Formulary but is available to order through Alliance Healthcare wholesalers. NHS prescribing data record two prescriptions dispensed in England in December 2025 at an average cost of £173 per item.[6] As a hybrid medicine, EURneffy does not require Scottish Medicines Consortium approval and may therefore be considered for suitable patients across formularies throughout the UK. Formulary decisions will need to consider comparative cost, efficacy and safety data, shelf life and training requirements.

The introduction of intranasal adrenaline does not alter the central principle of anaphylaxis management: adrenaline should be given promptly. It does, however, provide an additional option for clinicians and patients, expanding the available tools for emergency treatment.

References
1. Song TT, Worm M, Lieberman P. Anaphylaxis treatment: current barriers to adrenaline auto-injector use. Allergy 2014;69(8):983–91. https://doi.org/10.1111/all.12387
2. MHRA. MHRA approves adrenaline nasal spray - the first needle-free emergency treatment for anaphylaxis in the UK. 2025. https://www.gov.uk/government/news/mhra-approves-adrenaline-nasal-spray-the-first-needle-free-emergency-treatment-for-anaphylaxis-in-the-uk
3. Casale TB, Ellis AK, Nowak-Wegrzyn A, Kaliner M, Lowenthal R, Tanimoto S. Pharmacokinetics/pharmacodynamics of epinephrine after single and repeat administration of neffy, EpiPen, and manual intramuscular injection. J Allergy Clin Immunol 2023;152(6):1587–96. https://doi.org/10.1016/j.jaci.2023.08.007
4. Tanimoto S, Kaliner M, Lockey RF, et al. Pharmacokinetic and pharmacodynamic comparison of epinephrine, administered intranasally and intramuscularly: An integrated analysis. Ann Allergy Asthma Immunol 2023;130(4):508–514.e501. https://doi.org/10.1016/j.anai.2022.10.024
5. Electronic Medicines Compendium (emc). EURneffy 2 mg nasal spray, solution in single-dose container. 12 September 2025. Retrieved from: https://www.medicines.org.uk/emc/product/101346/smpc
6. Bennett Institute for Applied Data Science. 10 March 2026. Retrieved from University of Oxford: OpenPrescribing.net.

A simple solution right under our noses: Why nasal saline sprays deserve more attention in primary care

Monica Fletcher,[1] Beth Collop[2]

[1] *Chief Executive, Centre for Applied Respiratory Research, Innovation and Implementation (CARRii)*
[2] *Centre for Applied Respiratory Research, Innovation and Implementation (CARRii), Nuffield Department of Primary Care and Health Sciences, University of Oxford*

Background

CARRii (Centre for Applied Respiratory Research & Innovation) is a UK research centre dedicated to enhancing lung health by supporting the implementation of high-quality research into clinical practice, with the aim of reducing hospital admissions, easing NHS winter healthcare pressures, and improving patient outcomes.[1]

Winter respiratory infections remain one of the most common reasons for consultations in primary care. Most of these infections are viral, self-limiting and not helped by antibiotics, yet they still account for a substantial proportion of consultations in both general practice and community pharmacy. For primary care clinicians, these encounters are familiar. Patients seek reassurance, symptom relief and sometimes antibiotics, and we must balance compassionate care with antimicrobial stewardship and limited appointment capacity.

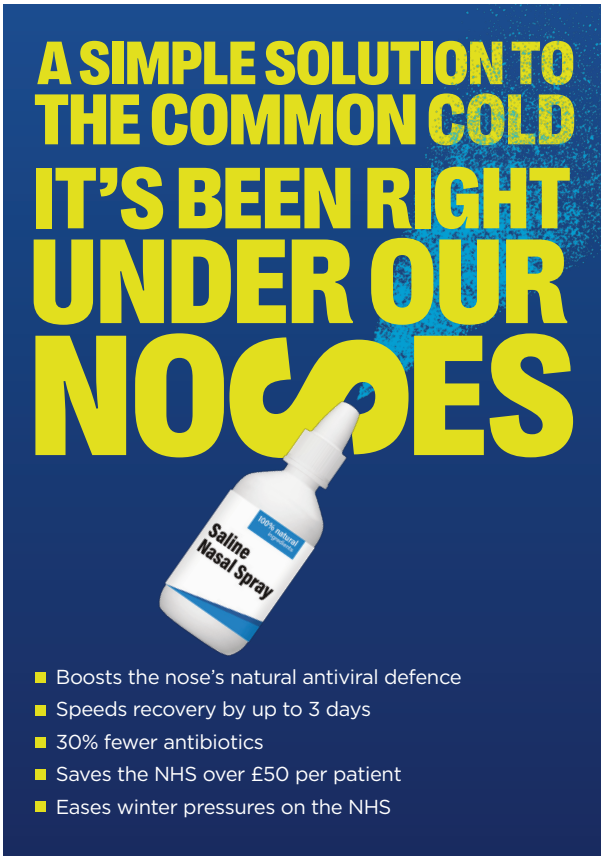
Emerging evidence suggests that something as simple as a saline nasal spray, used early in illness, may shorten symptom duration, reduce antibiotic use and support patient self-care. For primary care teams, this small inexpensive intervention could offer a practical addition to winter respiratory management.

Why the nose matters and why saline?

Respiratory viruses typically begin infection in the nasal mucosa, where they replicate before spreading further into the respiratory tract. Saline (sodium chloride) works directly at this early stage. Laboratory research has shown that chloride ions in saline enable nasal epithelial cells to produce hypochlorous acid, a naturally occurring antiviral substance capable of inhibiting viral replication.[2] Saline also helps clear mucus, wash away viral particles and soothe inflamed nasal passages. In effect, saline supports the nose's natural antiviral defences at the site where many respiratory infections begin.

Evidence from clinical trials

The evidence supporting the effectiveness of saline nasal sprays has strengthened considerably in recent years. The most notable study is the large UK Immune Defence Trial, published in *The Lancet Respiratory Medicine*.[3] This large-scale study included 13,799 adults who either experienced three or more respiratory tract infections per year or were identified as being at higher risk from respiratory



Using Saline Nasal Spray

Saline spray is clean, salty water. It isn't a medicine – the cells in your nose use salt to produce a natural antiviral defence which stops viruses multiplying. A large scientific study has shown that using saline spray can reduce the number of days your cold symptoms get in the way of normal activities by 3 days.

When should I use the spray?

- **Use as soon as you feel the first signs of a possible cold**
- **Spray 6 times each day, with 2 sprays in each nostril every time**
- **Spray when you first get up and throughout the day**
- **Keep using it for 2 days after symptoms go away, to stop the infection coming back**

How to use:

- **Put nozzle in nostril. Aim towards the side of the nose at a 45-degree angle**
- **Apply 2 sprays in each nostril**
- **Don't breathe in deeply while spraying**
- **Sniff gently after spraying**

Common questions about the spray

Q: I often have symptoms that might be a sign of a cold starting - can I use the spray often?

A: It is fine to use the spray as often as you need. Experts agree that even using the spray every day is totally safe - it may also help with cold-like symptoms due to allergies.

Q: Are there any side effects of using the spray?

A: Some people find that using it a lot can make their nose a little dry. You can pause or reduce how much you are using the spray if you find this. If you accidentally spray or sniff the saline too far up your nose this may sting but it will not cause harm.

This information has been produced by health experts at the University of Southampton. The advice is based on scientific and medical studies.

NUFFIELD DEPARTMENT OF PRIMARY CARE HEALTH SCIENCES · University of BRISTOL · University of Southampton

infection. Participants were randomly assigned to one of four groups: usual care, isotonic saline spray, antiviral spray or a wellbeing programme. Saline and antiviral sprays were used up to six times per day, either at the first sign of infection or following exposure.

Compared with usual care, those using saline experienced:

- Three days shorter illness duration (12 days vs 15 days)
- Less severe symptoms and less disruption to daily activities
- 30% fewer antibiotic prescriptions
- Estimated NHS savings of more than £50 per patient

Other studies[3-5] in both adults and children have also shown reductions in illness duration and household transmission when saline irrigation or drops are used early in infection.

Individually these gains may appear modest. But respiratory infections occur millions of times each winter. Even small improvements in recovery time and antibiotic use could translate into meaningful benefits for patients and the health system.

What this means for primary care: For clinicians, saline nasal spray offers something valuable: a practical recommendation that patients can act on early in viral illness.

Supporting early self-management: Primary care increasingly emphasises empowering patients to manage minor illness safely at home. Advising saline spray at the first sign of symptoms gives patients a clear and constructive step to take, rather than simply waiting for symptoms to pass.

Supporting antibiotic stewardship: Antibiotic prescribing decisions can be influenced by patient expectations and consultation pressures. Being able to recommend a simple intervention associated with reduced antibiotic use can strengthen conversations about why antibiotics are not appropriate for viral infections.

Potential system benefits: Shorter illness duration may mean fewer repeat consultations, faster return to work or school, and reduced pressure across primary care services.

Implementation is simple

Importantly, saline sprays are safe, inexpensive and widely available over the counter. Unlike many healthcare innovations, this one requires no new pathways, training programmes or prescribing systems. Practices could consider:

- Recommending saline spray at the first sign of cold or flu symptoms
- Including saline advice in acute respiratory infection consultations
- Adding guidance to practice websites and patient self-care information
- Aligning advice with community pharmacy teams

It is important to emphasise that the evidence relates specifically to saline (saltwater) solutions, not topical decongestant sprays.

A small change worth considering

Winter respiratory infections will always be part of primary care. But simple interventions that support early self-care and reduce illness burden are valuable additions to the clinician's toolkit. Saline nasal spray may not feel like a dramatic innovation. Yet its low cost, strong safety profile and growing evidence base make it a practical option for clinicians to recommend.

Sometimes improving respiratory care is not about new medicines or complex technology. Sometimes it is about ***recognising a simple solution right under our noses.***

Key Practice Points

- Respiratory viruses replicate initially in the nasal mucosa, making the nose an important early target for intervention.
- Saline nasal spray supports natural antiviral defences and helps clear viral particles from the nasal passages.
- Early use has been associated with three days shorter illness duration and 30% fewer antibiotic prescriptions in a large UK trial.
- Saline sprays are safe, inexpensive and available over the counter.
- Primary care teams can encourage early use at the first sign of respiratory symptoms as part of self-care advice.

References

1. Stephenson P., Fletcher M., et al. Tackling NHS winter pressures due to respiratory disease: the UK Centre for Applied Respiratory Research Innovation and Impact (CARRii). npj Primary Care Respiratory Medicine 2026. https://doi.org/10.1038/s41533-026-00500-x
2. Ramalingam S., Cai B., et al. Antiviral innate immune response in non-myeloid cells is augmented by chloride ions via an increase in intracellular hypochlorous acid levels. Sci Rep 2018;8(1):13630. https://doi.org/10.1038/s41598-018-31936-y
3. Little P., Vennik J.,et al. Nasal sprays and behavioural interventions compared with usual care for acute respiratory illness in primary care: a randomised, controlled, open-label, parallel-group trial. The Lancet Respiratory Medicine. 2024;12(8):619-632. https://doi.org/10.1016/S2213-2600(24)00140-1.
4. Ramalingam S., Graham C., et al. A pilot, open labelled, randomised controlled trial of hypertonic saline nasal irrigation and gargling for the common cold. Sci Rep 2019;9(1):1015. https://doi.org/10.1038/s41598-018-37703-3
5. Cunningham, S., Evans, E. et al (2024) Abstract OA1985: A randomised controlled trial of hypertonic saline nose drops as a treatment in children with the common cold (ELVIS-Kids trial). Presented in session "Advancements in paediatric infectious respiratory health" at the European Respiratory Society (ERS) Congress, Vienna, Austria. . Cunningham S, et al. Abstract OA1985: A randomised controlled trial of hypertonic saline nose drops as a treatment in children with the common cold (ELVIS-Kids trial). Presented in session "Advancements in paediatric infectious respiratory health" at 2024 ERS Congress.

Asthma care has changed

The 2024 BTS/NICE/SIGN guideline marked a major shift in asthma management. Since its publication, we have produced a range of resources to support our members and the wider respiratory community in implementing changes in their practice in line with the guidelines.

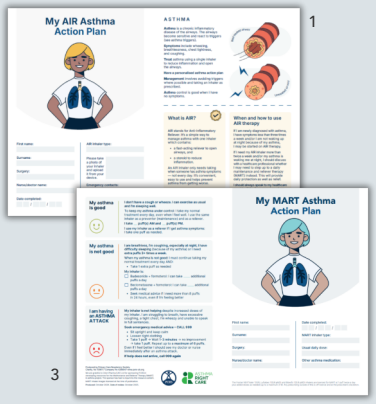
Guides and summaries

Our new consensus guide[1], published in this edition of PCRU, offers practical guidance on delivering evidence-based asthma care, particularly in unplanned care settings.

More information on diagnostic and treatment pathways is available in the PCRS First Steps Guide[2], and to learn more about the new Maintenance and Reliever Therapy (MART) license for children aged 6-11 years old, see our summary[1] of the new license and who it is appropriate for.

Top tips

Action Plans



Conference[4]

Sessions on:

Embedding the asthma guideline across unplanned care settings

Summary of the guideline and its implementation in primary care

Visit our website for the latest

We are continuously developing new resources to support you to deliver the best in respiratory care. Visit the PCRS website to access useful tools, guides, webinars, podcasts and more!

1. We are grateful to AstraZeneca Ltd for providing PCRS with sponsorship funding to develop this resource. The sponsor has had no input into the resource content.
2. We are grateful to our corporate supporters for their financial support which supports the core activities of the charity and allows PCRS to make its services either freely available or at greatly reduced rates to its members.
3. We are grateful to Orion Pharma (UK) Ltd for sponsoring PCRS in the development of resources for the Maintenance and Reliever Therapy (MART) in asthma project. The sponsor has had no input into the resource content.
4. The conference has been instigated and organised by PCRS. We are grateful to sponsors (https://qrco.de/confsponsors) and exhibitors (https://qrco.de/confexhibitors) who have contributed funding towards this event in return for exhibition space. Neither sponsors or exhibitors have had any input into the agenda or the selection of speakers with the exception of any sponsored satellite symposia which are clearly indicated.

Asthma, allergy and the school environment: Supporting children and young people

Lisa Cummings *Registered Nurse/Queens Nurse, Black Country*

Asthma is a long term condition caused by inflammation of the airways leading to wheeze, cough, breathlessness and chest tightness. It is the most common chronic condition in childhood, affecting around 1.1 million children in the UK,[1] equivalent to three children in every classroom. Many children with asthma also have atopy, meaning they are more likely to develop allergic conditions such as eczema or allergic rhinitis.

The link between asthma and allergy in children and young people

Asthma and allergy frequently occur together. Around 80–90% of children with asthma are sensitive to at least one allergen,[2] making allergic asthma the most common type in childhood. When allergies are poorly controlled, asthma symptoms often worsen. For this reason, it is essential that children, young people and their families understand the connection between asthma and allergy, and that both conditions are managed together.

In school, unrecognised or unmanaged allergies can lead to increased symptoms, reduced participation in activities and more time away from learning.[3] Supporting children through an annual asthma review to identify and avoid their triggers is a simple cost effective way to improve asthma control and may reduce the need for additional medication.

Common allergens and symptoms

Frequent allergy triggers in children:

- Tree and grass pollen
- House dust mites
- Pet dander (cats, dogs, small animals)

Typical allergy symptoms:

- Wheezing or coughing
- Sneezing
- Blocked or runny nose
- Swelling
- Itchy eyes, lips, throat or mouth
- Rashes or hives
- Sinus pain or pressure

These symptoms can significantly affect a child's comfort, sleep, concentration and confidence – especially during the school day.

Allergic rhinitis in the school setting

Allergic rhinitis (hay fever) affects 10–15% of children and young people in the UK and is closely linked with asthma.[4] Symptoms may be:

- **Perennial** – triggered by indoor allergens such as dust mites, pets or mould; often worse in winter when children spend more time indoors.
- **Seasonal** – triggered by grass, tree or weed pollen; symptoms peak in spring and summer, often affecting outdoor play, physical education (PE) lessons and exam performance.

Poorly controlled rhinitis can lead to fatigue, poor concentration, irritability and reduced academic performance. Recognising symptoms and supporting management can greatly improve the quality of life of the child or young person.

Managing asthma and allergy together

Following the principle of 'one airway, one disease',[5] allergy management should be included in every asthma review. Before new treatments are considered, healthcare professionals should check:

- Adherence to current medication
- Inhaler and nasal spray technique
- Exposure to known triggers

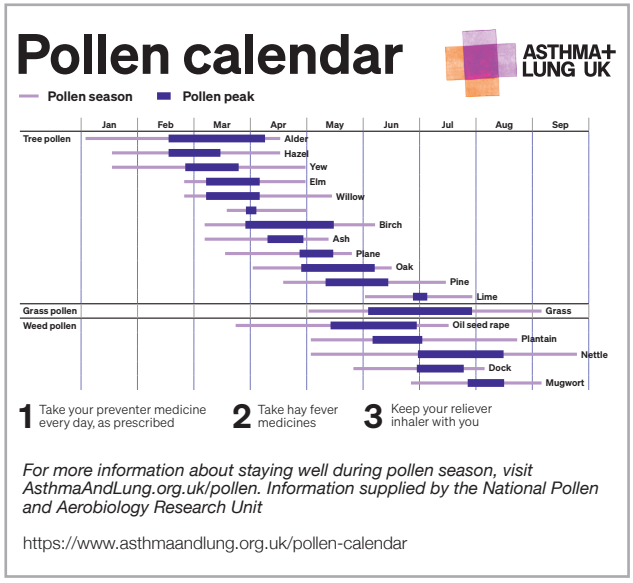
Schools can reinforce these messages by ensuring children use their inhalers correctly and have access to their medication when needed.

Non pharmacological management in children and schools

Reducing exposure to allergens could prevent up to 45% of asthma related hospital admissions. Helpful strategies include:[6]

- Keeping windows closed during high pollen periods
- Minimising exposure to classroom pets
- Wearing sunglasses outdoors
- Applying a barrier ointment around the nostrils during the pollen season
- Damping dusting surfaces
- Replacing carpets with hard flooring where possible or vacuuming regularly
- Reducing soft furnishings that trap dust

Schools can support by monitoring pollen forecasts, adjusting outdoor activities during peak times and ensuring classrooms are well ventilated and clean. The Pollen calendar[7] (below) can help support when to initiate treatment as this should be before symptoms start. Patients should be encouraged to start antihistamines **before** symptoms; most take 4–6 hours to have optimum efficacy. Providing information can prevent a delay in starting treatments.



Pharmacological management

Many children self manage allergic rhinitis with over the counter treatments, but professional guidance can improve outcomes. Nasal saline rinsing is a simple low cost option that may reduce symptoms and the need for medication.

- **Antihistamines**: These are the first line treatment for allergic rhinitis. Oral, intranasal or ocular antihistamines may be used. Daily treatment is often most effective, especially when started before symptoms begin—for example, ahead of the pollen season.
- **Intranasal corticosteroids**: These reduce inflammation and congestion and are safe for children when used as directed. Mometasone and fluticasone have the lowest systemic absorption, which is important for children already using steroid treatments for asthma or eczema. Parents may need reassurance about safety and correct technique.

A combination of antihistamines and intranasal steroids may be needed for optimal control (see the Primary Care Respiratory Society (PCRS) allergic rhinitis article for more information: https://www.pcrs-uk.org/resource/current/allergic-rhinitis-common-problem-not-be-sneezed).

Technique matters

Correct nasal spray technique is as important as correct inhaler technique. Children, families and school staff benefit from clear demonstrations and trusted resources such as Asthma & Lung UK (https://www.asthmaandlung.org.uk/living-with/inhaler-videos/nasal-spray).

Classification of allergic disease

Intermittent disease	Persistent disease
Symptoms less than 4 times a week *or* Periods of less than 4 weeks at a time	Symptoms 4 or more times a week *or* Periods of more than 4 weeks at a time
Mild symptoms	**Moderate/severe symptoms**
No impact on sleep No impact on daily activities No impact on school life No troublesome symptoms	Disturbed sleep Negative impact on daily activities Negative impact on school life Troublesome symptoms

When to refer

Access to allergy specialists varies greatly across regions and there are often long wating lists. It is estimated that 11% of referrals to secondary care for allergic rhinitis are rejected due to all treatment options not being tried in primary care.[8]

Patients who have not achieved optimum control with a combination fixed dose intranasal corticosteroid and intranasal antihistamine or combined intranasal corticosteroid and oral antihistamines should be considered for referral to secondary care.

Personalised asthma action plans in schools

The National Review of Asthma Deaths (NRAD)[9] highlighted that only 51% of patients had triggers documented, despite the known impact of atopy on asthma control.

Every child with asthma should have a written personalised asthma action plan (PAAP), with a copy also provided for school, that includes:

- Current medication
- Known triggers
- Steps to take if symptoms worsen
- Emergency procedures

Steroid use and safety

Children may also use steroids for asthma, eczema or allergic rhinitis. When used long term, some children may require a Steroid Treatment Card to record doses and treatment duration. Regular review helps ensure the lowest effective dose is used and reduces the risk of adrenal suppression.[10]

Anaphylaxis and asthma risk

Anaphylaxis is a severe allergic reaction that can be life threatening. Children with both asthma and food allergies are at higher risk of severe reactions and are more likely to have severe asthma.[11]

Children at risk should have:

- An epinephrine auto injector available at all times
- A paediatric allergy action plan issued by the child or young person's healthcare practitioner (an example can be found at https://www.bsaci.org/resources/resources/paediatric-allergy-action-plans/)
- A personalised asthma action plan that clearly outlines emergency steps (an example can be found at https://www.asthmaandlung.org.uk/healthcare-professionals/adult-asthma/AAPs)

Schools must ensure staff are trained to recognise symptoms and act quickly. Benedict's Law is a set of national protections designed to improve allergy safety in schools. Currently, these protections are agreed to come into force in England. More information can be found at https://benedictblythe.com/benedicts-law/

Supporting schools, families and young people

Improving awareness of allergy and asthma links, ensuring early treatment and reducing exposure to triggers can significantly improve quality of life and educational outcomes for children and young people. Annual asthma reviews provide an opportunity to have conversations with young people and families around school attendance and asthma-related absences and offer support by signposting to their local school nursing team.

Participation in local Asthma Friendly Schools programmes is an excellent opportunity for health and education to work together

to improve outcomes for children and young people with asthma. An Asthma Friendly School is one where children with asthma are safe and can fully participate in all elements of school life. By signing up, schools are committing to ensuring that all school staff know what to do if a child has an asthma attack.

References
1. Royal College of Paediatrics and Child Health (RCPCH). State of Child Health in the UK: Asthma. 2020. Available at: https://stateofchildhealth.rcpch.ac.uk (Accessed 24 March 2026)
2. Sheehan WJ, Phipatanakul W. Indoor allergen exposure and asthma outcomes. Curr Opin Pediatr 2016;28(6):772–7. https://doi.org/10.1097/MOP.0000000000000421
3. Marsh V. Managing allergic rhinitis in children and young people. Practice Nursing 2022;33:190–4. Available at: https://www.practicenursing.com/content/clinical/managing-allergic-rhinitis-in-children-and-young-people
4. Scadding GK, Durham SR, Mirakian R, et al; British Society for Allergy and Clinical Immunology. BSACI guidelines for the management of allergic and non-allergic rhinitis. Clin Exp Allergy 2008;38(1):19–42. https://doi.org/10.1111/j.1365-2222.2007.02888.x
5. Giavina-Bianchi P, Aun M, Takejima P, Kalil J, Agondi R. United airway disease: current perspectives. J Asthma Allergy 2016;9:93–100. https://doi.org/10.2147/JAA.S81541
6. Murray CS, Foden P, Sumner H, et al. Preventing severe asthma exacerbations in children. A randomized trial of mite-impermeable bedcovers. Am J Respir Crit Care Med 2017;196:150–8. https://doi.org/10.1164/rccm.201609-1966OC
7. Asthma UK. Pollen calendar. 2024. Available at: https://www.asthmaandlung.org.uk/pollen-calendar/ (accessed 10 March 2026)
8. Allergy UK. Meeting the challenges of the National Allergy Crisis: A report from the All Party Parliamentary Group for Allergy and the National Allergy Strategy Group. 2021. Available at: https://www.allergyuk.org/wp-content/uploads/2021/10/Meeting-the-challenges-of-the-national-allergy-crisis-2021.pdf
9. Royal College of Physicians. Why asthma still kills. The National Review of Asthma Deaths (NRAD). 2014. Available at: https://www.rcp.ac.uk/media/i2jjkbmc/why-asthma-still-kills-full-report.pdf
10. Ahmet A, Kim H, Spier S. Adrenal suppression: A practical guide to the screening and management of this under-recognized complication of inhaled corticosteroid therapy. Allergy Asthma Clin Immunol 2011;7:13. https://doi.org/10.1186/1710-1492-7-13
11. Wang J, Liu AH. Food allergies and asthma. Curr Opin Allergy Clin Immunol 2011;11(3):249–54. https://doi.10.1097/ACI.0b013e3283464c8e

UK Inhaler Group (UKIG) consensus guide on spacer devices

Introduction by **Viviene Marsh,** *Paediatric Asthma Nurse Specialist, Shropshire;* **Deborah Leese,** *Respiratory Pharmacist, South Yorkshire (at time of writing)* and **Katherine Hickman,** *GP, Bradford*

Introduction

The UK Inhaler Group (UKIG) has produced a practical concise guide to support healthcare professionals in selecting and using spacer and valved holding chamber (VHC) devices for patients with asthma and COPD. Appropriate spacer/VHC selection and use can improve drug delivery, optimise disease control, and reduce treatment-related side effects. The guide highlights that selecting the **right spacer matters** just as much as choosing the right inhaler and that the best device is **one a patient can and will use.** This can lead to **improved symptom control, fewer exacerbations and reduced treatment-related side effects.** This guide aims to support clinicians in making informed, patient-centred decisions that optimise both technique and treatment outcomes.

Why spacers/VHCs matter

- Improved medication delivery to the lungs, reduced oropharyngeal deposition, fewer local side effects.
- Reduces coordination between actuation and inhalation with pressurised metered-dose inhalers (pMDIs).
- Particularly helpful for patients (adults, young people and children) with poor inhaler technique.

The guide highlights:

- There may be clinically significant variation in drug delivery between different brands, due to differences in size, appearance, valve performance, reduction in electrostatic charge and facemask size, shape and material.
- Cost is a consideration however the cheapest spacer/VHC might not be the best device based on multiple factors as outlined in this guide.

Full hands-on assessment of spacer/ VHCs, including patient technique and education, is strongly recommended before making any clinical decision. This is a pragmatic, patient-centred introduction that balances clinical evidence with real-world usability with minor opportunities to sharpen clarity and impact.

Spacer Use

A Consensus Guide

UK INHALER GROUP

The following infographic has been produced as an easy reminder of the importance of spacer devices as part of our essential treatments for asthma and COPD. It has been created by health care professionals for health care professionals and is intended to be a useful guide to some of the important factors that we should consider before choosing a spacer device to support the delivery of medication for people with respiratory diseases. Whilst we put a lot of emphasis on the choice of inhaler device, we need to also consider the importance of the right spacer device for the right inhaler and always one that the person can and will use. An explanation of each prescribing consideration is given on pages 3 to 6.

S Specification
- Purpose
- Mouthpiece or Mask
- Static or Antistatic
- Compatibility

P Practicalities
- Feedback Mechanisms
- User-Friendliness
- Durability
- Cost

A Adults
- Preference
- Cognition
- Carer Supported

C Children
- Age Appropriate
- Ability
- Preference
- Families and Team Around the Child

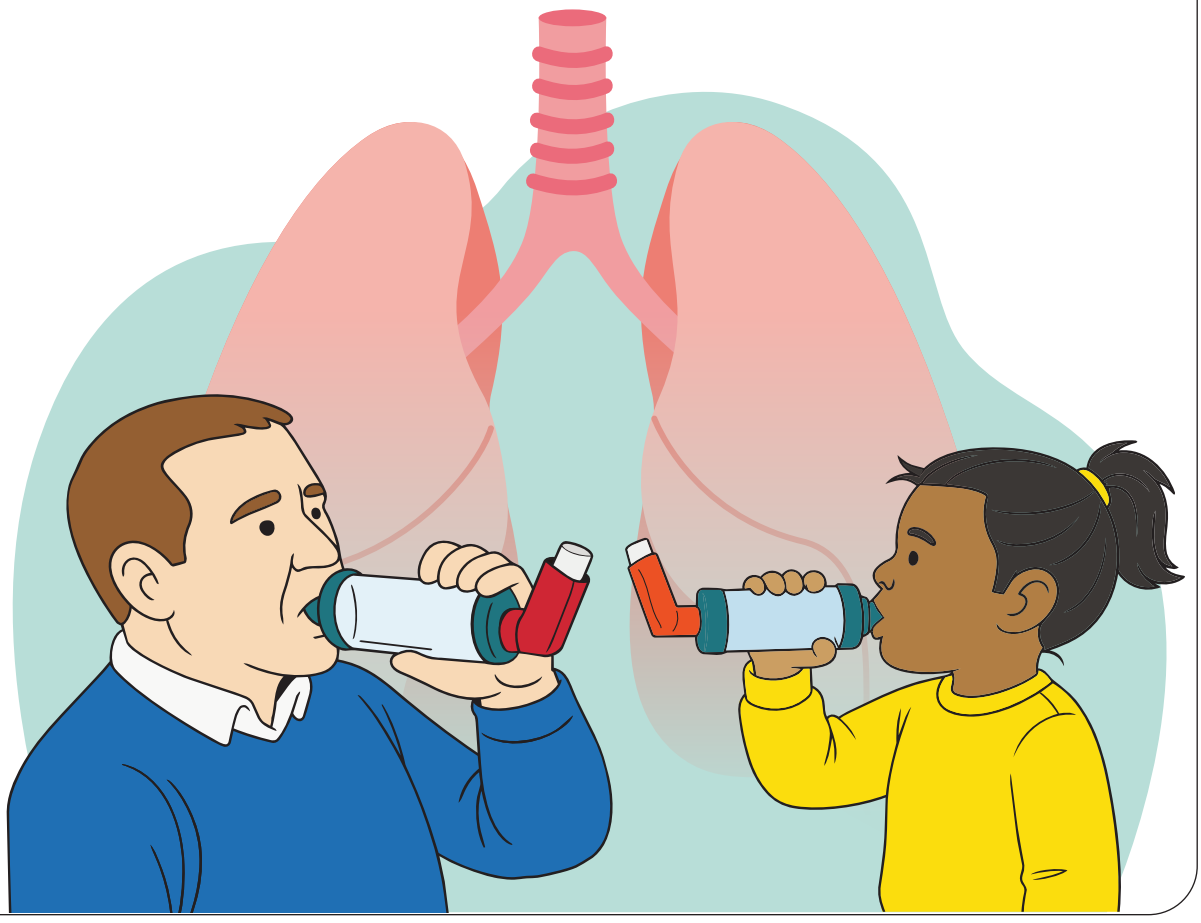
E Education
- Technique with Inhaler
- Priming
- Cleaning
- Replacement

R Review
- Check Correct Use
- Demonstration and Support
- Right Device
- Condition
- Check Prescription

S Safety
- Safety Features
- Patient Feedback
- Clinical Data
- Yellow Card Reporting

Key Points

- **Choice:** As with any inhaler device choice, the best spacer device is the one that the patient can and will use.
- **Myth:** Spacer devices are only for young children.
- **Risks:** Poor adherence to using pMDIs with a spacer, may reduce lung deposition leading to increased local side effects and poor disease control.
- **Assessment:** Hands on assessment of spacers/Valved Holding Chambers (VHCs) is strongly recommended before making any clinical decision.
- **Consistent Prescribing:** Spacers/VHCs should not be considered interchangeable as there maybe clinically significant variation in drug delivery between different brands, due to differences in size, appearance, valve performance, reduction in electrostatic charge and facemask size, shape and material.
- **Finance:** Cost is a consideration however the cheapest spacer/VHC might not be the best device based on multiple factors as outlined in this guide. Any perceived cost savings may be negated by shortcoming in any of these factors.



Specification

Spacer or Valved Holding Chamber (VHC) - What is the difference?

Although the names are used interchangeably, spacers and VHCs are different.

A spacer, usually small volume (<100mL), is a device placed on the mouthpiece of a pMDI device that simply extends the distance from the patient's mouth, allowing the aerosol plume to decelerate and reducing oropharyngeal deposition.

VHCs are usually bigger with a small or large volume chamber (>100mL to 750mL) and contain a one-way valve that holds the medication suspended in the chamber for an extended time, reducing the need to coordinate actuation and inhalation and allowing patients more timea to inhale their medication.

Both spacers and VHCs have been shown to increase fine particle delivery to the lungs, decrease oropharyngeal deposition, and reduce local side effects commonly seen with the use of pMDIs alone.

Purpose

When should a spacer/VHC be used?

A spacer/VHC should be used for children and adults who are unable to use a pMDI device optimally, often due to poor co-ordination of inhalation and actuation.

Mouthpiece or Mask

Which choice should I make?

A mouthpiece should be used in preference to a mask wherever a patient can achieve a tight seal of their lips around the mouthpiece and inhale slowly and steady over 3 – 5 seconds.

A mask will usually be required for young children <3 years and some elderly adults who are unable to use a mouthpiece, but care should be taken to achieve a tight seal of the whole mask on the face, which can be difficult to achieve in young children or uncooperative patients. If using a mask, the dead space between mouth and valve of the spacer/VHC should be minimised to reduce the amount of drug that is lost and not inhaled.

Static or Antistatic

Is priming of the spacer/VHC required?

Plastic spacers/VHCs are susceptible to electrostatic charging of their inner surface, which attracts aerosol particles resulting in reduced drug delivery.

Some spacers/VHCs have antistatic properties to prevent this effect. Others require priming by spraying multiple doses of a pMDI into the device, or by washing in lukewarm soapy water.

Antistatic spacers/VHCs have the advantage that they do not require drug to be wasted priming the device.

Consult the product literature which will state whether the spacer/VHC is antistatic or not.

Compatibility

Is the spacer/VHC compatible/licensed with a particular inhaler?

Are there clinical and drug delivery/deposition data for the spacer/VHC?

Drugs that can be administered with or without a spacer/VHC are required to provide clinical and drug delivery/deposition data to support their use with named spacers/VHCs, which are then named in the Summary of Product Characteristics.

There may be limited data on the use of alternative spacers/VHCs with different pMDIs to demonstrate equivalent performance.

You can check the summary of product characteristics for each inhaler to find out more.

Sustainability

What is the environmental impact of the spacer/VHC?

The greenest inhaler is the one the patient will use and use effectively. This applies to spacers/VHCs too. Environmental considerations should be secondary to shared clinical decision making to get the right medication delivery device for the right patient.

For formulary and procurement processes, where sustainability credentials are a factor, you could check whether the spacer/VHC has carbon footprint data, a lifecycle analysis, and/or the supplier has completed an NHS Evergreen Assessment.

Practicalities

Feedback Mechanisms

Does the spacer/VHC have a whistle indicator?
A whistle can support good technique, particularly important to highlight if the patient is breathing in correctly for optimal lung deposition. Whistle indicators on spacer/VHC brands can differ: Check - does the whistle sound if inhalation is too fast or too slow?

Does the spacer have a breath flow indicator showing that the patient is breathing in/out?
This is particularly important for parents/carers of people using spacers/VHCs as an indicator that the device is being used correctly.

User-Friendliness

Is it easy to carry?
Patients may choose not to carry a spacer/VHC if it is bulky and inconvenient to carry.

Is it easy to use?
Some devices may be harder for patients to exhale through when tidal breathing.

Some spacers/VHCs may require assembly and include more steps to use, eg: fitting a detachable facemask.

How easy is it to insert an inhaler into the spacer?
Tougher rubber parts may make it more challenging to insert the inhaler into the spacer/VHC.

How easy is it to clean/maintain?
Spacers/VHCs have different cleaning and maintenance instructions. Some are easier to take apart and put back together. Some can be cleaned in the top rack of a dishwasher.

Durability

Has there been any testing of the spacer to show its robustness and are there any parts that could become dislodged or break easily?
Loose or easily breakable parts could reduce the spacer/VHC functionality or become a hazard to patients or family members eg: choke risk.

Cost

How much does the spacer/VHC cost?
Cost consideration should go beyond the unit price and take into account the practicalities outlined above and other factors highlighted within this guide.

Adults

Preference

Is pMDI and spacer/VHC the right combination for the patient?
Correct technique and preference are important when choosing any inhaler device with the patient. Can they use in one inhalation or is tidal breathing required (see education)?

Discussing the benefits of using a spacer/VHC with pMDIs can support informed shared decision making. The combination of pMDI and spacer/VHC may help patients who experience local side effects from their medication, particularly those using higher doses of inhaled corticosteroids.

Cognitive Ability

Is a mouthpiece suitable or would a mask be needed?
Adults do not generally need a mask unless there are underlying issues such as cognitive impairment, learning difficulties or an inability to create a good seal on a mouthpiece.

Carer Support

Does a relative/carer assist with medication?
If so, ensure they understand how to use the device correctly including cleaning, maintenance and replacement.

Children

Mask or Mouthpiece

Is the spacer/VHC age appropriate?

Very young children will need to use a spacer/VHC device with a face mask. Mask size is important - the mask should form a tight seal around the child's nose and mouth. Very young children grow quickly so the mask size needed may change. Most children can use a tidal breathing technique with a mouthpiece rather than a mask from 3-4 years of age. Advise 5 tidal breaths per puff of inhaler and only 1 puff at a time.

Ability

Children tend to master a tidal breathing technique from an early age. The breathing technique itself should be as slow and steady as possible, coaching is helpful as young children tend to go too fast – encourage them to "breathe slowly, right down to your tummy". Communication barriers may be overcome using demonstration, role play, using toys to practice, involving parents, siblings or peers to "have a go too."

Preference

Will the child use the spacer/VHC?

Consider child/parent preference and other convenience factors.

Families and Team Around the Child

All those with caring responsibilities need to know how the child's inhaler and spacer devices are correctly used, stored and maintained.

Education

Inhaler and Spacer Technique

Teaching and checking inhaler technique is of key importance to optimise disease control. This is best achieved through demonstrating correct inhaler technique with the spacer/VHC and can be supported by signposting patients to inhaler technique videos such as at Asthma + Lung UK **https://www.asthmaandlung.org.uk/living-with/inhaler-videos**.

Priming

When is priming needed?

Antistatic spacers/VHCs do not need priming. Others should be primed before use by soaking in lukewarm soapy water for 15 minutes and allowing to air dry in the vertical position, or by spraying multiple doses of a pMDI into the spacer/VHC.

Cleaning

How often should a spacer/VHC be cleaned?

Spacers/VHCs should be cleaned once a week. Disassemble the spacer/VHC and remove the mask (if detachable) if used and soak in lukewarm soapy water for 15 minutes. Shake off excess water, but do not rinse, and leave to air dry in the vertical position.

Replacement

How often should spacer/VHC be replaced?

Spacers/VHCs should be replaced every 12 months, or earlier if damaged or has missing parts.

Review

- **Check Correct Use**
  Observe the patient using their spacer to ensure they are following the correct steps, achieving a good seal, and coordinating inhaler activation with breathing.
- **Demonstration and Support**
  Where needed, demonstrate correct technique in person, and signpost to an appropriate video resource for the patient or carer to review at home.
- **Indicators Working**
  Confirm that any breath flow or whistle indicators are present, easy to see, and being interpreted correctly by the patient to guide inhalation speed.
- **Easy to Handle**
  Ask the patient to demonstrate inserting the inhaler into the spacer, holding it securely, and breathing in and out without difficulty or discomfort.
- **Cleaning**
  Discuss and, if needed, demonstrate the correct cleaning and maintenance routine. Make sure the patient understands how often this should be done and why it matters. Remind patients to wash a new spacer before first use, following manufacturer instructions, and to clean regularly thereafter.
- **Condition**
  Inspect the spacer for cracks, loose fittings, worn seals, or other damage that could affect performance or safety. Check whether the device is more than 12 months old or otherwise in need of replacement.
- **Right Match**
  Ensure the device is compatible with the prescribed inhaler and is licensed for that use.
- **Patient Feedback**
  Invite the patient to share their experience, confidence level, and any challenges they face with daily use.
- **Safety Check**
  Consider any issues that could impact drug delivery, such as poor fit, damage, or changes in patient technique, and address them promptly.

Safety

Many of these issues have been explored previously so here's a quick check list:

- ☐ Is there a range of sizes and masks to suit all ages and requirements?
- ☐ Is the prescription age appropriate?
- ☐ Are the inhaler and spacer compatible?
- ☐ Is it antistatic or does it need pre-treating?
- ☐ Is the cap attached to the mouthpiece?
- ☐ Is there a feedback mechanism to help with correct technique?
- ☐ Does the spacer have any patient safety features?
- ☐ Is there efficacy and effectiveness data?
- ☐ Are there published reliable clinical trials data available with the spacer in people?
- ☐ Is there consistency in the dose delivery?
- ☐ Is there deposition data?
- ☐ What it the inhalation/exhalation resistance of the valves?
- ☐ Is the spacer robust?
- ☐ Is the device disposable or recyclable?
- ☐ Have you taught and reviewed technique with the patient?

Acknowledgements

About this Consensus Guide

Disclaimer: This consensus guide was developed by a UKIG working group and supported by Trudell Medical UK Ltd through the provision of a grant for its production. Trudell Medical UK Ltd had no editorial control other than to check factual accuracy. The views and opinions of the contributors are not necessarily those of Trudell Medical UK Ltd. No part of this publication may be reproduced in any form without the permission of the publisher.

Group Members and Affiliations:

Deborah Leese - Respiratory Clinical Lead Pharmacist. Co-Clinical Lead, Children and Young Peoples Asthma for South Yorkshire; Primary Care Respiratory Society (PCRS) Vice Chair, Service Development committee and Policy Forum member; Asthma + Lung UK Respiratory Champion.

Jane Scullion - Respiratory Nurse Consultant. UK Inhaler Group, Steering Group and Educational Lead; Associate Expert Witness, Bush and Co.

Dr Katherine Hickman - General Practitioner. Respiratory Lead, West Yorkshire ICB; Primary Care Clinical Lead, National Respiratory Audit Programme (NRAP); Ex-Chair, Primary Care Respiratory Society (PCRS).

Dr Toby Capstick - Consultant Pharmacist – Respiratory Medicine, Leeds Teaching Hospitals NHS Trust; UK Inhaler Group, Steering Group Lead; UK Clinical Pharmacy Association Respiratory Group, committee member; British Thoracic Society (BTS) Multi-Drug Resistant Tuberculosis (TB) Clinical Advice Service, Steering Group member; NTM Network UK, management group member.

Vivienne Marsh - CYP Asthma Nurse Specialist. Asthma Clinical Lead, Black Country ICB; Children and Young People's Lead, Association of Respiratory Nurses (ARNS); Asthma + Lung UK Council of Healthcare Professionals member; Lead Asthma Tutor, Rotherham Respiratory.

Date of preparation: December 2025

This guide is endorsed by:

ARNS
Association of Respiratory Nurses

PCRS

The **UK Inhaler Group (UKIG) Spacer Use Consensus Guide** – supported by Trudell Medical through provision of a grant – is an independent guide to support healthcare professionals in selecting spacer devices to improve care for the 7.2 million people in the UK with asthma[1] and 1.7 million with COPD.[2]

Why Trudell Medical supported this important guide:

- Two thirds of asthma deaths are avoidable with better basic care.[3]
- Up to 80% of people have incorrect inhaler technique – meaning they may not be receiving the full benefit from their inhaler medicine.[4]
- The UKIG highlights that the right spacer matters.
- ***AeroChamber***® brand of spacers is the most studied and most recommended by leading pMDI companies.[5]
- Trials have proven that using an inhaler alone delivers 50% less medicine to the lungs than using an inhaler with Trudell Medical's ***AeroChamber Plus***® ***Flow-Vu***® spacer.[6]

"Just one in ten healthcare professionals believe spacer prescribing is consistent across the NHS, according to our survey" says Liam Clutterbuck, Market Access Development Manager of Trudell Medical UK. "Endorsed by ARNS and Primary Care Respiratory Society (PCRS), the release of this independent, expert-led guide from UKIG marks a step forward in supporting clinicians who are helping to tackle conditions like asthma, which still claims four lives every day in the UK."[1]

> ***"…a spacer device should always be prescribed alongside a pMDI."***

"Crucially, not all spacers are the same – substitution of one type of spacer or VHC with another may have both safety and clinical implications, and different chambers deliver different amounts of medication."[7]

"Trudell Medical's 'Always Together' initiative raises awareness that a spacer device should always be prescribed alongside a pMDI. This forms part of our mission at Trudell Medical, to ***help people breathe better and live fuller lives.***"

Scan to find out more

UKIG Spacer Use Consensus Guide

On-Demand Webinar: Launch of UKIG Consensus on Spacer Devices

Or contact your local Trudell Medical UK representative at
+44 (0) 1256-338-400 | www.trudellmedical.co.uk

TRUDELL MEDICAL UK LIMITED

aerochamber.co.uk

AeroChamber®
BRAND OF SPACERS

1 Asthma + Lung UK. What is Asthma? 2026. **2** Asthma + Lung UK. What is Chronic Obstructive Pulmonary Disease (COPD)? 2025. **3** Figure via Why Asthma Still Kills: The National Review of Asthma Deaths; Royal College of Physicians. 65% of asthma deaths had one or more avoidable factor (Table 6.3.1 http://www.asthmaandlung.org.uk/). **4** Global Initiative for Asthma (GINA). Global Strategy for Asthma Management and Prevention 2021. **5** Suggett J. How to select the appropriate Valved Holding Chamber (VHC) / Spacer – Understanding the terminology in order to make an informed choice. RCGP Conference. 2024. **6** Dorinsky P, DePetrillo P, DeAngelis K, Trivedi R, Darken P, Gillen M. Relative Bioavailability of Budesonide/Glycopyrrolate/Formoterol Fumarate Metered Dose Inhaler Administered With and Without a Spacer: Results of a Phase I, Randomized, Crossover Trial in Healthy Adults. Clin Ther. 2020;42:634-648. **7** Lavorini F *et al*. Spacers and Valved Holding Chambers – the Risk of Switching to Different Chambers. J Allergy Clin Immunol Pract. 2020 May;8(5):1569-1573

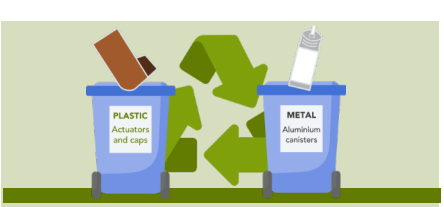
Greener Respiratory Healthcare

The PCRS Greener Healthcare Initiative sets out to promote practical action that can help to reduce the environmental impact of respiratory healthcare. Our campaign resources aim to give you the inspiration, information and practical guidance you need to deliver greener, kinder and more sustainable respiratory care.

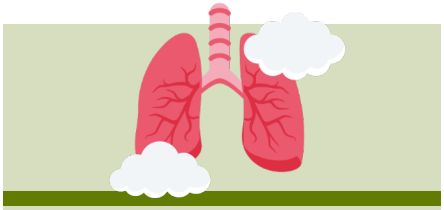
New resource: Putting greener healthcare into practice

Available in this issue of PCRU, this document offers practical tips and advice to support you in applying the 10 ways to implement sustainable, greener healthcare in primary care respiratory practice.

Lobbying your local MP on environmental issues



10 ways to implement sustainable greener healthcare



Summary of our white paper for greener respiratory healthcare

"Blanket" switching of inhaler types: Why is this a bad idea?

Webinar: The impact of air quality and respiratory health

Podcast: Air Quality and respiratory disease from the perspective of patients

These resources are available via our greener healthcare campaign webpage

Scan the QR code and take the first steps to greener practice

We are grateful to Chiesi for the provision of funding to support the activities of the PCRS Greener Respiratory Healthcare campaign. The campaign has been solely organised by PCRS and Chiesi has had no input in the content.

CARRii's inaugural annual scientific meeting: Accelerating national action on respiratory health

St Hilda's College, Oxford – 29th October 2025

Monica Fletcher, *OBE, Chief Executive, CARRii*

CARRii's inaugural annual scientific meeting brought together over 100 researchers, clinicians, innovators and patient partners from across the UK at a critical moment for the health service. With respiratory viruses already contributing to early increases in hospital admissions, the meeting opened with a clear reminder from **Professor Julian Redhead, national clinical director for urgent and emergency care,** that **"the greatest predictor of the extent of the crisis is the flu numbers."** The challenge is both predictable and pressing, positioning CARRii to lead a coordinated national response.

CARRii: A national engine for applied respiratory improvement

Founded in February 2025, CARRii has rapidly become the central UK hub for applied respiratory research, innovation and implementation. Its mission is unequivocal: ***to reduce NHS winter pressures and to tackle respiratory inequalities.***

CARRii's structure, built around the themes of prevention, connected care and optimised clinical care - supported by specialist platforms for data, methodology, patient and public involvement and postgraduate training - creates a UK-wide network capable of driving change and converting research into real-world improvements at pace and scale.

Evidence designed for system change

More than 60 abstract submissions reflected the depth of respiratory research already active across the network. Twelve were selected for oral presentation, spanning:

- community management innovations for acute respiratory infections
- real-world patterns in RSV, influenza and COVID-19
- winter risk prediction modelling
- environmental exposures and children's lung development
- unmet diagnostic needs in chronic respiratory disease
- primary care capacity and compounding pressures
- data-driven insights into absenteeism, exacerbations and seasonal surges

The programme showcased evidence that not only characterises problems but points decisively to actionable, scalable solutions.

From innovation to implementation

A dedicated innovation session focused on the practical adoption of tools that can transform frontline respiratory care, including point-of-care diagnostics and simplified lung health assessments. Discussions underscored the importance of designing interventions that are implementable across integrated care systems - reflecting one of CARRii's core strengths: its outward-facing drive to turn research into real-world impact.

Connecting research with policy

A policy-focused session explored how applied respiratory research can more effectively influence national and local decision-making. Contributors highlighted strategies for aligning evidence with government priorities, anticipating upcoming policy shifts, and supporting long-term NHS transitions toward prevention, digitally enabled pathways and stronger community-based care. The message was clear: research designed with policy adoption in mind has the greatest likelihood of shaping change.

Collective priorities for the year ahead

Delegates identified several high-impact opportunities for reducing winter pressures, including:

- expanding vaccination uptake
- strengthening public information and health literacy
- improving air quality and environmental protections
- early risk identification
- enhanced community-based prevention
- development of a coordinated CARRii prevention bundle

A springboard for national impact

The meeting closed with a strong sense of shared purpose and momentum. Insights from the day will guide CARRii's strategic agenda, inform national policy and partnerships and shape a larger spring meeting.

CARRii is now firmly established as the UK's leading driver of applied respiratory research, innovation and implementation - uniting experts across disciplines to deliver the practical solutions the NHS urgently needs.

If you are interested in joining please contact CARRii Communications: Beth Collop at Elizabeth.Collop@phc.ox.ac.uk or CARRii.info@phc.ox.ac.uk

PCRS Respiratory Leaders Programme: Could you be a respiratory leader?

Siobhan Hollier, *Team lead respiratory physiotherapist, Norfolk*

Are you passionate about respiratory care but frustrated by the pace of change? Do you have ideas about how things could be done better, but aren't sure how to make your voice heard? The Primary Care Respiratory Society (PCRS) Respiratory Leaders Programme could be the catalyst you've been looking for.

Established in 2009, the PCRS Respiratory Leadership Programme has been through several iterations since the COVID-19 pandemic. For 2026 we are offering a three-year rolling programme of biannual residential workshops which delegates can join at any point or participate in stand-alone sessions where there is a particular learning need or interest.

What makes the PCRS leadership programme different to other leadership workshops?

There are other learning opportunities available to clinicians to enhance their leadership knowledge and skills but, for clinicians with a passion for high quality respiratory care, PCRS Respiratory Leadership Programme offers a unique opportunity to develop professional leadership skills within the respiratory context.

What will I learn?

Each residential workshop combines an expert-led session, peer discussion and practical tools you can apply immediately. Workshops will focus on core themes of leadership such as:

- influencing and negotiating;
- understanding teams; and
- project initiation

and will provide delegates with useful tools and resources that can be implemented in their practice setting and beyond. As we move into 2026 we will see the architecture of the NHS continuing to change. More than ever there will be a requirement for respiratory leaders to understand the needs of their local population and key stakeholders to position themselves to influence and drive positive change and innovation in respiratory care.

The PCRS Respiratory Leadership Programme:

- **Network** with like-minded colleagues building connections that extend well beyond the workshop.
- **Apply** leadership theory to real-world respiratory scenarios making it immediately relevant and transferable.
- **Reframe, redirect and problem-solve** in a safe non-judgemental space sharing challenges, ideas and solutions with informed peers.
- **Stay current** on hot topics, policy and campaigns, equipping you to advocate and drive change with confidence.

The programme is led by Catherine Blackaby, an experienced leadership consultant, and established respiratory leaders who support the Programme as facilitators or by delivering content related to areas of expertise.

Catherine Blackaby – Biography

Catherine has over 25 years' experience of working in the NHS in primary and community care and brings a wealth of real-life experience and practical tools to her work. She is an experienced coach, facilitator and trainer and is an engaging presenter and improvement leader, who focuses on building people's confidence and capability with knowledge and skills they can put into use immediately.

Catherine is a former improvement fellow with the NHS Institute for Innovation and Improvement, where she undertook improvement skills training with the Institute for Healthcare Improvement in the USA. Besides holding a Masters Business Administration (MBA), she is an Advanced Practitioner in Managing Successful Programmes, an MBTI (Myers Briggs Type Indicator) practitioner, NLP master practitioner and accredited executive coach, and has a particular interest in the human and cultural aspects of change. She also worked as a development adviser on the national "Time for Care" General Practice Development Programme, which supported practice teams and primary care networks (PCNs) to deliver practical change, release capacity and develop the skills to lead local improvement.

Who is it for?

Anyone can be a leader, and you do not necessarily need to hold a position of power to influence, inspire and empower others around you. This programme is for:

- **The aspiring leader:** You have drive and ambition. You want to understand yourself and others, communicate with impact and start making a real difference.
- **The established leader:** You want to sharpen your toolkit, refresh your thinking, expand your network and stay aheadof the curve.

The PCRS leadership programme has a proven track record of developing confident inspiring leaders; many of the current leaders within PCRS are 'graduates' of the respiratory leadership programme.

> *"This was an exceptionally useful session, all parts were completely relevant and useful skills for my job, and it was excellently presented. Such a welcoming and supportive environment."*

> *"Excellent, very informative and worthwhile course. Feel more confident to put skills/knowledge gained from course into practice. Thank you."*

The next generation of respiratory leaders are already out there – could it be you?

If you are interested come and join us for our next workshop:

Delivering Value, Demonstrating Outcomes

Friday 26th and Saturday 27th June 2026 • Wychwood Conference Centre

For more information: https://www.pcrs-uk.org/respiratory-leadership-programme

Respiratory Leadership Programme

Our revamped programme returns with a new rolling three year format. Exclusively available to PCRS premium members.

New themes **New content** **New opportunities**

Whether you're joining for the first time or returning to update your skills, our programme is designed so you can join at any point and participate in the sessions most relevant to your professional development.

Delivering Value, Demonstrating Outcomes

26th and 27th June 2026 **Wychwood Conference Centre**

This session focuses on population health and what you can do to impact and effect change beyond the practice. Our expert facilitator and contributors will guide you through how to find, interpret and use data and information to support local priorities and engage your colleagues.

Exclusively available to PCRS premium members - if you are not a premium member you can join now from only £54.

Don't miss this opportunity to refine your leadership skills and gain practical tools to drive real change in respiratory healthcare.

We are grateful to Chiesi for providing sponsorship for the PCRS Respiratory Leadership Programme. The sponsor has had no input into the content of the programme.

Putting greener healthcare into practice

Fiona Mosgrove, *GP, Aberdeenshire. PCRS Education Committee Lead*

This article aims to support healthcare professionals working within general practice to implement Ten ways to implement sustainable greener healthcare in primary care respiratory practice, a publication from the Primary Care Respiratory Society (PCRS). It offers practical tips, resources and advice on steps you can take to prioritise options and break down the activities required into manageable tasks.

We are in a climate crisis, and everyone has a role to play in addressing it. The NHS contributes approximately 4-5% of UK greenhouse gas emissions.[1] These emissions influence microclimates, and the quality of the air that people breathe in their locality can worsen respiratory symptoms. Primary care accounts for around 1% of total UK greenhouse gas emissions and 23% of the NHS carbon footprint.[2] Within respiratory care, there is also a clear link between clinical outcomes and environmental impact: uncontrolled asthma is associated with 22% higher greenhouse gas emissions than controlled asthma.[3]

All four UK nations have established carbon reduction targets. Changes in prescribing practice can contribute to these goals. For example, the use of lower- carbon inhalers, such as dry powder inhalers (DPIs), has the potential to reduce NHS carbon emissions by 4% and the carbon footprint by a factor of 18.[4] Relatively small changes in practice can collectively have a substantial impact and more sustainable approaches can also improve patient outcomes.

Leading change in greener healthcare presents challenges. Primary care teams are already managing competing priorities and significant time pressures, and there may be uncertainty about the impact of sustainability initiatives or concern about creating additional work. Practical leadership approaches can help address these barriers, including deciding what actions to take, prioritising effectively, identifying supportive colleagues, avoiding overwhelm, and focusing on moving ideas into action.
It is important to build your tribe – this will be a team effort.

There are various potential approaches to greener healthcare, and priorities will differ between practices. Some possible short-term and long-term might include:

Short-term goals

1. Switch to ethical bank and energy providers
2. Promote sustainable travel
3. Leverage data for sustainable practice
4. Shared decisions aroung inhaler prescribing
5. Safe disposal schemes of medical waste, especially inhalers

Long-term aspirations

1. Embrace social prescribing
2. Donate and recycle
3. Explore energy renewables
4. Adopt simple everyday changes
5. Encourage plant-based diets

Figure 1. Using the MoSCoW prioritisation method to decide which projects are most important

These are illustrative examples

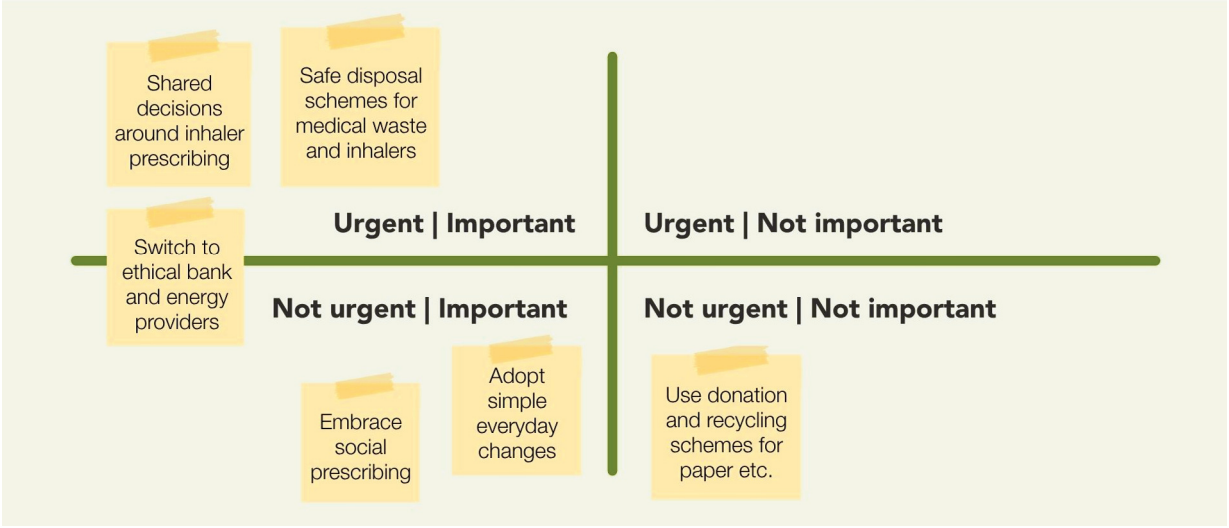
When considering next steps, it is important to reflect on what is realistic based on existing resources and funding. Some ambitions may need to be deferred. Change should be led without pressure or guilt, focusing on achievable, small steps and celebrating progress along the way.

Prioritisation tools can support decision-making. The MoSCoW method categorises actions into must-have, should-have, could-have and won't-have, helping teams to agree on what matters most (Figure 1).

Similarly, the Eisenhower matrix helps organise tasks based on urgency and importance, distinguishing between what needs immediate attention and what will have the greatest impact on outcomes (Figure 2). A good approach to structuring the matrix is to work as a team to rank each task in order of importance and then urgency.

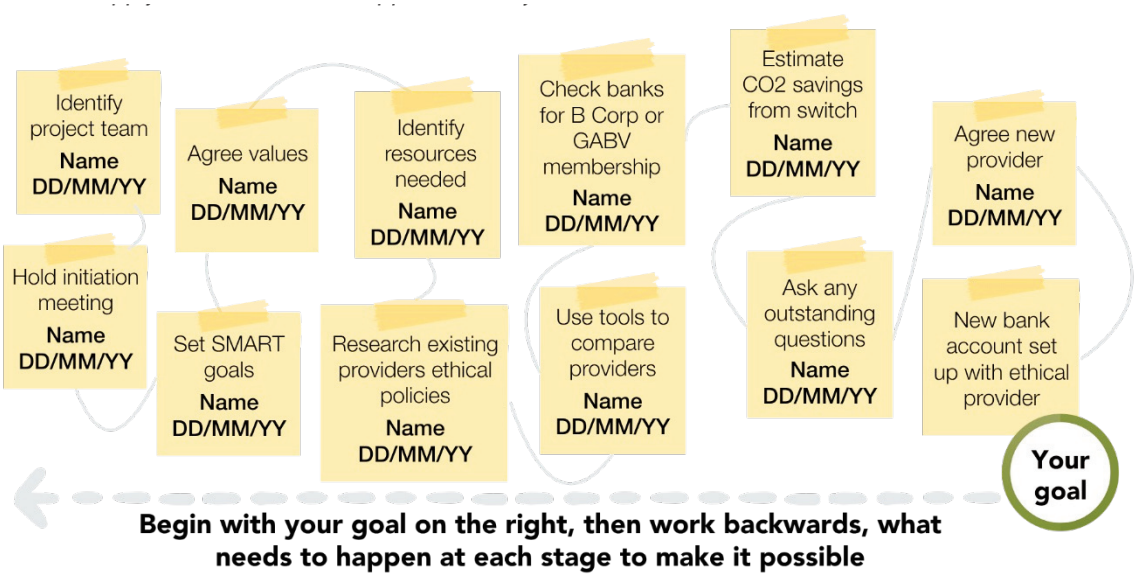
Turning ideas into action can be supported by a structured approach such as "Sticky steps". This

Figure 2. Using the Eisenhower matrix to rank tasks in order of urgency and importance



These are illustrative examples

Figure 3. Using the Sticky steps approach to illustrate how to switch to ethical bank account providers



The same checklist approach can be applied to any of the ten actions
SMART: specific, measurable, achievable, relevant, time-based

involves imagining that you have succeeded in your project and working backwards, detailing what needs to happen at each stage to make it possible. Tasks can be organised sequentially, with clear allocation of responsibility, timelines and required resources (Figure 3). Reviewing the plan can help identify any gaps before implementation.

Actionable steps should align with SMART principles, with agreement on how success will be measured and what data will be required. At the end of the project, the team should review the outcomes and take time to celebrate success.

Greener healthcare is an important priority that can be integrated into routine practice without significant additional work. Building a supportive team and using practical tools such as MoSCoW, the Eisenhower matrix and Sticky steps can help your team select, prioritise and implement effective actions.

References
1. NHS England. Greener NHS campaign to tackle climate 'health emergency'. January 2020. https://www.england.nhs.uk/2020/01/greener-nhs-campaign-to-tackle-climate-health-emergency/
2. Tennison I, Roschnik S, Ashby B, et al. Health care's response to climate change: a carbon footprint assessment of the NHS in England. Lancet Planet Health 2021; 5: e84–e92. https://doi.org/10.1016/s2542-51969(20)30271-0
3. Orlovic M, Tzelis D, Guerra I, et al. Environmental, healthcare and societal impacts of asthma: a UK model-based assessment. ERJ Open Res 2024;10(4):00577-02023. https://doi.org/10.1183/23120541.00577-2023
4. UK Parliament UK Progress on Reducing F-gas Emissions | Enhanced Reader. https://publications.parliament.uk/pa/cm201719/cmselect/cmenvaud/469/469.pdf

Scan the QR code for detailed guidance on each of the actions featured in the "Ten ways to implement sustainable greener healthcare in primary care respiratory practice".

Acknowledgement
This resource is part of the PCRS Greener Healthcare Initiative. Learn more on the PCRS website: www.pcrs-uk.org.

We are grateful to Chiesi for the provision of a grant to support the activities of the PCRS Greener Respiratory Healthcare campaign. The campaign has been solely organised by PCRS and Chiesi has had no input into the content.

Left behind by design: Who's missing from digital respiratory care?

Dr Leslie Borrill, *GP, Midlands*

Digital technology aims to improve access to healthcare. However, for certain individuals with respiratory conditions, it may introduce additional barriers rather than eliminating existing ones.

Consider the case of Evelyn, a 74-year-old living alone with a 12-year history of chronic obstructive pulmonary disease (COPD). Her GP practice now uses an online triage system. Appointment reminders are sent via text, repeat prescriptions are ordered through an app, and annual reviews are conducted by phone or video. However, Evelyn's mobile phone is outdated, she lacks home internet access, and she has forgotten the password to her email account. Recently, she missed her review because the reminder was sent to an obsolete phone number. When she attempted to call the practice using her landline she was instructed to book online.

Cases similar to Evelyn's are frequently encountered in primary care. Clinicians often experience patients who have difficulty using smartphones, miss appointments due to undelivered SMS reminders or feel overwhelmed by online triage systems.

The NHS Ten Year Plan, *Fit for the Future*, articulates a transition "from analogue to digital", with the NHS App intended to serve as 'the full front door to the entire NHS' by 2028.[1] The accelerated shift to digital healthcare, particularly during the COVID-19 pandemic, has yielded benefits such as increased convenience, efficiency and expedited access for many people. However, this transition has also intensified disparities. Respiratory care, like many chronic illnesses, relies on self-management, remote monitoring and regular reviews and is particularly affected by this digital divide.

The Access Gap: Barriers Created by Circumstance

There is a common assumption that all individuals possess smartphones or internet access; however, this is inaccurate. According to Age UK, 6% of people aged 75 and over and 4% of those aged 65–74 lack the necessary skills to function in a digital society. Among individuals aged 65 and over who live alone, approximately 30% (1.4 million people) use the internet less than once a month or not at all.[2]

Where you live also matters. In rural areas 4% of homes lack adequate broadband access, rising to 6% in remote rural settlements, compared with less than 1% in cities.[3] Mobile coverage is equally uneven. For people in temporary housing, hostels or sleeping rough, a stable phone number or smartphone with data is a luxury.

For individuals with respiratory conditions, these access gaps have tangible consequences. They are unable to view instructional videos on inhaler technique, receive prescription reminders, participate in online pulmonary rehabilitation or complete review forms digitally. At each stage the healthcare system presumes access to resources that many patients simply do not have.

Digital pulmonary rehabilitation programmes such as myCOPD and SPACE for COPD offer genuine potential to extend access, particularly for patients facing travel or mobility barriers. However, NICE's early value assessment for these technologies explicitly flagged digital literacy, age and device access as equality considerations, noting that patients unfamiliar with technology or without internet access may require additional support.[4]

The Capability Gap: Exclusion Resulting from System Design

Access represents only one aspect of the challenge. Having a smartphone does not guarantee the ability to use it for healthcare purposes. One in five individuals aged 65 and over (approximately 2.4 million people) rarely or never use the internet. Among those aged 75 and over, almost half are unable to complete basic digital tasks.[2] Only two-thirds of this population use a smartphone. For individuals with memory impairments, learning disabilities or dementia, these barriers are even more pronounced.

Physical barriers compound this: age-related impairments, such as reduced vision or limited dexterity, can make touchscreens and apps inaccessible even when a device is available. Age UK data shows that, among older people in England who do not use the internet, reduced vision and health-related physical limitations are cited as distinct barriers, separate from lack of skills or interest.[2] The exclusion risk also steepens sharply with advancing age: Ofcom's research on digital disadvantage confirms that older age is a significantly stronger predictor of being offline for the over-85s than for those aged 65–84.[5]

This challenge is set to grow. The Health Foundation's Health in 2040 projects that 9.1 million people in England will be living with major illness by 2040, up from 6.7 million in 2019.[6] If respiratory services are not designed with this in mind now, the gap will only widen.

Intersecting Barriers: Where Access and Capability Gaps Overlap

Many patients face multiple barriers at once. An older Urdu-speaking woman with COPD may struggle with language, cost and digital confidence simultaneously. A young man with asthma who is recently homeless might have a smartphone but no data and nowhere quiet for a video call.

Respiratory disease is strongly linked to deprivation: those in the most deprived communities are 2.5 times more likely to have COPD,[7] and these are the same communities where digital exclusion is most prevalent. For these patients, the digital divide is not an inconvenience; it is a clinical risk.

People with learning disabilities and those experiencing homelessness face a similarly compounded risk. NHS England's inclusive digital healthcare framework identifies both as inclusion health groups for whom digital exclusion deepens existing health inequalities.[8] In respiratory terms, these are not marginal populations: Homeless Link's 2025 Health Needs Audit found that 81% of people experiencing homelessness report a physical health condition, with asthma and COPD among the most common diagnoses.[9]

Addressing Digital Exclusion in Primary Care

These challenges are not inevitable. Digital transformation can expand access to care, but only if systems are intentionally designed to include those most at risk of exclusion, rather than solely serving individuals who are already digitally connected.

NHS England recently launched the Digital Exclusion Risk Atlas (DERA), an interactive map that scores every neighbourhood in England for its likelihood of digital exclusion. DERA brings together data on connectivity, affordability, digital skills, and demographics into a single index, enabling integrated care boards, Primary Care Networks, and practices to see where risk is concentrated and plan accordingly. The Atlas does not tell us who is being excluded from care; it shows where to look, a useful place to start.[10]

Primary care teams are already under significant pressure, with increasing demands to see more patients in less time. Digital tools were introduced, in part, to alleviate this burden. However, providing

genuine choice for patients requires additional time and resources. Failing to reach digitally excluded patients may result in greater costs, including missed reviews, preventable exacerbations, emergency admissions and widening health inequalities.

The initial priority should be to ensure that digital care is offered as one option among several, rather than as the sole pathway. The following contact methods should be available to all patients:

Contact Method	Description
☐ **Online**	App, website, video consultation, email: where patients have access and confidence
☐ **Phone**	Smartphone or landline: booking, reminders, review calls and prescriptions by telephone
☐ **In-person/ personalised**	Face-to-face appointments, health champions, social prescribing link workers and peer supporters
☐ **Written**	Letters, printed instructions and paper-based correspondence for those without phone or internet
☐ **Pharmacy**	Community pharmacist for inhaler technique, medication review and opportunistic health advice

Community pharmacists are a significantly underutilised resource for digitally excluded patients with respiratory conditions. Fit for the Future outlines a transition for community pharmacy towards becoming "integral to the Neighbourhood Health Service"[1] and, for this patient group, that transition is already clinically meaningful. Commissioned services, including Pharmacy First, Structured Medication Reviews and the New Medicine Service, create genuine funded opportunities for in-person inhaler technique training, medication reviews and opportunistic health promotion without requiring digital access from the patient.

Personal support is equally important. Social prescribers, link workers, health champions and peer supporters, many already embedded in PCNs, can actively identify digitally excluded patients on respiratory disease registers and provide navigation support. Practices should consider digitally excluded patients as an explicit referral criterion for social prescribers, rather than relying on patients to self-identify as struggling.

Recommended Actions for Primary Care Practices

Identify and flag digitally excluded patients

- Ask your clinical system supplier about digital exclusion codes: EMIS and SystmOne have options available.
- Recording this systematically ensures these patients receive appropriate contact methods.

Ensure patients can book via phone and in person, not just online

- Check that your annual review invitations and appointment reminders offer telephone booking as standard.
- If your triage system defaults to "book online", ensure reception staff have clear pathways to offer alternatives.

Train staff to support appointment navigation

- Brief reception and administrative staff on recognising patients who may be struggling digitally.
- Empower them to offer help without making patients feel like a burden.
- A few minutes of support can prevent a missed review and an avoidable exacerbation.

Screen proactively for digital exclusion risk

- Consider adding a brief digital inclusion question to new patient registration and to asthma and COPD annual reviews.
- Treat non-response to digital invitations as a trigger for an alternative contact attempt, not a missed review: non-responders may be digitally excluded, not disengaged.

Designing Inclusive Digital Health Systems

Digital health is a permanent feature of modern healthcare and offers substantial benefits for many patients. However, the effectiveness of such systems should be evaluated by their ability to serve those facing the greatest challenges. Primary care teams are uniquely positioned to address these issues, as they frequently encounter patients who are at risk of exclusion and are familiar with communities where respiratory disease and digital exclusion intersect.

Achieving this requires meaningful co-design[11]: services built without the involvement of digitally excluded people risk compounding the very inequalities they aim to address. The King's Fund has found that users are not routinely involved in digital service design, a critical gap at a time when the NHS is undergoing rapid digital transformation.[12]

While Fit for the Future envisages a digitally transformed NHS, a transformation that fails to include the most vulnerable populations cannot be considered true progress.

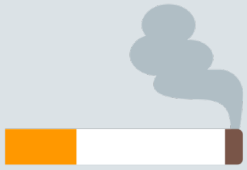
References

1. Department of Health and Social Care. Fit for the Future: 10 Year Health Plan for England. July 2025. Available at: https://www.gov.uk/government/publications/10-year-health-plan-for-england-fit-for-the-future
2. Age UK. Facts and Figures about Digital Inclusion and Older People. July 2025. Available at: https://www.ageuk.org.uk/siteassets/documents/reports-and-publications/reports-and-briefings/active-communities/internet-use-statistics-july-2025-1.pdf
3. Department for Environment, Food & Rural Affairs. Statistical Digest of Rural England: Connectivity and Accessibility. October 2025. Available at: https://www.gov.uk/government/statistics/statistical-digest-of-rural-england
4. National Institute for Health and Care Excellence. Digital Technologies to Deliver Pulmonary Rehabilitation Programmes for Adults with COPD: Early Value Assessment. 2023. Available at: https://www.nice.org.uk/guidance/htg718
5. Ofcom. Digital Adoption and Digital Disadvantage Today: What Has Changed, and What Barriers Remain? April 2025. Available at: https://www.ofcom.org.uk/internet-based-services/technology/digital-adoption-and-digital-disadvantage-today-what-has-changed-and-what-barriers-remain
6. Watt T, Raymond A, Rachet-Jacquet L, et al. Health in 2040: Projected Patterns of Illness in England. The Health Foundation; 2023. Available at: https://www.health.org.uk/publications/health-in-2040
7. Primary Care Respiratory Society. Health Inequalities and Respiratory Disease. Available at: https://www.pcrs-uk.org/resource/current/health-inequalities-and-respiratory-disease
8. NHS England. Inclusive Digital Healthcare: A Framework for NHS Action on Digital Inclusion. Available at: https://www.england.nhs.uk/long-read/inclusive-digital-healthcare-a-framework-for-nhs-action-on-digital-inclusion/
9. Homeless Link. Unhealthy State of Homelessness 2025: Findings from the Homeless Health Needs Audit. 2025. Available at: https://homeless.org.uk/knowledge-hub/unhealthy-state-of-homelessness-2025-findings-from-the-homeless-health-needs-audit/
10. Digital Exclusion Risk Atlas. Available at: Digital Exclusion Risk Atlas (DERA) - https://experience.arcgis.com/experience/e990bec3d90f4a0dbb15e56dd58da5e7/page/Home. Accessed April 2026.
11. Centre for Ageing Better. Why Digital Inclusion Matters Now More Than Ever. 2025. Available at: https://ageing-better.org.uk/blogs/why-digital-inclusion-matters-now-more-ever
12. Jabbal J, Sherlaw-Johnson C, Sherlaw-Johnson R. Designing Inclusive and Trusted Digital Services with People and Communities. The King's Fund, January 2025. Available at: https://www.kingsfund.org.uk/insight-and-analysis/long-reads/inclusive-digital-services-people-communities

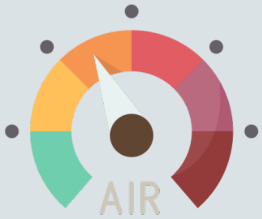
Health inequalities

Health inequalities are an exacerbating factor for respiratory conditions and negatively affect patient outcomes.

Incidence and mortality rates from respiratory disease are higher in disadvantaged groups and areas of social deprivation.



Higher smoking rates



Higher levels of air pollution

Poorer housing quality

Working in industries with greater exposure to hazards

Contributing factors to lung disease

PCRS aims to raise awareness and offers practical resources to help healthcare professionals mitigate the impact of health inequalities.

Poverty and poor housing

Article and infographic in this edition of PCRU: The impact of poor housing on health inequalities and respiratory disease

- Video on the impact of cold, mould, heat and overcrowding on respiratory health
- Template letters for landlords for patients with asthma or COPD

Health inequalities podcast series*

The impact of respiratory disease on mental health

- Mental health and respiratory disease in current and ex-prisoners
- Suicide and suicide prevention in long-term respiratory conditions

Explore this topic further and access PCRS resources

PCRS

*We are grateful to Norfolk and Waveney ICB for sponsoring this 2025 Health Inequalities project. This resource has been developed by PCRS, and Norfolk and Waveney ICB has had no input into the development, content or production of this material.

The impact of poor housing on health inequalities and respiratory disease

Anthony Ball,[1] Rachel Williams[2]

[1] *Public Health Practitioner (Advanced), Cornwall Council and Council of Isles of Scilly*
[2] *Consultant Respiratory Practitioner (Physiotherapist), NHS Cornwall and Isles of Scilly*

In this article Anthony Ball and Rachel Williams provide a summary of why it is so important to address poor housing as a way of tackling health inequalities. They outline some of the key issues, potential barriers to and opportunities for addressing poor housing, as well as some top tips for primary care. This article is also accompanied by a PCRS summary of the impact of poor housing on individuals with respiratory disease.

Too many individuals and families in Cornwall and the Isles of Scilly, and across the UK, are trapped in cold, damp and poor-quality homes. Our homes should be a place of safety, healthy living and warmth for residents. Instead, particularly with high levels of fuel poverty, they can both create and exacerbate health conditions, thereby widening health inequalities and shortening healthy lives.

Cold, damp and underheated homes remain costly despite the collective work of local government and initiatives, landlords, homeowners and the NHS. Abrupt and unforeseen changes in Government policies and global forces on energy mean the UK has some of the least energy-efficient homes and the highest level of energy debt in Europe.

In England, winter "costs" healthcare (NHS and local authority) £2.5bn per year,[1] with broader societal costs from lost education and employment opportunities. Respiratory illness, cardiovascular disease, common mental disorders and healthy life years lost are among the most expensive examples of health-related implications of poor housing. Fuel poverty also exposes regional disparities, with households in Yorkshire and the Humber and the West Midlands more likely to live in fuel poverty than households in the South East of England.[2] Fuel poverty is a structural problem, with home upgrades and independent and trusted advice on use of existing and new heating systems the best long-term solution.

Excess cold and heat

In the extreme, cold homes cost lives. Across the UK it is estimated that 10,000 people die each year due to living in a cold home.[3] The alarming increase in excess winter deaths due to a sharp rise in energy costs leaves more households exposed to the risks of living in a cold home than ever before. However, excess heat is also a factor as many older homes cannot cope with high prolonged summer temperatures and some are at significant risk of overheating. This poses health risks for those most vulnerable to overheating, including older people, young children and those with long-term conditions, placing additional pressure on healthcare services.[4]

Damp and mould

Mould is a common form of fungus that can grow indoors, particularly in damp, cold and poorly ventilated spaces. Mould produces spores which, when inhaled, can cause irritation, allergic reactions and

breathing difficulties, with the respiratory effects of damp and mould potentially causing serious illness and, in the most severe cases, death. Those most vulnerable are babies, young children and older people, as well as those with existing respiratory conditions, allergies and co-morbidities (cardiovascular disease, skin conditions (eczema), weakened immune systems, etc).

Potential barriers

The number of people requiring support and intervention in these areas can be overwhelming and consideration may be needed on how to prioritise identification and support of those most at risk.

It is important to understand housing tenure, households at higher risk of cold, damp and mould and the updated legislation. Table 1 shows the proportion of households in fuel poverty by tenure type in England in 2024. It shows that the highest level of fuel-poor households is in private rented housing, and this represents the largest opportunity to improve health and wellbeing.

Table 1: Proportion of households in fuel poverty by tenure type in England, 2024

Tenure (2024)	Households (%)	Not fuel-poor	Fuel-poor	Households (n)
Owner-occupied	65%	92.5%	7.5%	19 million
Private rented	19%	78.5%	21.5%	4.7 million
Social rented	16%	86.9%	13.1%	4.1 million

Most private renters are subject to landlord decisions on energy efficiency measures, and the tenure has the lowest average energy performance certificate (EPC) rating compared with social housing and owner-occupied housing. For tenants in substandard accommodation, the impacts can be severe.

Households in social rented homes are more likely to live in a home with an EPC of C or above. However, they will generally have lower than average incomes and are more likely to be in fuel poverty relative to the overall housing stock.

By addressing the root causes of fuel poverty and targeting those most vulnerable, it will make a tangible difference to tens of thousands of people's lives but will also work to better align efforts to tackle health inequalities, poverty and release healthcare resources at regional and national levels.

Opportunities

The Government has adopted legislation – the Renters Rights' Reform Act (also known as Awaab's Law)[5] – to improve the standard of rented homes. Initially, this requires social landlords to act promptly to fix housing hazards and is regulated by the Housing Ombudsman. In future this will be extended to private rented homes. All tenures of energy-inefficient homes are covered by the new Warm Homes Plan,[2] and the Government is working across departments to help ensure more health-vulnerable households get the help they need to improve their homes.

In Cornwall and the Isles of Scilly we have introduced new approaches, pathways and collaborative ways of working between the local authority and the NHS (across all levels, including primary care) to address our above average damp and mould challenges. To access full details on the Cornwall Rising Risk COPD Winter Project, please go to https://www.pcrs-uk.org/case-repository/submission/693

References
1. Local Government Association. The cost of unhealthy housing to the NHS. House of Commons debate. 26 February 2019. Available at: https://www.local.gov.uk/parliament/briefings-and-responses/cost-unhealthy-housing-nhs-house-commons-26-february-2019. Accessed March 2026.
2. UK Government. Warm Homes Plan 2026. Available at: https://assets.publishing.service.gov.uk/media/69cea1d7019a4faf2745b333/warm-homes-plan-corrected-print-ready.pdf
3. National Energy Action (NEA). Our Health, Our Homes. Available at: https://www.nea.org.uk/who-we-are/policy-and-research/our-health-our-homes/
4. UK Health Security Agency. Adverse Weather and Health Plan - GOV.UK. April 2026, page 44. Available at: https://assets.publishing.service.gov.uk/media/69cbbd2b024cdf09254f3f57/Adverse_Weather_and_Health_Plan_2026_2027.pdf
5. Ministry of Housing, Communities and Local Government. Guide to Renters Right Act. November 2025. Available at: https://www.gov.uk/government/publications/guide-to-the-renters-rights-act/guide-to-the-renters-rights-act (applies to England). Accessed March 2026.

Further information / resources

- GOV.UK
- NHS England
- National Energy Action
- House of Commons Library
- Centre for Sustainable Energy
- Institute of Health Equity

Top tips for primary care – make every contact count

"Health inequalities and the social determinants of health are not a footnote to the determinants of health. They are the main issue." Sir Michael Marmot (2020)

ASK

- Link with your local authority for information/schemes that may support poor housing issues eg, Winter Wellbeing, Warmer Homes initiatives, Housing Associations, Neighbourhood events, etc.
- Cover accommodation at each contact point and/or annual review and ask screening questions which may help identify housing and poverty issues:
  - *"Do you struggle to make ends meet at the end of the week/month?"*
  - *"Are you having to decide between food and fuel?"*
  - *"Is there visible condensation on windows or surfaces in your house or visible patches of damp, mould or water damage on walls, windows or ceilings?"*
  - *"Have you raised concerns about your housing which have not been responded to and/or addressed?"*
- Benefit and income maximisation: check if people are accessing all the benefits they should receive.

ASSESS

- Assess clinical vulnerability of the whole household, particularly any challenges in accessing healthcare.
- Is there overcrowding within the household?
- Are there other patients which visit your practice who may potentially be at risk, particularly those who may find accessing healthcare challenging. Can any action be taken to engage with them?

ACT

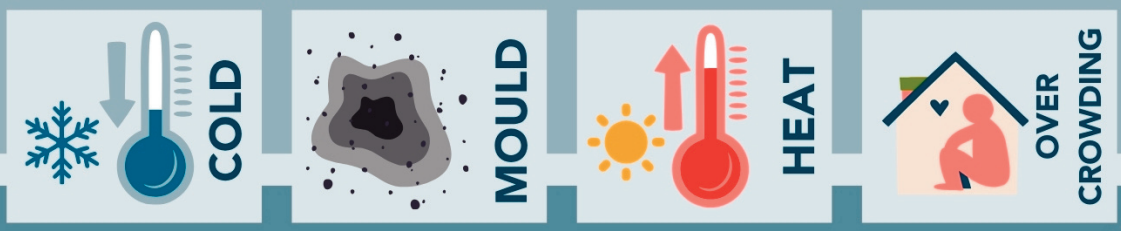
- Signpost and refer to things like Community Energy Plus (https://cep.org.uk/) or your local equivalent and identify local Winter Wellbeing advice and information. Cornwall's example is https://www.cornwall.gov.uk/health-and-social-care/public-health/public-health-campaigns/winter-wellbeing/#guides.
- Once you have identified all local schemes, support or initiatives available to those affected by poor housing issues, signpost individuals to the relevant service. Don't forget to consider social prescribing!
- Link and invite local authority/housing associations to neighbourhood events.
- Liaise with your social prescribers, community health and wellbeing workers and voluntary, community and social enterprise (VSCE) groups.
- Train staff who visit people in their homes to recognise signs of poor housing that may impact health, as well as giving advice and referring for support.
- Raise the correlation between poor housing conditions and healthcare resource expenditure at strategic boards (dealing with cold, damp and mould will improve healthcare and outcomes and reduce healthcare costs in the longer term).
- Improve your own knowledge: https://www.nice.org.uk/guidance/ng149/resources/visual-summary-pdf-7022755693

Health inequalities

Poverty and poor housing

Poverty and poor housing can exacerbate chronic and acute respiratory conditions - as a combination they are hard to isolate from each other and overlap with other inequalities.

In this infographic we explore the impact of the following conditions on respiratory health:



COLD

Cold air inflames lungs and causes bronchoconstriction leading to:

- Respiratory tract infections.
- Worsening of COPD.
- Risk of asthma attacks.

The cold has wider implications on health:

- Worsens cardiovascular disease, mental illness, and dementia.
- Negatively impacts child development.
- Children and older adults are most affected.

Poorly insulated, draughty, or badly designed properties lead to cold homes in winter and hot homes in summer.

Geographical disparities in heat efficient homes are leading to increased fuel poverty.

Cold spells are associated with increased mortality and respiratory morbidity.[1]

Cold, poor ventilation and mould are linked. Sealing homes to keep heat in, traps indoor pollution particulates and increases risk of mould.

MOULD

Damp and mould is associated with bad housing:

- Leaking pipes and roofs, overflowing gutters, and ground water.
- Condensation.

Mould releases spores and mycotoxins into the air. When inhaled, these can trigger allergic reactions, chronic inflammation, and infection.

People with asthma are

2x-3x

more likely to live in cold, damp household conditions than those without asthma.[2]

Awaab's Law came into effect in 2025. It compels social landlords to investigate and fix damp, mould and other serious hazards within strict timeframes. Named after two-year-old Awaab Ishak, who died in 2020 from mould exposure.

HEAT

Physiological response to overheating:

- Oxygen requirements increase.
- Hot air activates upper airway thermal sensor, causes coughing.
- Sweating causes dehydration including of the lungs.

Humidity increases the concentration of pollutants which can trigger exacerbations.

OVER CROWDING

Overcrowding is associated with low-income households and fuel poverty is often a co-factor.

Crowded homes have an increased risk of spread of respiratory infections.

Housing and nutrition are linked - household budget pressures shape dietary practices (e.g. reliance on nutrient poor food) which impacts on health.

ACTIONS

Suggested actions for primary care clinicians:

- Identify and link with your local authority for information and schemes that may support poor housing issues. Signpost individuals to all relevant services.

> **"Do you struggle to make ends meet at the end of the month?"**

- Ask screening questions which may help identify housing and poverty issues.
- Identify anyone who may potentially be at risk, particularly those who may find accessing healthcare challenging.
- Train staff who visit people in their homes to recognise signs of poor housing that may impact health (provide training on giving advice and referring).
- Cover housing at each point of contact and/or annual review.
- Raise housing conditions and value-based healthcare at strategic boards (addressing poor housing will improve health outcomes and reduce costs in the longer term).

Explore further in our Cornwall Rising Risk case study

- Benefits - are people accessing all the benefits they are entitled to? Signpost to relevant services, including social prescribing.
- Improve your own knowledge nice.org.uk/guidance/ng149.

RISKS

- The number of people requiring support and intervention in these areas - how to prioritise alongside competing demands.
- Using the healthcare system to address inequality risks widening the gap (further disenfranchises those who aren't known to primary/community care).

Learn more about health inequalities

Click on the QR code to access our podcasts, videos, and articles on the topic.

References

1. World Health Organization. WHO housing and health guidelines. Recommendations to promote healthy housing for a sustainable and equitable future. 2018. Available via the WHO website.
2. Public Health England (PHE) and Institute of Health Equity (IHE). Local action on health inequalities: Fuel poverty and cold home-related health problems. 2014. Available via the gov.uk website.

Standard letter from HCP for patient with COPD to give to landlord/council

NAME/LOGO PRACTICE/CLINIC

PCRS

Insert date

Insert patient name and address

To whom it may concern

I am writing on behalf of the above patient and /or carer who attends the above service. This person lives with Chronic Obstructive Pulmonary Disease (COPD) and I am currently involved in their care for this problem.

As part of a holistic assessment of their care I have asked about their housing and explored whether there are any factors that may be resulting in worsening of their condition.

The patient reports the following housing related factors that can cause worsening of COPD (delete those that don't apply):

- Overcrowding
- Mould
- An energy inefficient home combined with fuel poverty resulting in a cold home
- Damp
- Inadequate ventilation

COPD is a condition which requires a number of different treatments, however it is essential to optimise indoor air quality as part of the treatment approach.

I have encouraged the above-named patient and /or carer to engage with you to discuss a resolution of these housing related problems that could be impacting on their COPD.

Yours,

Name of HCP

This model letter template has been written by PCRS as a service to health practitioners in the UK who wish to advise and advocate for patients with respiratory illness with their local authority, housing association or private landlord where their patient's housing may be a trigger for worsening of their condition.

More information about how housing can impact on respiratory health can be found at https://www.pcrs-uk.org/resource/current/poverty-and-poor-housing

Standard letter from HCP for patient with asthma to give to landlord/council

NAME/LOGO PRACTICE/CLINIC

Insert date

Insert patient name and address

To whom it may concern

I am writing on behalf of the above patient or their parent or carer who attends the above service. This person lives with asthma and I am currently involved in their care for this problem.

As part of a holistic assessment of their care I have asked about their housing and explored whether there are any factors that may be preventing them from gaining control of their asthma and preventing acute asthma attacks.

The patient reports the following housing related factors that can influence control of a sthma symptoms and cause asthma attacks (delete those that don't apply):

- Overcrowding
- Mould
- An energy inefficient home combined with fuel poverty resulting in a cold home
- Damp
- Inadequate ventilation

Asthma is a condition which can be controlled effectively with medication, however it is essential to also remove the underlying triggers as described above.

I have encouraged the above-named patient, their parent or carer to engage with you to discuss a resolution of these housing related triggers.

Yours,

Name of HCP

This model letter template has been written by PCRS as a service to health practitioners in the UK who wish to advise and advocate for patients with respiratory illness with their local authority, housing association or private landlord where their patient's housing may be a trigger for worsening of their condition.

More information about how housing can impact on respiratory health can be found at https://www.pcrs-uk.org/resource/current/poverty-and-poor-housing

Top 10 tips for contacting your local MP about environmental issues

This resource has been developed based on a PCRS member's experience of contacting their local MP. Some of the examples given are therefore area/MP specific but can be used to inform action you can take in your local area.

1. Check who your local MP is

Start by confirming who your MP is. You can do this by entering the necessary residential postcode here: https://members.parliament.uk/FindYourMP.

MPs only respond to their constituents, so make sure you contact the right representative.

2. Follow all the instructions

MPs often outline specific instructions to ensure your query is handled efficiently. For example, here's a common response template:

"This is an automated response with important information, so please read it fully. I can only raise cases for residents of the <area> constituency. To check if I'm your MP, enter your postcode here: https://members.parliament.uk/FindYourMP. Please ensure your email includes:

- Full name
- Postal address
- Contact telephone number
- Any relevant reference numbers

If these details are missing, I may not be able to respond."

NOTE: Establish if your MP will only deal with one issue per email and plan/tailor your communication accordingly.

3. Grab their attention

MPs receive a lot of correspondence, so use a compelling subject line, such as:
"Urgent: Addressing climate change, air pollution, and public health"

In your opening paragraph, after introducing yourself, emphasise the urgency of the issue:
"As the effects of climate change and rising air pollution continue to affect public health, we are facing a respiratory crisis that demands immediate action."

Again, if they will only deal with one issue per email, focus your title and opening paragraph to exactly what you want to engage them about.

4. Structure your argument

Keep your letter clear and concise. Focus on the positive impacts of addressing environmental issues and give local examples where you can. For example:
“According to Asthma + Lung UK, cleaner transport schemes could save the NHS £254 million annually and protect vulnerable children in areas like Greater Manchester.”

You could also signpost to national guidance that supports the issues you are highlighting: www.gov.uk/government/publications/air-pollution-applying-all-our-health/air-pollution-applying-all-our-health#taking-action

5. Personalise your message

Make your message relevant to your local area and mention local statistics or personal experiences*. For instance, MP Katie White, who represents Leeds North West, has long advocated for clean air and successfully campaigned for Britain’s first Climate Change Act. Many of her constituents, though, are concerned about Leeds Bradford Airport’s expansion plans, which would increase night flights, disrupt sleep, and worsen air quality.

**i.e. Add a personal connection to the topic of your letter that highlights your passion, commitment and why you care about the issues you are raising*

6. Ask for specific action

Be clear about what you want your MP to do. For example, you could ask them to support clean transport solutions, engage with community action groups, or endorse specific programs, like Sustrans School Streets. You can learn more about it here: www.sustrans.org.uk/our-blog/projects/sustrans-school-streets

Acknowledgment of any supportive actions they may have already taken – a simple sign of appreciation. More information about their local MP and their voting records can be found at www.theyworkforyou.com

7. Follow up if necessary

If you don’t hear back after 10 days, send a polite follow-up. MPs have busy schedules, and persistence can help keep your issue on their radar.

8. Leverage social media

If your MP is active on social media, tag them in posts about your environmental concerns. This can increase visibility, build public pressure, and inspire others to take action.

9. Stay informed about their position

Research your MP's stance on environmental issues. For example, you could reference Katie White's past actions in Parliament to highlight her support for clean air initiatives, showing that you are informed and engaged.

10. Share your experience

Whether you receive a response or not, share your experience on social media or with local groups. This helps amplify the issue and encourages others to take action too.

Template letter to your MP on environmental issues

Copy and paste the text below or follow this link: https://qrco.de/bfYuol to download a Word document version of the letter.

[Your Full Name]
[Your Address]
[Your Postcode]
[Date]

Subject: Urgent Action Needed on Climate Change, Air Pollution, and Public Health

Dear [MP's Name],

I am writing as a concerned constituent from [Your Constituency] to raise an issue that requires urgent attention—climate change, air pollution, and their impact on public health, especially respiratory health in our community.

As you know, air pollution is linked to respiratory illnesses like asthma and negatively affects the quality of life in [Your Constituency]. [Insert a personal anecdote or relevant local example].
Addressing these issues would benefit our community by:

- Creating jobs in green industries and boosting our local economy.
- Improving public health and reducing NHS costs.
- Reducing social inequality, as disadvantaged groups are most affected by pollution.
- Improving public transport in rural areas

I urge you to support stronger policies that reduce emissions, promote clean energy, and invest in local air quality initiatives. I look forward to hearing how you plan to address these pressing issues.

Thank you for your time.

Yours sincerely,
[Your Full Name]
[Your Postcode]
[Your Email Address or Contact Information]

We are grateful to Chiesi for the provision of a grant to support the activities of the PCRS Greener Respiratory Healthcare campaign. The campaign has been solely organised by PCRS and Chiesi has had no input in the content.

PCRS News round-up

New trustee

PCRS was delighted to welcome Joanne Page to the Board of Trustees in January this year. Joanne has worked for several years as a civil servant and has over 20 years in senior management roles. The skills she brings to the trustee role are communications, stakeholder engagement and project and change management. Joanne is currently co-opted to the Board until the AGM, where the membership will have the opportunity to formally elect her to the Board.

New committee members

PCRS was also delighted to welcome new committee members at the start of 2026. The Executive Committee has five new members: Dr Leslie Borrill, GP; Dr Mohamed Mansoor, GP; Helena Cummings, Respiratory Nurse Specialist; Marieke Strange, Practice Nurse and Claire Yerramasu, Respiratory Specialist Physiotherapist.

Laura Rush, Respiratory Nurse Specialist, and Katie Johnston, Pharmacist, joined the Education Committee. Dr Anne-Marie Cole, GP, joined the Service Development Committee, and Sian Jones-Barry, Respiratory Nurse Specialist, Marieke Strange, and Rachel Voller, Nurse Practitioner, joined the Policy Forum.

We look forward to working with them all over the next few years.

Catch PCRS at an event near you!

PCRS has had a busy start to the year, raising awareness of the society and our work at Best Practice in London on 25th & 26th February, MediConf in Birmingham on 28th February, Ban the Blue in Northern Ireland on 26th March, the Respiratory MCN Professional Education Conference in Edinburgh on 13th May, and The Primary Care Show, NEC, Birmingham on 20th & 21st May.

We are also looking forward to exhibiting at COPD 2026 in Liverpool on 1st & 2nd June and MIMS Live, London on 12th June. If you are attending, be sure to visit our stand to take away copies of some of our most popular resources.

New resources

A host of ongoing programmes are in development to support members with the implementation of service innovation, greener healthcare and best practice in respiratory health in primary care. Our popular SABA slider[1] has been updated, which can be used with your patients to highlight possible SABA over-reliance. We've recently produced a helpful one-minute video[1] on how to use the tool. Access the slider and video by scanning the QR Code on the advert overleaf.

We've also developed a consensus guide[2] on the implementation of the asthma guideline in all healthcare settings including unplanned care (see pages 9-13).

We're imminently launching a new leadership guide to support greener healthcare. Make sure you bookmark the PCRS site as your go-to place for the best information written by primary care for primary care practitioners.

1 This resource has been produced as part of the PCRS Asthma Right Care (ARC) initiative, which is part of a wider global social movement initiated by the IPCRG; AstraZeneca Ltd has sponsored the production of this resource, the sponsor has had no input into the resource content.
2 We are grateful to AstraZeneca Ltd for providing PCRS with sponsorship funding to develop this resource. The sponsor has had no input into the resource content.

In other news

Respiratory Transformation Programme

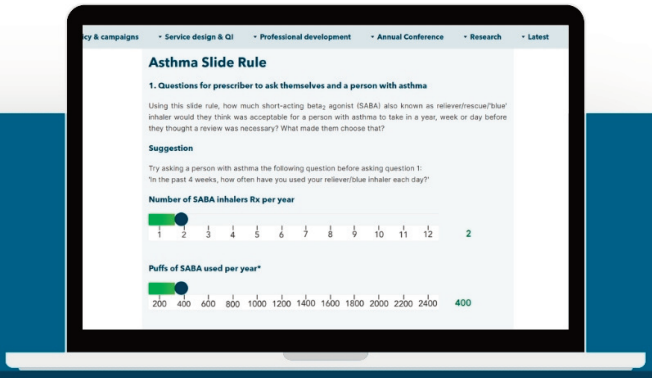
PCRS was pleased to be invited to partner in the ambitious Respiratory Transformation Programme. As part of this innovative initiative, we have contributed to the development of clinical pathways and, over the coming months, will be delivering tailored educational support and resources for primary care. This work will focus on enhancing the management of chronic cough, breathlessness, and sleep apnoea, ensuring primary care teams are equipped with the knowledge and tools needed to improve patient outcomes.

Tackling NHS winter pressures due to respiratory disease

A new article from the UK Centre for Applied Respiratory Research Innovation and Impact (CARRii), published in *Nature* (https://www.nature.com/articles/s41533-026-00500-x), details an approach to tackling NHS winter pressures. By positioning implementation and impact as a central scientific goal, CARRii aims to show how health systems can move from discovering respiratory solutions to delivering them at scale. If adopted widely and supported through policy, investment and cross-sector collaboration, this approach could reduce winter pressures, improve health equity and strengthen system resilience.

Asthma Slide Rule

Use our asthma slide rule to help start a conversation with your patients and colleagues around how much short-acting beta-2-agonist (SABA) is acceptable before a review is necessary.



The slide rule supports implementation of the 2024 BTS/NICE/SIGN asthma guideline, greener respiratory healthcare and is a gateway to establishing SABA-free treatment pathways.

New One-minute video on how to use the slide rule in practice

Use the asthma slide rule online

Scan the QR code to access the interactive slide rule online and download the accompanying guidance notes.

This resource has been produced as part of the PCRS Asthma Right Care (ARC) initiative, which is part of a wider global social movement initiated by the International Primary Care Respiratory Group (IPCRG); AstraZeneca Ltd has sponsored the production of this resource, the sponsor has had no input into the resource content.

COPD and neighbourhood health

As part of our neighbourhood health work, we are inviting healthcare professionals to share examples of best practice that demonstrate innovative, integrated neighbourhood care projects for people with respiratory conditions. This is an excellent opportunity to showcase your work as part of a national initiative.

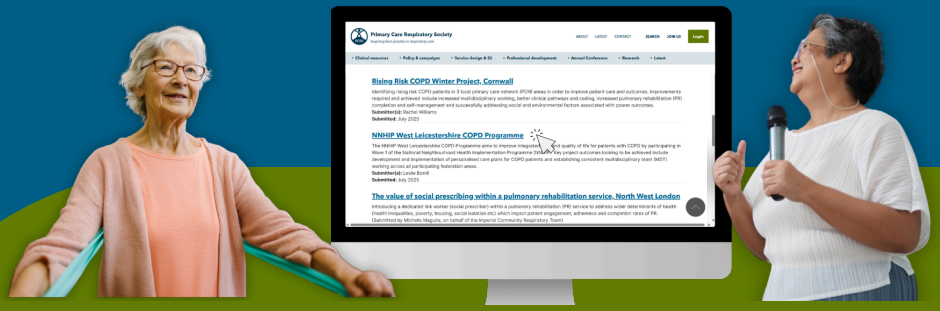
Showcase your work

Share your learning, outcomes and your experience with us via a short write up and video. Scan the QR code to submit your case study.

Our repository of case studies and examples of work highlights projects which have been successful in implementing Neighbourhood Health models to improve care and outcomes for people with COPD.

Learn from best practice

Scan the QR code to browse the repository and learn from good practice projects.



PCRS

We're grateful to our corporate supporters for their financial support which supports the core activities of the Charity and allows PCRS to make its services either freely available or at greatly reduced rates to its members. View all supporters: qrco.de/PCRSsupporters