

Primary Care Respiratory **UPDATE**



www.pcrs-uk.org/pcru

HIGHLIGHTS ...

Whose health is it anyway?
The patient perspective

Are we as patient centred as
we really think we are?

Policy Round Up

Getting the basics right

Journal Round Up

PCRS-UK News

Delivering excellence locally



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inhalation powder. Each single inhalation of fluticasone furoate (FF) 100 micrograms (mcg) and vilanterol (VI) 25mcg provides a delivered dose of 92mcg FF and 22mcg VI. Each single inhalation of FF 200mcg and VI 25mcg provides a delivered dose of 184mcg of FF and 22mcg of VI. **Indications:** *Asthma:* Regular treatment of asthma in patients ≥ 12 years and older not adequately controlled on inhaled corticosteroids and "as needed" short-acting inhaled β_2 -agonists, where a long-acting β_2 -agonist and inhaled corticosteroid combination is appropriate. *COPD:* Symptomatic treatment of adults with COPD with a FEV₁ $< 70\%$ predicted normal (post-bronchodilator) and an exacerbation history despite regular bronchodilator therapy. **Dosage and administration:** Inhalation only. *Asthma:* Adults and adolescents ≥ 12 years: one inhalation once daily of: Relvar 92/22mcg for patients who require a low to mid dose of inhaled corticosteroid in combination with a long-acting beta2-agonist. If patients are inadequately controlled then the dose can be increased to one inhalation once daily Relvar 184/22mcg. Relvar 184/22mcg can also be considered for patients who require a higher dose of inhaled corticosteroid in combination with a long-acting beta2-agonist. Regularly review patients and reduce dose to lowest that maintains effective symptom control. *COPD:* one inhalation once daily of Relvar 92/22mcg. **Contraindications:** Hypersensitivity to the active substances or to any of the excipients (lactose monohydrate & magnesium stearate). **Precautions:** Pulmonary tuberculosis, severe cardiovascular disorders, chronic or untreated infections, diabetes mellitus. Paradoxical bronchospasm – substitute alternative therapy if necessary. In patients with hepatic with moderate to severe impairment 92/22mcg dose should be used. *Acute symptoms:* Not for acute symptoms, use short-acting inhaled bronchodilator. Warn patients to seek medical advice if short-acting inhaled bronchodilator use increases. Therapy should not be abruptly stopped without physician supervision due to risk of symptom recurrence. Asthma-related adverse events and exacerbations may occur during treatment. Patients should continue treatment but seek medical advice if asthma symptoms remain uncontrolled or worsen after initiation of Relvar. *Systemic effects:* Systemic effects of inhaled corticosteroids may occur, particularly at high doses for long periods, but much less likely than with oral corticosteroids. *Possible Systemic effects include:* Cushing's syndrome, Cushingoid features, adrenal suppression, decrease in bone mineral density, growth retardation in children and adolescents, cataract, glaucoma. More rarely, a range of psychological or behavioural effects including psychomotor hyperactivity, sleep disorders, anxiety, depression or aggression (particularly in children). Increased incidence of pneumonia has been observed in patients with COPD receiving Relvar. *Risk factors for pneumonia include:* current smokers, patients with a history of prior pneumonia, patients with a body mass index $< 25 \text{ kg/m}^2$ and patients with a FEV₁ $< 50\%$ predicted. If pneumonia occurs with Relvar treatment should be re-evaluated. Patients with rare hereditary problems of galactose intolerance, the Lapp lactase deficiency or glucose-galactose malabsorption should not take Relvar. **Interactions with other medicinal products:** Interaction studies have only been performed in adults. Avoid β -blockers. Caution is advised when co-administering with strong CYP 3A4 inhibitors (e.g. ketoconazole, ritonavir). Concomitant administration of other sympathomimetic medicinal products may potentiate the adverse reactions of FF/VI. Relvar should not be used in conjunction with other long-acting β_2 -adrenergic agonists or medicinal products containing long-acting β_2 -adrenergic agonists. **Pregnancy and breast-feeding:** Experience limited. Balance risks against benefits. **Side effects:** Very Common ($\geq 1/10$): Headache, nasopharyngitis. Common ($\geq 1/100$ to $< 1/10$): Candidiasis of the mouth and throat, dysphonia, pneumonia, bronchitis, upper respiratory tract infection, influenza, oropharyngeal pain, sinusitis, pharyngitis, rhinitis, cough, abdominal pain, arthralgia, back pain, fractures, pyrexia. Uncommon ($\geq 1/1,000$ to $< 1/100$): Extrasystoles. **Legal category:** POM. **Presentation and Basic NHS cost:** Relvar[®] Ellipta[®], 1 inhaler x 30 doses. Relvar Ellipta 92/22 - £27.80. Relvar Ellipta 184/22 - £38.87. **Marketing authorisation (MA) nos. 92/22mcg 1x30 doses [EU/1/13/886/002]; 184/22mcg 1x30 doses [EU/1/13/886/005]. MA holder:** Glaxo Group Ltd, 980 Great West Road, Brentford, Middlesex TW8 9GS, UK. **Last date of revision:** November 2013. Relvar[®] and Ellipta[®] are registered trademarks of the GlaxoSmithKline group of companies. All rights reserved. Relvar[®] Ellipta[®] was developed in collaboration with Theravance, Inc.

Adverse events should be reported. For the UK, reporting forms and information can be found at www.mhra.gov.uk/yellowcard. For Ireland, adverse events should be reported directly to the IMB; Pharmacovigilance Section, Irish Medicines Board, Kevin O'Malley House, Earlsfort Centre, Earlsfort Terrace, Dublin 2, Tel: +353 1 6764971. Adverse events should also be reported to GlaxoSmithKline on 0800 221 441 in the UK or 1800 244 255 in Ireland.

References: 1. Relvar Ellipta Summary of Product Characteristics. GlaxoSmithKline; 2014. 2. Bleecker ER *et al.* Fluticasone furoate/vilanterol 100/25mcg compared with fluticasone furoate 100mcg in asthma: a randomized trial. JACI In Practice 2014. 3. Svedstater H *et al.* Ease of use of a two-strip dry powder inhaler (DPI) to deliver fluticasone furoate/vilanterol (FF/VI) and FF alone in asthma. ERS. 2013.

UK/FFT/0077/13(1) Date of preparation: May 2014



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[Tiffin, N., Zeman, K. L., Bennett, W. D., CJRT Vol. 47,1, 2011]



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Please refer to the Summary of Product Characteristics (SmPC) for full details of the Prescribing Information. DuoResp[®] Spiromax[®] (budesonide/formoterol) 160mcg/4.5mcg inhalation powder and DuoResp[®] Spiromax[®] (budesonide/formoterol) 320mcg/9mcg inhalation powder. **Abbreviated Prescribing Information. Presentation: DuoResp[®] Spiromax[®] 160/4.5:** Each delivered dose contains 160mcg of budesonide and 4.5mcg of formoterol fumarate dihydrate. This is equivalent to a metered dose of 200mcg budesonide and 6mcg of formoterol fumarate dihydrate. **DuoResp[®] Spiromax[®] 320/9:** Each delivered dose contains 320mcg of budesonide and 9mcg of formoterol fumarate dihydrate. This is equivalent to a metered dose of 400mcg budesonide and 12mcg of formoterol fumarate dihydrate. **Inhalation powder. Indications: Asthma:** Treatment of asthma, where use of a combination (inhaled corticosteroid and long-acting β_2 -adrenoceptor agonist) is appropriate. COPD: Symptomatic treatment of patients with severe COPD (FEV₁ <50% predicted normal) and a history of repeated exacerbations, who have significant symptoms despite regular therapy with long-acting bronchodilators. **Dosage and administration:** For use in adults ≥ 18 years. Not for use in children <18 years of age. **Asthma:** Not intended for the initial management. If an individual patient should require a combination of doses other than those available in the combination inhaler, appropriate doses of β_2 -adrenoceptor agonists and/or corticosteroids by individual inhalers should be prescribed. The dose should be titrated to the lowest dose at which effective control of symptoms is maintained. When control of symptoms is achieved titrate to the lowest effective dose, which could include once daily dosing. **DuoResp[®] Spiromax[®] 160/4.5:** maintenance therapy – regular maintenance treatment with a separate reliever inhaler. **Adults:** 1-2 inhalations twice daily (maximum of 4 inhalations twice daily). **DuoResp[®] Spiromax[®] 320/9:** maintenance and reliever therapy – regular maintenance treatment and as needed in response to symptoms: should be considered for patients with: (i) inadequate asthma control and in frequent need of reliever medication (ii) previous asthma exacerbations requiring medical intervention. **Adults:** The

recommended maintenance dose is 2 inhalations per day, given either as one inhalation morning and evening or as 2 inhalations in either the morning or evening. For some patients a maintenance dose of 2 inhalations twice daily may be appropriate. Patients should take 1 additional inhalation as needed in response to symptoms. If symptoms persist after a few minutes, an additional inhalation should be taken. Not more than 6 inhalations should be taken on any single occasion. A total daily dose of up to 12 inhalations could be used for a limited period. Patients using more than 8 inhalations daily should be strongly recommended to seek medical advice. **DuoResp[®] Spiromax[®] 320/9:** Only to be used as maintenance therapy. **Adults:** 1 inhalation twice daily (maximum of 2 inhalations twice daily). **COPD:** **Adults:** 1 inhalation twice daily. **Elderly patients (≥ 65 years old):** No special requirements. **Patients with renal or hepatic impairment:** No data available. **Contraindications:** Hypersensitivity to the active substance or to any of the excipients. **Precautions and warnings:** If treatment is ineffective, or exceeds the highest recommended dose, medical attention must be sought. Patients with sudden and progressive deterioration in control of asthma or COPD should undergo urgent medical assessment. Patients should have their rescue inhaler available at all times. The reliever inhalations should be taken in response to symptoms and are not intended for regular prophylactic use e.g. before exercise. For such, a separate rapid-acting bronchodilator should be considered. Patients should not be initiated during an exacerbation. Serious asthma-related adverse events and exacerbations may occur. If asthma symptoms remain uncontrolled or worsen, patients should continue treatment and seek medical advice. If paradoxical bronchospasm occurs, treatment should be discontinued immediately. Paradoxical bronchospasm responds to a rapid-acting inhaled bronchodilator and should be treated straightaway. Systemic effects may occur, particularly at high doses prescribed for long periods. Potential effects on bone density should be considered, particularly in patients on high doses for prolonged periods that have co-existing risk factors for osteoporosis. Prolonged treatment with high doses of inhaled corticosteroids

may result in clinically significant adrenal suppression. Additional systemic corticosteroid cover should be considered during periods of stress. Treatment should not be stopped abruptly. Transfer from oral steroid therapy to a budesonide/formoterol fumarate fixed-dose combination may result in the appearance of allergic or arthritic symptoms which will require treatment. In rare cases, tiredness, headache, nausea and vomiting can occur due to insufficient glucocorticosteroid effect and temporary increase in the dose of oral glucocorticosteroids may be necessary. To minimise risk of oropharyngeal Candida infection patients should rinse mouth with water. Administer with caution in patients with thyrotoxicosis, phaeochromocytoma, diabetes mellitus, untreated hypokalaemia, or severe cardiovascular disorders. The need for, and dose of inhaled corticosteroids should be re-evaluated in patients with active or quiescent pulmonary tuberculosis, fungal and viral infections in the airways. Additional blood glucose controls should be considered in diabetic patients. Hypokalaemia may occur at high doses. Particular caution is recommended in unstable or acute severe asthma. Serum potassium levels should be monitored in these patients. As with other lactose containing products the small amounts of milk proteins present may cause allergic reactions. **Interactions:** Concomitant treatment with potent CYP3A4 inhibitors should be avoided. If this is not possible the time interval between administration should be as long as possible. Not recommended with β -adrenergic blockers (including eye drops) unless compelling reasons. Concomitant treatment with quinidine, disopyramide, procainamide, phenothiazines, anticholinergics (atropine), Monoamine Oxidase Inhibitors (MAOIs) and Tricyclic Antidepressants (TCAs) can prolong the QTc-interval and increase the risk of ventricular arrhythmias. L-Dopa, L-thyroxine, oxytocin and alcohol can impair cardiac tolerance. Concomitant treatment with MAOIs, including agents with similar properties, may precipitate hypertensive reactions. Patients receiving anaesthesia with halogenated hydrocarbons have an elevated risk of arrhythmias. Hypokalaemia may increase the disposition towards arrhythmias in patients taking digitalis glycosides. **Pregnancy and lactation:** Use only

when benefits outweigh potential risks. Budesonide is excreted in breast milk; at therapeutic doses no effects on infants are anticipated. **Effects on ability to drive and use machines:** No or negligible influence. **Adverse reactions:** Since DuoResp[®] Spiromax[®] contains both budesonide and formoterol, the same pattern of adverse reactions as reported for these substances may occur. No increased incidence of adverse reactions has been observed following concurrent administration of the two compounds. **Serious:** Immediate and delayed hypersensitivity reactions, e.g. exanthema, urticaria, pruritus, dermatitis, angioedema and anaphylactic reaction, Cushing's syndrome, adrenal suppression, growth retardation, decrease in bone mineral density, hypokalaemia, hyperglycaemia, aggression, psychomotor hyperactivity, anxiety, sleep disorders, depression, behavioural changes, cataract and glaucoma, tachycardia, cardiac arrhythmias, e.g. atrial fibrillation, supraventricular tachycardia and extrasystoles, angina pectoris, prolongation of QTc-interval, variations in blood pressure, bronchospasm and paradoxical bronchospasm. **Common:** Candida infections in the oropharynx, headache, tremor, palpitations, mild irritation in the throat, coughing and hoarseness. **Consult the Summary of Product Characteristics in relation to other side effects. Overdose:** An overdose of formoterol may lead to: tremor, headache, palpitations. Symptoms reported from isolated cases are tachycardia, hyperglycaemia, hypokalaemia, prolonged QTc-interval, arrhythmia, nausea and vomiting. Supportive and symptomatic treatment may be indicated. **Price per pack: DuoResp[®] Spiromax[®] 160/4.5 and DuoResp[®] Spiromax[®] 320/9: £29.97. Legal Category: POM. **Marketing Authorisation Numbers: DuoResp[®] Spiromax[®] 160/4.5: EU/1/14/920/001. DuoResp[®] Spiromax[®] 320/9: EU/1/14/920/004. **Marketing Authorisation Holder:** Teva Pharma BV, Computerweg 10, 3542 DR Utrecht, The Netherlands. **Date of Preparation:** May 2014. **Job Code:** UK/MED/14/0019. **Reference:** 1. Rychlik R, Kreimendahl F. Presented at the 7th IPCRG World Conference, 2014. Teva Pharmaceuticals Europe BV, Piet Heinkade 107, 1019 GM Amsterdam, The Netherlands.****

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Primary Care Respiratory **UPDATE**



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PCRS-UK WORKSHOP - Bringing about change in practice: secrets for a successful project

Studley Castle, Warwickshire 14th & 15th November 2014

How long have you been trying to get a project underway? Whether the project is bringing about a change in your practice, or it's to support your own professional development or encourage service improvement across a locality - and no matter how big or small the project is or what your level of experience is - this workshop, exclusive to PCRS-UK members, is for you!

The workshop provides an ideal opportunity, supported by our experienced faculty, to develop and practise the range of skills necessary to successfully implement a project. The faculty are all practising clinicians in primary care who understand the realities and challenges of the job and can help with your specific learning needs.

Programme features:-

- **The secrets to make your project happen:** an overview of the theory and skills to help you implement your project
- **Getting noticed and being heard:** chairing, steering, influencing and getting invited to the right parties...
- **News from the NHS:** using policy to your advantage
- **Great communicators – How do they do it?**
Two minutes to get your point across: up close and virtual
- **What's new clinically that can be used to drive improvements?** An overview of recent published evidence and new developments
- **Equipping you to improve care:** an update on PCRS-UK resources and support
- **Keeping focused and moving forward.**
Avoiding mission creep, making processes for project management work for you and keeping people involved
- **Project review:** evaluating & celebrating success, building on learning for the future
- Sharing your vision of what has been achieved and future plans

- **FREE to attend***
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Places are limited and will be allocated on a first-come first-served basis so don't miss out on this opportunity to attend.

Log-on to the PCRS-UK website and REGISTER now at <http://www.pcrs-uk.org/respiratory-leaders-events>

or use the QR code



*The workshop, including dinner (but excluding accommodation), is free to attend for PCRS-UK members. Accommodation can be arranged at Studley Castle at the negotiated discounted rate of £60 inclusive of VAT on a bed and breakfast basis - please contact the hotel direct on 0871 222 4727 before the 29th September (when the discounted offer will expire) to book your accommodation and inform them it is for the PCRS-UK workshop at the time of booking. Alternative accommodation options and offers may be available on-line.



Editor's highlights...

Hilary Pinnock, *Editor*



Inspired by our conference a few weeks ago, the theme that runs through this quarter's *Primary Care Respiratory Update* is patient centred care. In his editorial, Steve Gaduzo reflects on some of the challenges: a digital revolution led by patients which we cannot afford to ignore but which will have profound implications for the way that we work; and shared decision making to which we aspire but is not easy to put into practice in busy time-limited consultations. In a review of the conference sessions, Francesca Robinson asked Surayya and Steven, the two patient representatives at the conference, whether they felt we had achieved our aim of a patient centred conference. The answer was 'yes, a lot of the time' but they observed that improved quality of life was more important to patients than our preoccupation with preventing admissions – I wondered if our political masters were listening to that message...

Ensuring that all people with asthma know how to recognise deterioration and how to respond was a key recommendation of the National Review of Asthma Deaths which we highlighted in the previous issue of *PCRU*. We have continued that theme in this issue with an educational piece from *npj Primary Care Respiratory Medicine* (page 35) which considers supported self-management from the perspective of the (overwhelmingly positive) academic evidence base, the patient, the professional and the organisation. This is timely, as the recently published

2014 British Thoracic Society/Scottish Intercollegiate Guideline Network asthma guideline, contains an updated chapter on supported self-management, which unequivocally recommends that all people with asthma should have a personalised asthma action plan. If we still have doubts about the importance of self-management, Surraya's personal endorsement should be enough to convince us that this is an aspect of asthma care that we must prioritise.

There are some very practical ideas in the Journal Round Up summaries: read about the abstract on Page 21 about the challenges of implementing discharge bundles, the study on Page 24 which piloted out-patient reviews 'on demand' instead of at fixed intervals, and the report on page 25 about the (detrimental) effect of being admitted with a respiratory problem on a Friday or over the weekend. And finally, you will not look at a nebuliser in the same way again once you have read the abstract on page 21 which detected pathogenic bacteria in a third of home nebulisers.

We are delighted to welcome Francesca Robinson, a freelance medical journalist to the editorial team, to report PCRS-UK events and key activities from around the UK.

So, read, enjoy, learn – and then share this Autumn edition of the *PCRU*.

Chair's perspective: Whose health is it anyway? Don't forget about me: successful approaches to working with patients

Stephen Gaduzo, *PCRS-UK Executive Chair*



A current key priority for PCRS-UK is to develop our understanding of how we can more effectively put the patient at the centre of their care.

It was a key theme for this year's national conference *Sharing success: inspiring excellence in respiratory care* in September, which I came away from realising that that I could do a lot more to make my own practice patient-centred.

We might think we are already providing patient-centred care because, for example, we give patients really good information. But is this enough? If patients don't understand or agree with the management of their condition then concordance with their treatment doesn't have much of a chance.

The reason I see patients is to help them and if the transaction between us is not patient-focused then it's not going to work.

At the conference we heard that the concept of patient-centred care means that we should be actively collaborating with patients when we consult with them. We should be involving them and empowering them so that they can make decisions about their care with our help. This is a goal that we could all set ourselves, and a promise we could make to our patients.

The conference opened with a thought-provoking presentation from Dr Paul Hodgkin, GP and founder of the Patient Opinion website, who talked about our need to be aware of the many new ways that patients are communicating with each other. He challenged us to keep up with the new digital networks that – with or without us – patients will be using in the future.

He recommended that we embrace social media and other technology platforms which will enhance

communication options with patients and carers and support patient engagement. For me this was a reality check. It made me realise that at the beginning of my career the patient was compliant and didn't play an active part in their care but now our role has changed so much that it is no longer just about providing medical care, but also needs to involve practical ways of coordinating social, family and medical care 24 hours a day.

Another powerful presentation came from Ren Gilmartin, an advanced nurse practitioner in South East London, and an active PCRS-UK member, who was very clear about the role we should be playing to involve patients in decisions about their care and setting goals for them. She told us that a small change that could make a big difference, was to invest more time in patients at the time they are given a COPD diagnosis, explaining carefully what it means to have a chronic condition – and then checking that they have understood what we have been talking about.

In the Quality in Practice stream there were several presentations about developing high quality services that can really improve patients' quality of life. Topics ranged from designing a home oxygen service, developing a successful pulmonary rehabilitation service or introducing strategies for identifying individuals at high risk of admission, to tips on how to achieve success in commissioning spirometry services and whether you should you consider setting up a breathlessness service. These are all about providing high quality services that are important to patients.

There were a lot of practical ideas for people to take back to their practices in a more light hearted but evidence-based debate in which three respiratory experts argued the case for making the most of inhaled drug treatments, smoking cessation and

action plans - key resources that we have to offer to patients with asthma and COPD. Smoking cessation came out the winner in COPD whilst actions plans won the day in asthma.

This year 45 posters were on display at the conference – this was the highest number we have ever had. The range of subjects was wide – from small practice-based projects to reports on large surveys and trials. This is a very welcome development because the bedrock of information, evidence and improving quality in respiratory care is research.

A number of the posters set out ways of improving the quality of life for patients and satisfaction with their care. The best abstract prize was won by one that simply asked patients what they really thought about their care, and then assessed how this matched up to a good standard of care.

Those of you who come to the national PCRS-UK conference will know that it is not only the presentations that provide us with new insights into the way we can improve our care but much valuable information can be gleaned from networking opportunities. During a conversation in the evening, I heard about an excellent patient-centred programme set up by a group of nurses for patients with milder COPD to help them with lifestyle choices and to learn more about their condition and how to live with it. This type of patient-centred care needs to be shared and shouted from the rooftops as an example of the good practice that goes beyond the standard recommended by guidelines and quality standards. I would love to see in a poster next year.

We invited two patient representatives, Surayya Khan, a person with asthma and a research and policy volunteer with Asthma

UK, and Steven Wibberley, Director of Operations and Innovation at the British Lung Foundation, to give us some honest and constructive feedback. Surayya gave us a very generous score of 9 out of 10 while Steven was more honest with seven and a half. They told us that there were some very strong messages about improving patient-centred care at the conference. But whilst a lot of the focus was on the NHS targets of reducing hospital admissions and costs, they would have liked to hear more about how we can improve patients' quality of life. This is food for thought for all us in our everyday practice.

We have already begun to plan for next year's conference. Please save the date – it is 15-17th October 2015 at Whittlebury Hall, Northampton.

In addition to coming along to the national conference, if you have not done so, you can join your local PCRS-UK affiliated group (<https://www.pcrs-uk.org/civicrm/google-mapping?reset=1>) or contact your Regional Lead <http://www.pcrs-uk.org/pcrs-uk-regional-leads>. Our network of leads and local groups are there to support you and help you to deliver the highest standards of care as part of our strategy of delivering excellence locally.

Also don't forget to use our EQUIP improvement modules and practice improvement worksheets (<https://www.pcrs-uk.org/resources/types-improvement-tools>) they are not only very patient-centred but also focus on those evidence-based interventions most likely to lead to improved outcomes and/or reduced costs because they will help you to provide the highest standards of treatment.

One of the ways we will be looking to develop our patient focus in the future is by forming

closer alliances with patient organisations like the British Lung Foundation and Asthma UK.



These two organisations will help us at an organisational level to be more patient-centred. Guidelines will tell us what the evidence is and the best way to go forward and at PCRS-UK we have played an active role in drawing them up. But if we want to get those guidelines out there and delivered locally then we have to make sure that patients are fully involved. In everything we do we should be asking ourselves - what is the patient perspective on this?

The national PCRS-UK conference is about being inspired by something new we have seen and heard, sharing good ideas and taking away a little nugget of something that we can use to change our practice. I hope the overall message that everyone has taken away this year is: yes, we can make a difference to patients.

For me personally, the presentations that I heard at this year's conference will encourage me to make more of an effort to understand the patient's perspective.

We should all be working to embed improvement in the culture of what we do every working day so that doing the right thing becomes the norm. This is the only way that our patients can be guaranteed to receive patient-centred care and the same high standard of care wherever they go in the country.

Was our conference as patient centred as we hoped?

Francesca Robinson, *Communications Consultant*



This year the PCRS-UK annual conference focused on patient centred care and Surayya Khan, a person living with asthma, and Steven Wibberley from the British Lung Foundation were invited to listen to the presentations and provide feedback. Our question was: just how patient centred are we?

The PCRS-UK executive has agreed that there is a need for a corporate consciousness to consider where patient involvement and consultation are important and how, in the development of any new programme, patient collaboration should be considered.

A former NHS manager, Steven Wibberley is Director of Operations and Innovation at the British Lung Foundation and runs a range of national projects focused on improving services and long-term support for people with lung conditions.



Surraya Khan, a Qualification and Assessment Development Manager for vocational education is a person with asthma who works as a Research and Policy volunteer for Asthma UK.

Both Steven and Surayya praised the opening plenary with three presentations on successful approaches to working with patients.

Three patient-centred presentations

In this session Liz Moulton, a GP trainer in Ackworth, West Yorkshire and former Deputy Director at Yorkshire Deanery and GP adviser to the Department of



Health, explained how to use consultation skills to help patients get the most out of the time available during the consultation.

She talked about the "golden key" – those first few minutes of the consultation when it is vital for practitioners to "tune up" their listening skills because this is the time when patients tend to divulge the important things that are concerning them.

She also reminded the audience of the importance of picking up cues from the patients. She told the story of a registrar she was training who missed a patient making a crucial comment at the end of the consultation about the hard time he had been having since his wife had died a year previously.

"I sometimes look at the patient sitting there in a chair in my consulting room and I think to myself, what would it be like to be in your shoes, wearing your clothes and living your life? It's very different from my life and we forget that at our peril," said Dr Moulton.

She advised delegates: "Although you may know more about medicine, the patient always, always knows more about themselves." She said it was also important that however experienced a practitioner was they should continue to practise their consultation skills because there was always something new to learn.

"The patient should feel more empowered by the consultation and go out feeling better than when they came in. They should understand more about what's going on, know where the next stage of the journey leads and know what to do if things don't go to plan. For your part, hopefully you will have understood the patient better and will have forged a deeper relationship with them."

Steven said the idea of the clinician putting themselves in the patient's shoes was a powerful analogy. He was struck by the poignancy of the patient who commented that life had been difficult since his wife died. "This is about clinicians needing to understand all the other things that are important to the patient, not just the illness that has brought them in to the surgery. What we have heard from Liz Moulton is how we can make sure that that this happens in practice every day and all the time, every day."



A presentation by Ren Gilmartin, an advanced nurse practitioner specialising in respiratory care in South East London and an active member of PCRS-UK, who talked about giving more information to patients with COPD, also struck a chord with the patient representatives.

Ren has been involved in a project to find out from patients with COPD what information they need and what clinicians could do better. The patients were divided into three groups - the newly diagnosed, patients who were already a little bit more engaged, perhaps having completed pulmonary rehabilitation, or in the process of doing so and a third group who were poorly adherent.

Each group responded that they wanted more information. They said they didn't understand their condition, they didn't know what had caused it and they didn't know how long they would be ill for.

"The sad thing and the thing that bothered me, was group three who had inaccurate beliefs about what was wrong with them and what caused their condition. They had got to the point where as sick patients they had become fatalistic and didn't care any more," she said.

Ren said if patients could be given the right information at diagnosis then maybe the third

group of patients would not be going into hospital not knowing why they were there and what they could do about it,

When she asked a woman with very advanced COPD and a history of multiple hospital admissions what could have been done differently she told her that GPs and nurses needed to invest more time in helping patients at the time of diagnosis – "It's cruel otherwise".

"That really hit home with me, cruel is a strong word: but actually she is right. It's really important that we get the communication right at the time of diagnosis. How do we tell someone "you've got COPD". We think very carefully how we tell someone who has been diagnosed with diabetes or cancer. So have you prepared yourself when you're about to give the diagnosis of COPD? Have you thought through what the patient might be thinking and what it might mean to them when you give them a diagnosis of a life changing, long-term disease.

Steven said Ren's point about using the right language and giving out information at diagnosis was very important and key to the patient setting out on their journey in the right direction.

Dr Paul Hodgkin, GP and founder and chair of Patient Opinion, talked about new ways of listening to patients that are arising from the digital world. He explained how patients were increasingly sharing information about their treatment through websites like Patient Opinion and were joining social networks. He said there was a new "community of solidarity" forming around the patient.



He talked about new online platforms to support communications with patients citing the new online APP called HOWZ which



helps families to stay in constant contact with a frail, vulnerable or elderly relative and monitor their health wherever they are by sending them updates on their mobile phones to see who has visited.

Dr Hodgkin's comments were challenged by some members of the audience who were concerned that it would be time consuming for healthcare professionals to become actively involved in all the new online networks. Steven said: "Healthcare professionals work hard and are very busy but sometimes it does feel that concerns about time or money get in the way of thinking about change. Paul's message was - this isn't going away, you can take the ostrich approach and put your head in the sand, or embrace change."

Dr Hilary Pinnock, Reader with the Allergy and Respiratory Research Group, University of Edinburgh and a GP in Whitstable, Kent, set out the evidence for personalised respiratory care. She said research showed that effective care should be tailored to the individual's symptoms and/or or risk of exacerbations.

Therapy, disease management, self-management and the organisation of care should be personalised to the individual and take into account their day-to-day challenges of living with the condition and their circumstances. See the PCRS-UK opinion sheet on self-management and self-care written by Dr Pinnock and available open access at <http://www.pcrs-uk.org/resource/Opinion-sheets/copd-self-management-and-self-care-opinion-sheet>.

There was evidence that shared decision making could make a difference and that patients needed to be taught to self-manage, given written action plans and supported by regular medical review. Health services should be organised so that they were flexible enough to enable patients to access care when and how they needed it.

Surayya said Hilary summarised all the things patients with asthma wanted: help with learning to self-manage, care tailored to the patient's needs, personalisation and help with fitting asthma into their lifestyles because patients didn't want their lives controlled by asthma.

She said health professionals should help patients to find reliable sources of information and support and should also not underestimate the power of patient peer support – this should be seen as a strength and not a threat. She said patients tended to blend information – what they had learned from a consultation, what they had learned from each other and what they could learn online.

There was a lot of merit in action plans because it gave the patient confidence and made them feel that someone was helping them to manage their asthma. "If you don't give a person with asthma an action plan it's a bit like not giving a student a timetable, without a timetable they have no idea where their classes are." See page 15 for information on self-management and action plans.

Surayya said she had had to teach herself to self-manage after she was diagnosed with

"mild asthma" around the age of 30, and went on to have a near fatal asthma attack triggered by a viral infection. At that time she had no idea she was at risk of having a serious attack, what to do when it occurred and how to prevent it. Only after moving to a new GP surgery was she able to find a nurse to help her understand and self-manage her condition.

Some patient-centred highlights – but we could do better...

Steven commented on a patient friendly talk on pulmonary rehabilitation where the presenter showed a video of patients talking about their experiences. "They were saying that the way patients could be persuaded to go to pulmonary rehabilitation was to hear about the benefits from their peers. It is the whole "nudge" concept. It was a very valuable point," he said.

He said he was also impressed by a presentation by Martyn Partridge, Professor of Respiratory Medicine and Patient Centred Care at the National Heart and Lung Institute, Imperial College, London, arguing the case for action plans. "He talked about the importance of shared decision-making when drawing up action plans and one of the key things was you have to work really hard to get the benefit. That's a powerful message: you don't necessarily get it first time." Martyn's presentation showed that good clinical practice goes hand in hand with being patient centred.

Steven's verdict on the conference was: "There have been some very strong positive

messages, some of the speakers were really passionate about listening to and responding to patients - these were the evangelists speaking. However at other times, the patient centred care message was a bit of a 'bolt-on' Apart from the presentations in the first plenary session, there wasn't enough discussion explicitly around what does patient centred care mean, why it's a good thing and what changes are needed.

Surayya said: "It would have been good to have a session presented by a patient. Some of the poster abstracts missed a trick by not having at least one slide about patients. Ideally all the conference sessions and posters should have had some kind of patient feedback incorporated into them. What is the point of any studies or research unless you find out what the patients think?"

She also observed that there was a lot of talk at the conference of the clinicians' agenda about reducing hospital admissions. "Sometimes people don't realise there is a mismatch between what patients want to achieve and what the clinicians want to achieve. As a patient. I'm not really interested in hospital admissions going down. What I want is improved quality of life.

"It's a fact that some people with asthma will always want to go to hospital because they feel they will be better looked after than at the GP surgery. Sometimes in areas where patients struggle to get medication from the GP surgery they will go to A&E because they can get instant medication there. That's just the life of the patient."



Policy Round-Up

Bronwen Thompson, *PCRS-UK Policy Advisor*

A summary of the latest developments in the UK health services, including any major new reports, guidelines and other documents relevant to primary care respiratory medicine

Patients in control: why people with long term conditions must be empowered

63% of people with long term conditions are satisfied with their care, yet 77% said that they would be able to manage their health issues more independently at home with better information and support.



This report from the Institute of Public Policy and Research (IPPR) is based on interviews with 2,500 people with long term conditions. It highlights that there is a long way to go before services are configured and patients are treated in a way that supports them in taking an active role in their care. These patients want a named contact person to be available to handle questions about any aspect of

their care (75%) and 57% said that having such a named contact would reduce the need to contact the GP, go to hospital or attend A&E. Patients also want better access to their medical records (70%), and feel that coaching and support would be useful so that they can manage their health issues better. Many are interested in peer support.

Importantly, those who had a care plan were more positive about the care they receive (91% were satisfied) compared to all respondents (63%).

This report raises important questions about how a healthcare system should be organised if it is to meet the needs of people with long term conditions. There is an increasingly urgent need to involve patients and carers in the design of care provision, and also in supporting patients to play a more active role in the day to day management of their condition. The current misalignment between what patients want and the way healthcare is organised will only be addressed by listening to patients and designing care to meet their needs.

PCRS-UK would be interested in hearing of any work being done in practices to reconfigure their service so that such priorities are being addressed for people with respiratory conditions. Please contact us via email to tell us about your experiences via info@pcrs-uk.org

What is care and support planning all about?

National Voices – the health and social care charity coalition – has developed a presentation outlining what Care and Support Planning is all about – specially for professionals (<http://www.nationalvoices.org.uk/principles-care-support-planning>). It sets out the core principles of Care and Support Planning and the 4 stages involved – Prepare, Discuss, Document, Review. Importantly it describes the benefits to healthcare professionals and to the NHS, as well as to the patient.

What is the evidence for self-management?

National Voices has published an evidence base for Supporting self- management (<http://www.nationalvoices.org.uk/supporting-self-management>) – one of the core components of person-centred care. Compiling evidence from 228 systematic reviews, they found that key things that can be done to support self-management are:



- providing self-management education for people with specific conditions which is integrated into routine healthcare
- generic self-management education courses co-led by peers / laypeople
- interactive online self-management programmes
- telephone support and telehealth initiatives
- self-monitoring of medication and symptoms

BTS/SIGN British Guideline on the management of asthma

The 8th October 2014

saw the launch of the updated BTS/SIGN guideline for asthma, which PCRS-UK wholeheartedly endorses. The main chapters which have been updated are:

- Patient education and self management
- Organisation of Care
- Non-pharmacological management

All these areas of considerable importance to primary care – and indeed the evidence review groups were all led by general practitioners. The supported self-management chapter is now much expanded and the strength of evidence emphasised. This clearly indicates the importance of working in partnership with the patient and supporting them to understand and manage their own asthma. Importantly it offers some advice on how to implement self-management in routine practice.

Remember – The National Review of Asthma Deaths highlighted in its report 'Why asthma still kills' – that only 23% of the 195 patients who died, on whom the report focused, had received a self management plan in primary or secondary care.

We encourage you to look at the changes in this revision and take the opportunity to update your colleagues with the latest evidence-based practice for managing people with asthma. The guideline can be downloaded direct at [https://www.brit-](https://www.brit-thoracic.org.uk/document-library/clinical-information/asthma/btssign-asthma-guideline-2014/)

[thoracic.org.uk/document-library/clinical-information/asthma/btssign-asthma-guideline-2014/](https://www.brit-thoracic.org.uk/document-library/clinical-information/asthma/btssign-asthma-guideline-2014/)

The PCRS-UK is in the process of updating its Quick Guide to the diagnosis and management of asthma which is based on the BTS/SIGN guidelines and provides a succinct summary of the guidance relevant to those working in primary care. Watch out for an e-alert when the quick guide is launched later in the year.

Inhalers in schools Schools across the UK are now able to hold a salbutamol inhaler to be used by any student having an asthma attack, who is not able to access their own inhaler. PCRS-UK supports this change in the law because it enables a safety net for children and young people with asthma.

While it is still best for a child or young person to use their own salbutamol inhaler, schools can now purchase an inhaler and spacer from a local pharmacy to be held for any emergency that arises. It is not mandatory for schools to hold an inhaler, and it is recommended that they put measures in place to ensure safe use of the inhaler, such as training for staff, a register of all students with asthma, and permission from parents that the inhaler can be used by their child.

The link to the guidance on the use of inhalers in schools is available at <https://www.gov.uk/government/publications/emergency-asthma-inhalers-for-use-in-schools>. Please play your part and encourage your local schools to take part

In brief...

- Person centred care 2020: making person centred care a reality. Person centred care 2020 is an initiative driven by National Voices and its members which sets out why person centred coordinated care must be the central ambition for the development of health and social care for the next five years. For too long the NHS has been organised around the convenience of the service, not the people using it, so this initiative seeks to put the patient properly at the centre of the NHS. It is critical that people are partners in decisions about their health and care. This is fundamental to improving quality and making funding go further. This campaign seeks to engage politicians and NHS leaders alike in focusing on the needs of patients, and particularly those with long term conditions – to ensure that their needs are properly considered as the NHS evolves. A 2 page summary version is available for a quick read. See website for more information at <http://www.nationalvoices.org.uk/person-centred-care-2020-calls-and-contributions-health-and-social-care-charities>
- A new alliance – the Coalition for Collaborative Care – was created in June 2014 - a group of individuals and organisations across the health, social care and voluntary sectors who want to make person-centred, coordinated care a reality for people living with long-term conditions. That means improving the relationship that people have in their day-to-day interaction with the NHS and social care so their care and support is organised around what matters to them.

GETTING THE BASICS RIGHT

Supporting healthcare professionals to deliver patient-centred care

Tricia Bryant

The Primary Care Respiratory Society produces a number of resources to support healthcare professionals in delivering patient-centred care through the use of action plans, self-management plans and tailoring treatment to individual patient needs.



Our opinion sheet on **personal asthma action plans** provides structured information on asthma action plans and how they should be used.

<http://www.pcrs-uk.org/resource/Opinion-sheets/personal-asthma-action-plans-opinion-sheet>



Our opinion sheet on **tailoring inhaler choice** provides information on the choices of inhalers available, their characteristics and helpful tips and advice for patients.

For additional tips on inhaler technique training visit <https://wessexhiepartnership.org.uk/wires/video-series/inhaler-technique/> for a series of short video clips by Dr Stephen Gaduzo

<http://www.pcrs-uk.org/resource/Opinion-sheets/tailoring-inhaler-choice-opinion-sheet>



Our opinion sheet on **COPD self management and self care** by Dr Hilary Pinnock provides information on how to support patients to manage and care for their condition.

<http://www.pcrs-uk.org/resource/Opinion-sheets/copd-self-management-and-self-care-opinion-sheet>

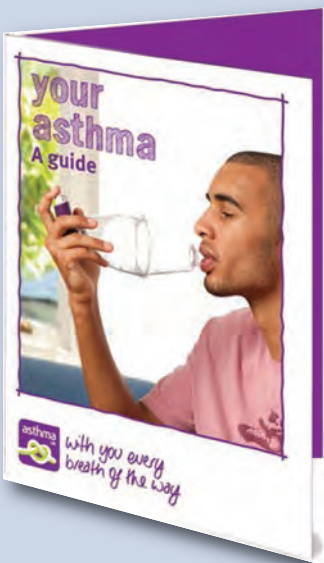


Our opinion sheet on **the social and lifestyle impact of COPD** describes the impact that COPD can have on patients and their carers. It describes the social impact, physical limitations, psychological problems and how these issues affect the quality of life for the patients and the burden carried by family and carers as well as providing practical tips on how healthcare professionals can support the patients.

<http://www.pcrs-uk.org/resource/Opinion-sheets/social-and-lifestyle-impact-copd-opinion-sheet>

Our improvement tools also include practice improvement worksheets for asthma and COPD for acute discharge care bundles both of which feature recommended actions to provide patient education and self-management training.

See <http://www.pcrs-uk.org/resource-types-improvement-tools>



Asthma UK

Asthma UK's 'Your Asthma' and 'My Asthma' materials have been developed to help people with asthma to self-manage and take better control of their asthma. They are based on an extensive review of the evidence supporting self-management and have been evaluated by healthcare professionals and people with asthma.

See <http://www.asthma.org.uk/Sites/healthcare-professionals/pages/self-management-materials> for more information

British Lung Foundation



The British Lung Foundation provide a range of self-management tools to support patients manage and deal with their condition. To find out more about their tools visit <http://www.blf.org.uk/Page/Self-management-tools>

Steroid Cards

The London Respiratory Team have developed a steroid card for people using high dose inhaled corticosteroids. For information on the steroid card visit <http://www.networks.nhs.uk/nhs-networks/london-respiratory-network/key-documents/responsible-respiratory-prescribing/LRT%20Inhaled%20steroid%20safety%20card.pdf/view>

Hold the date



PCRS-UK primary care respiratory conference 2015

Whittlebury Hall, Northampton
15th-17th October 2015

www.pcrs-uk.org

Journal Round-Up

npj Primary Care Respiratory Medicine Key Summaries

npj | Primary Care
Respiratory Medicine

A selection of short summaries of original research articles published in *npj Primary Care Respiratory Medicine*. The articles featured have been selected by the Primary Care Respiratory Update editorial board as being the most relevant and useful to primary care respiratory clinical practice in the UK. You can download freely any articles of interest from the website <http://www.nature.com/npjpcrm/>

npj Primary Care Respiratory Medicine is the only fully indexed scientific journal devoted to the management of respiratory diseases in primary care. It is an international, online, open access journal and is part of the Nature Partner Journal series.

If you would like to be informed when a new paper is published by *npj Primary Care Respiratory Medicine* simply join the npj Primary Care Respiratory Medicine e-alert list to receive notification direct to your inbox. Visit www.nature.com/npjpcrm/ and click the link on the right titled E-alert.

** RECOMMENDED MANUSCRIPT **

Diagnostic accuracy of pre-bronchodilator FEV1/FEV6 from microspirometry to detect airflow obstruction in primary care: a randomised cross-sectional study

van dem Bemt *et al.* *npj Primary Care Respiratory Medicine* (2014) 24, 14033; doi:10.1038/npjpcrm.2014.33; published online 14 August 2014

COPD represents a significant burden to the health care economy and yet is still under diagnosed in primary care. High-quality post bronchodilator (BD) spirometry FEV1/FVC ratio <0.7 remains the diagnostic gold standard but is time-consuming and not possible in routine GP consultations. This Dutch randomised cross-sectional study examined the diagnostic accuracy of a pre-bronchodilator FEV1/FEV6 ratio using a simple handheld Micro-spirometer (PiKo-6) compared to diagnostic spirometry post-bronchodilator FEV1/FVC ratio <0.7 and FEV1/FVC <lower limit of normal (LLN).

Patients with respiratory symptoms suggestive of COPD were referred by GPs to a regional diagnostic centre. Subjects were ≥ 50 years age and were current or former smokers (≥ 1 pack year). Exclusions included; previously diagnosed COPD; previous diagnostic spirometry and inability to do spirometry.

Participants (n=104) had a diagnostic spirometry and microspirometry test before and after administration of 400 µg of aerosolised salbutamol using a Volumatic spacer. The order of diagnostic spirometry and microspirometry testing was randomised.

The highest FEV1 and FEV6 value of the three pre-BD measurements were used (which were not necessarily from the same blow) and the FEV1/FEV6 ratio was calculated. A FEV1/FEV6 cut-off point of <0.73, which has been shown to be a valid alternative to FEV1/FVC <0.70 in previous studies, was used as an indicator for airflow obstruction.

Negative predictive values from microspirometry for airflow obstruction based on the fixed and LLN cut-off points were 94.4% (95% confidence interval (CI), 86.4–98.5) and 96.3% (95% CI, 88.2–99.3), respectively. In all, 18% of positive microspirometry results were not confirmed by a post-BD FEV1/FVC <0.70 and 44% of tests were false positive compared with the LLN criterion for airflow obstruction.

The study did not examine the validity of the PiKo-6 device and did not provide information on the quality of diagnostic spirometry performed.

Pre-BD microspirometry seems to be a valid method to screen subjects for full diagnostic spirometry in the diagnostic work up of subjects who are suspected of having COPD in primary care. However, microspirometry should not replace regular diagnostic spirometry.

Adolescent seasonal allergic rhinitis and the impact of health-care professional training: cluster randomised controlled trial of a complex intervention in primary care

Victoria S Hammersley, Rob A Elton, Samantha Walker, Christian H Hansen & Aziz Sheikh. *npj Primary Care Respiratory Medicine* 24, Article number: 14012 doi:10.1038/npjpcrm.2014.12. Published online 05 June 2014

One-day training in management of seasonal allergic rhinitis improved health-care professionals' knowledge but not clinical outcomes for adolescents. Poor management of this condition in adolescents can impair educational performance. The work, led by Victoria Hammersley at The University of Edinburgh, UK, aimed to show how intensive training affects clinical outcomes. In this randomised controlled trial, health-care professionals attended a one-day workshop

on the evidence-based management of seasonal allergic rhinitis. This improved the self-assessed confidence and knowledge of the health-care professionals but scores in a patient quality of life questionnaire did not differ from a control group in which health-care professionals did not attend the workshop. The number of consultations, symptom scores and treatments issued were also the same. Further research is needed to determine how knowledge from intensive training can be translated into improved patient outcomes.

Asthma control and management in 8,000 European patients: the REcognise Asthma and Link to Symptoms and Experience (REALISE) survey

David Price, Monica Fletcher & Thys van der Molen. *npj Primary Care Respiratory Medicine* 24, Article number: 14009 doi:10.1038/npjpcrm.2014.9 Published online 12 June 2014

Asthma control in Europe remains poor, with many patients over-estimating how effectively they manage their symptoms. So finds the online REALISE survey, one of the largest analyses of European asthma patients' attitudes to their disease and its management. A team led by David Price of the University of Aberdeen in the UK surveyed 8,000 patients from 11 European countries. Only 55% of the respondents were estimated by researchers to have their symptoms under control. However, 80% of respondents considered their asthma to be controlled, with more than 75% reporting that they had either excellent or good knowledge about managing their symptoms. Given that the REALISE survey was restricted to patients who use the internet and social media, the results suggest that online sources of information about asthma control might benefit this sector of asthma sufferers.

Computer decision support systems for asthma: a systematic review

Patricia Matui, Jeremy C Wyatt, Hilary Pinnock, Aziz Sheikh & Susannah McLean. *npj Primary Care Respiratory Medicine* 24, Article number: 14005 doi:10.1038/npjpcrm.2014.5 Published online 20 May 2014

Currently available computer decision support systems (CDSSs) contribute little to improving clinical outcomes for people with asthma. CDSSs are interactive systems that are designed to assist physicians and other health professionals in making clinical decisions. As part of a systematic review, Susannah McLean and colleagues at the University of Edinburgh searched major bibliographic databases (Medline, Embase, Health Technology Assessment, Cochrane and Inspec) and online repositories for published reports, ongoing studies and unpublished trials on the use of CDSSs in the professional management of asthma. They found that CDSSs were generally ineffective for two reasons: the systems were rarely used and their advice was not followed. When used properly, however, CDSSs did provide some benefits. Future CDSSs must therefore align with professional workflow if they are to improve clinical outcomes.

Comparison of the efficacy of ciclesonide with that of budesonide in mild to moderate asthma patients after step-down therapy: a randomised parallel-group study

Kuo-Chin Chiu, Yen-Li Chou, Jeng-Yuan Hsu, Ming-Shian Lin, Ching-Hsiung Lin, Pai-Chien Chou, Chun-Liang Chou, Chun-Hua Wang & Han-Pin Kuo. *npj Primary Care Respiratory Medicine* 24, Article number: 14010 doi:10.1038/npjpcrm.2014.10 Published online 20 May 2014

Ciclesonide is more effective than budesonide in people seeking to reduce their asthma medications. Best-practice guidelines suggest that patients can take just one drug once they achieve reasonable asthma control for at least 3 months. This is known as step-down therapy. Researchers in Taiwan, led by Chun-Hua Wang and Han-Pin Kuo of Chang Gung Memorial Hospital, randomised 150 individuals with mild to moderate asthma well controlled by a combination of corticosteroid and β_2 agonist to receive either ciclesonide or budesonide, both inhaled corticosteroid drugs. The study found that participants on a once-daily regimen of ciclesonide maintained a stable pulmonary function throughout the 12-week trial, whereas those receiving two doses of budesonide per day had smaller lung volumes. More research is needed to determine whether the benefit of ciclesonide is attributable to treatment compliance or drug efficacy.

Investigating the association between obesity and asthma in 6- to 8-year-old Saudi children: a matched case-control study

Mahmoud Nahhas, Raj Bhopal, Chantelle Anandan, Rob Elton & Aziz Sheikh. *npj Primary Care Respiratory Medicine* 24, Article number: 14004 doi:10.1038/npjpcrm.2014.4. Published online 05 June 2014

Obesity might be causally linked to asthma in boys and girls of Middle Eastern origin but the mechanism does not involve airway obstruction. Instead, obesity appears to cause asthma, at least in part, by making children more prone to allergic reactions against airborne substances such as pollen. Aziz Sheikh and colleagues from the University of Edinburgh in the UK compared 632 pre-pubertal Saudi children with asthma with the same number of otherwise comparable children without asthma. Separate assessment of 388 matched pairs of boys and 244 matched pairs of girls, with careful attention to potentially confounding factors, indicated that obesity was correlated with the incidence of asthma in both sexes. The correlation was stronger in girls than in boys. These observations confirm findings from broadly comparable analyses of populations with different ethnic backgrounds and ages.

Development and validation of a model to predict the 10-year risk of general practitioner-recorded COPD

Daniel Kotz, Colin R Simpson, Wolfgang Viechtbauer, Onno CP van Schayck & Aziz Sheikh. *npj Primary Care Respiratory Medicine* 24, Article number: 14011 doi:10.1038/npjpcrm.2014.11 Published online 20 May 2014

A model to assess the risk of developing chronic obstructive pulmonary disease (COPD) has been developed. Lung diseases such as emphysema and chronic bronchitis, collectively known as COPD, are responsible for 6% of all deaths annually worldwide. Smoking is a key risk factor but there is no tool available to doctors that accurately predicts who will develop the disease. Now, Daniel Kotz at Maastricht University Medical Centre, together with an international team of researchers, has developed the first prediction model for assessing COPD risk in patients. Using data from 10 years' worth of general practice records following 728,658 patients in Scotland, the model determined those most likely to develop COPD with 85% accuracy. Female smokers were most at risk, with social deprivation and a history of asthma also important risk factors.

Chronic obstructive pulmonary disease hospital admissions and drugs—unexpected positive associations: a retrospective general practice cohort study

Timothy H Harries, Paul T Seed, Simon Jones, Peter Schofield & Patrick White. *npj Primary Care Respiratory Medicine* 24, Article number: 14006 doi:10.1038/npjpcrm.2014.6 Published online 20 May 2014

Hospital admissions for chronic obstructive pulmonary disease in the UK have not fallen despite a rise in inhaler prescriptions. Doctors in the UK regularly prescribe inhaled medication to help alleviate the symptoms of chronic obstructive pulmonary disease (COPD) at a cost of nearly £650 million per year. In a retrospective cohort study of 806 general practices in England covering a total population of 5.26 million, Timothy Harries and co-workers at King's College London have discovered an unexpected positive correlation between levels of inhaler prescription and hospital admissions for COPD. Increasing levels of drug prescription and admissions could point to a rise in the severity of COPD in patients attending certain practices. The team remain uncertain about the effectiveness of inhaled drugs in treating COPD and urge further investigation.

Tiotropium in patients with moderate COPD naive to maintenance therapy: a randomised placebo-controlled trial

Thierry Troosters, Frank C Scirba, Marc Decramer, Nikos M Siafakas, Solomon S Klioze, Santosh C Sutradhar, Idelle M Weisman & Carla Yunis. *npj Primary Care Respiratory Medicine* 24, Article number: 14003 doi:10.1038/npjpcrm.2014.3 Published online 20 May 2014

Tiotropium is effective as a first-line maintenance therapy in people with moderate chronic obstructive pulmonary disease (COPD). The once-daily inhaled anticholinergic agent has consistently been shown to provide sustained improvements in lung capacity in people with the condition. An international team led by Thierry Troosters from the Katholieke Universiteit Leuven, Belgium, conducted a randomized, double-blind trial in which they gave 457 patients with stage II COPD, a moderate form of the disease, either tiotropium or placebo for 24 weeks. The patients had not previously received maintenance pharmacotherapy. This was the largest and longest trial so far of tiotropium in patients of this type. Tiotropium proved superior to placebo in various measures of respiratory function. It also reduced COPD symptoms and flare-ups. The findings support beginning maintenance therapy with tiotropium early on in the COPD disease process.

Trends in management and outcomes of COPD patients in primary care, 2000–2009: a retrospective cohort study

Gareth D James, Gavin C Donaldson, Jadwiga A Wedzicha & Irwin Nazareth. *npj Primary Care Respiratory Medicine* 24, Article number: 14015 doi:10.1038/npjpcrm.2014. Published online 03 July 2014

Chronic obstructive pulmonary disease (COPD) is being diagnosed and treated more, on average the severity of disease seen in primary care is falling and patients are experiencing increases in life span similar to the rest of the population. Irwin Nazareth and colleagues at University College London used The Health Improvement Network UK primary care database to analyse the history of 92,576 pa-

tients with COPD between 2000 and 2009. The researchers focused their retrospective cohort study on age at diagnosis and at death, number of primary care consultations, and on the therapeutic use of oral corticosteroids and "triple-inhaled therapy" (corticosteroid, bronchodilator and beta-agonist drugs). Primary care consultations increased significantly as did the use of both kinds of therapy. These trends were associated with a decreased risk of having severe COPD and an increase in average age at death. This research suggests current primary care initiatives including the UK's "Quality and Outcomes Framework" should continue to be supported.

Efficient screening for COPD using three steps: a cross-sectional study in Mexico City

Francisco Franco-Marina, Rosario Fernandez-Plata, Luis Torre-Bouscoulet, Cecilia García-Sancho, Elisa Sanchez-Gallen, David Martinez & Rogelio Perez-Padilla for the Study Team. *npj Primary Care Respiratory Medicine* 24, Article number: 14002 doi:10.1038/npjpcrm.2014.2. Published online 20 May 2014

Researchers in Mexico find the assessment of chronic obstructive pulmonary disease (COPD) is best achieved using a three-step approach. Rogelio Perez-Padilla and colleagues at the National Institute of Respiratory Diseases in Mexico City conducted a cross-sectional study where they asked a representative sample of Mexico City residents to complete a short questionnaire assessing their likelihood of developing COPD. Subjects with a higher risk of developing COPD had their lung capacity checked using an inexpensive pocket spirometer. Those with a low forced expiratory volume (i.e., small lung capacity) underwent confirmatory spirometry tests to determine whether they really had COPD. The results showed that the initial screening by a simple questionnaire and inexpensive pocket spirometry was able to exclude 80-90% of the subjects from confirmatory spirometry, thereby reducing the amount of resources needed for COPD assessment.

Reducing hospital admissions and improving the diagnosis of COPD in Southampton City: methods and results of a 12-month service improvement project

Tom Wilkinson, Mal North & Simon C Bourne. *npj Primary Care Respiratory Medicine* 24, Article number: 14035 doi:10.1038/npjpcrm.2014.35. Published online 21 August 2014

A focus on early diagnosis and interventions to prevent hospitalisation could improve care for chronic obstructive pulmonary disease (COPD). The United Kingdom's National Health Service spends over £800 million treating patients with acute flare-ups of COPD, and the English city of Southampton has an especially large at-risk population. Simon Bourne and colleagues at University Hospital Southampton implemented a two-pronged program aimed at better serving these patients. First, they helped develop educational and screening programs in community hospitals throughout the city, a diagnostic effort that revealed a 50% increase in COPD prevalence after 12 months. In parallel, the researchers identified a cohort of patients accounting for nearly a quarter of COPD hospital admissions, and showed that personalized medical consultation and targeted care could greatly reduce the likelihood of readmission in the future.

Patients' perspectives on the impact of a new COPD diagnosis in the face of multimorbidity: a qualitative study

Sameera Ansari, Hassan Hosseinzadeh, Sarah Dennis & Nicholas Zwar. *npj Primary Care Respiratory Medicine* 24, Article number: 14036 doi:10.1038/npjpcrm.2014.36 2014 Published online 14 August 2014

An Australian study of patient perspectives reveals the need for personalised management of chronic obstructive pulmonary disease (COPD). Sameera Ansari and colleagues from UNSW Australia, Sydney interviewed 17 people who have a range of chronic conditions about their experience of being newly diagnosed with COPD, a debilitating lung disease. Most of the interviewees had limited understanding of their diagnosis of early-stage COPD and only five individuals thought COPD was their primary health priority; the rest gave precedence to other diseases such as diabetes or arthritis. These findings, the authors say, highlight the need to raise awareness about the gravity of COPD, one of the leading causes of death worldwide, particularly among patients with other health problems in the primary care setting, where most diagnoses are made.

COPD Diagnostic Questionnaire (CDQ) for selecting at-risk patients for spirometry: a cross-sectional study in Australian general practice

Anthony J Stanley, Iqbal Hasan, Alan J Crockett, Onno C P van Schayck & Nicholas A Zwar. *npj Primary Care Respiratory Medicine* 24, Article number: 14024 doi:10.1038/npjpcrm.2014.24. Published online 10 July 2014

A diagnostic questionnaire can help clinicians determine which patients should be tested for chronic obstructive pulmonary disease (COPD). In COPD, a lung disease often associated with smoking, the airways become obstructed and patients have difficulty breath-

ing. Clinicians can test for COPD using spirometry, which measures airflow into and out of patients' lungs but testing all patients is time-consuming. A diagnostic questionnaire (CDQ) is available but the ideal score for recommending spirometry was unclear. Anthony Stanley of the University of New South Wales in Australia and colleagues compared the CDQ scores and spirometry results of 1054 patients. They recommend two possible scores: using a score of 19.5 would minimise use of spirometry while detecting most cases of COPD, whereas using a score of 14.5 would detect more COPD cases but would have a higher false-positive rate.

Pulmonary rehabilitation and sleep quality: a before and after controlled study of patients with chronic obstructive pulmonary disease

Lucy M McDonnell, Lauren Hogg, Lynn McDonnell & Patrick White. *npj Primary Care Respiratory Medicine* 24, Article number: 14028 doi:10.1038/npjpcrm.2014.28 2014 Published online 10 July 2014

Pulmonary rehabilitation (PR) does not improve sleep quality in patients with chronic obstructive pulmonary disease (COPD). Sleep quality is compromised in up to 70% of patients with the disease but the underlying cause is unclear. A study led by Patrick White at King's College London, UK, and colleagues assessed sleep quality in 28 patients with COPD before and after completing an 8-week PR programme. Although the programme had positive effects on exercise capacity and mood, no improvements in sleep quality, as measured using the Pittsburgh Sleep Quality Index, were observed compared with a control group. PR has been shown to improve the quality of life of patients with COPD but specific strategies other than PR, for example, cognitive behavioural therapy for insomnia, are needed to improve the quality of their sleep.

Best of the rest

These reviews were originally published by Doctors.net Journal Watch and have been adapted for inclusion into *Primary Care Respiratory Update (PCRU)* by PCRU editor Dr Hilary Pinnock.

The Doctors.net Journal Watch service covers other specialities as well as respiratory medicine. Doctors.net is the largest network of GMC-registered doctors in the UK. To find out more about membership visit <http://www.doctors.net.uk>

Prevalence of night-time dyspnoea in COPD and its implications for prognosis

Peter Lange, Jacob Louis Marott, Jørgen Vestbo and Børge Grønne Nordestgaard. *ERJ* 2014;43(6):1590-1598
<http://erj.ersjournals.com/content/43/6/1590.abstract>

Nocturnal symptoms have been recognised in asthma patients for years but less so in COPD patients. This Danish study used pooled data from two prospective epidemiological studies (Copenhagen City Heart Study and the Copenhagen General Population Survey). The researchers identified 6,616 individuals with COPD based on pre-bronchodilator forced expiratory volume in one second /



forced vital capacity (FEV1/FVC) <0.7 but excluding people self-reported asthma. All participants filled in an extensive questionnaire covering health and lifestyle issues and had a physical examination. Participants were followed up by means of a nationwide registry for up to 8.9 years with an average of 4.3 years.

Multivariate logistic regression analysis was applied to investigate which characteristics were associated with self-reported nocturnal dyspnoea and the log-rank test was used to compare the differences in exacerbations, COPD admissions and all-cause mortality between individuals with and without nocturnal dyspnoea.

The overall prevalence of nocturnal dyspnoea in the COPD population was 4.3%. Predictably those with more severe disease had

higher prevalence (16.9% in GOLD D). Patients with nocturnal dyspnoea had lower FEV1, more daytime dyspnoea, higher prevalence of wheezing and bronchitis and more previous exacerbations than those without dyspnoea at night. In addition ischaemic heart disease, atrial fibrillation, diabetes, stress, nervousness and tiredness and either very high or very low body mass index (BMI) were associated with nocturnal symptoms.

After adjustment for age and sex, the presence of night-time dyspnoea was associated with future COPD exacerbations (HR 3.2: 95%CI 1.7 to 3.0), hospital admissions due to COPD (HR 3.2: 95% 2.3 to 4.4) and mortality (HR 1.7: 95% CI 1.2 to 2.3).

Despite weaknesses such as the cohort having an under representation of severe disease; this study suggests that in COPD, nocturnal dyspnoea is significantly related to disease severity and to poor prognosis.

Microbial contamination of domiciliary nebulisers & clinical implications in COPD

BMJ Open Respiratory Research

Jarvis *et al.* *BMJ Open Resp Res* 2014;1:e000018
doi:10.1136/bmjresp-2013-000018
<http://bmjopenrespres.bmj.com/content/1/1/e000018.full>

Domiciliary nebulisers are used in COPD patients who have severe disease, multiple co-morbidities and advancing age.

This group from Imperial College Healthcare NHS Trust evaluated microbial contamination of 44 nebulisers from 37 patients on their local COPD database. All had received information sheets instructing daily cleaning of the nebuliser chamber, and cleaning of the facemask or mouthpiece 2-3 times weekly. Most patients had severe disease and 25 had significant co-morbidities while 29 required a carer at least once daily.

73% of nebuliser sets (32/44) were contaminated with micro-organisms. In 30% of sets (13/44) potentially pathogenic organisms were isolated including *Pseudomonas aeruginosa*, *Staphylococcus aureus*, multi-resistant coliforms and in one case a potentially pathogenic fungus.

While 86% of patients used their nebuliser at least once daily only 3/44 nebulisers were cleaned after each use. No statistically significant difference was found in rates of contamination from sets cleaned more or less frequently than advised, suggesting that strategies for more effective and manageable nebuliser cleaning are required.

The possibility that contamination of nebuliser sets by pathogenic organisms is associated with an increased probability of exacerbation warrants further investigation.

Identifying the challenges and facilitators of implementing a COPD care bundle

BMJ Open Respiratory Research

Lennox *et al.* *BMJ Open Resp Res* 2014;1:e000035
doi:10.1136/bmjresp-2014-000035
<http://bmjopenrespres.bmj.com/content/1/1/e000035.full>

Care bundles have been shown to improve outcomes, reduce hospital readmissions and reduce length of hospital stay. The COPD discharge care bundle includes five evidence-based elements to be provided at discharge from hospital following an acute exacerbation of COPD: offering smoking cessation assistance; referring for pulmonary rehabilitation; providing written information about COPD

including a self-management booklet; demonstrating satisfactory inhaler technique and arranging a specialist follow-up appointment.

This study describes the implementation of the COPD care bundle across seven hospital sites in Northwest London from September 2010 to April 2012 with the support of the National Institute of Health Research (NIHR) Collaboration for Leadership in Applied Health Research and Care (CLAHRC). A quality improvement collaborative approach was used, with the teams providing structured reports at 6, 12 and 18 months.

Three focus groups involving healthcare professionals and healthcare managers from five of the sites discussed and ranked the challenges identified. The five most significant challenges to bundle implementation identified by the focus groups were: staff too busy, staff shortages, lack of staff engagement, added workload of the bundle and patient coding issues. This study highlights facilitators and actions taken by staff during implementation of the COPD care bundle. Shifting staff perceptions to accept that this was best practice was deemed important. Adopting a multidisciplinary team approach to delivery of the bundle and the identification of a 'bundle champion' to overcome key challenges was considered essential. Gaining buy-in from managers through payment frameworks was also a key facilitator.

This paper provides an understanding of the challenges that teams may encounter in introducing a COPD care bundle and shares the learning about the facilitators that make these projects work.

Thrombocytosis is associated with increased short and long-term mortality after exacerbation of COPD: a role for anti-platelet therapy?

Thorax

Harrison *et al.* *Thorax* 2014;69:609-615
<http://thorax.bmj.com/content/69/7/609.abstract>

Systemic inflammation has been identified as a key driver of cardiovascular disease in COPD. In addition to haemostasis and thrombosis platelets are proposed as key inflammatory mediators. Increased platelet activation has been reported in acute exacerbations of COPD (AECOPD) raising the possibility that thrombocytosis may be an independent marker of poor outcome following AECOPD, and that anti-platelet therapies may improve outcome.

This prospective study identified 1,343 patients (49% male) from a secondary analysis of the EXODUS (Exacerbations of Obstructive lung Disease managed in UK Secondary Care) cohort.

Participants were over 40 years of age, had a primary diagnosis of AECOPD and a diagnosis of COPD confirmed by spirometry when stable. Patients with airway disease due to other causes and suspected or proven alternative diagnoses were excluded. Platelet count was recorded on admission.

The primary outcome was one-year mortality analysed as death from the first day of admission to completion of one-year follow-up. Secondary outcomes were in-hospital mortality and post-discharge mortality. Analyses were conducted using logistic regression after adjustment for confounding variables.

157 (11.7%) had thrombocytosis (platelet count >400x10⁹ cells/mm³). There was no difference between this group and those with normal platelet counts in terms of GOLD class but those with

thrombocytosis had more frequent exacerbations, type II respiratory failure and use of long term oxygen therapy (LTOT). Thrombocytosis was associated with both increased one-year mortality and in-hospital mortality; OR 1.53 (95% CI 1.03 to 2.29) and OR 2.37 (95% CI 1.29 to 4.34) respectively. This effect was independent of respiratory failure. Cardiovascular hospitalisation was not significantly increased in patients with thrombocytosis.

Aspirin or clopidogrel treatment correlated with a reduction in one-year mortality (OR 0.63: 95% CI 0.47 to 0.85) but not in-hospital mortality (OR 0.69: 95% CI 0.41 to 1.11).

This suggest thrombocytosis is an independent predictor of short term and one-year mortality in AECOPD, and anti-platelet therapy may be associated with a survival benefit. Future randomised controlled trials would be required to confirm this.

Disease progression in young patients with COPD: rethinking the Fletcher and Peto Model



Sanchez-Salcedo P *et al. Eur Respir J* 2014; 44: 324–331
<http://erj.ersjournals.com/content/44/2/324.abstract>

The Fletcher and Peto model of COPD progression describes accelerated decline in lung function in susceptible subjects. Recent publications have argued that lung function change is heterogeneous, with a minority of COPD patients having a rapid decline. This study aimed to examine disease progression in younger individuals.

The authors identified 1,708 patients with COPD attending pulmonary clinics, from the prospective multicentre BODE (body mass index, airflow obstruction, dyspnea, exercise capacity) cohort study.

COPD was diagnosed on the basis of a 20 pack year history of smoking and a post-bronchodilator spirometry with an FEV1/FVC ratio of <0.7. Those with a history of asthma, wheeze, or a post-bronchodilator increase in FEV1 of >200mls or >12% increase in FEV1 were excluded.

Those with three or more annual spirometry assessments were divided into a younger group (≤ 55 years at enrolment, $n=103$) and an older group (≥ 65 years, $n=463$.) Baseline and annual changes in FEV1 and BODE score were recorded and compared between both groups.

At baseline, there was no difference in FEV1 % predicted or in distribution of COPD severity between groups, except for GOLD grade 1, which was observed in a larger proportion of patients in the younger population ($p=0.002$). The proportion of patients on inhaled medication was similar in both groups. 59% of the younger group were active smokers compared to 20% of the older group. The older patients had worse BODE scores and more comorbidities. More patients in the older age group were receiving statins and angiotensin-converting enzyme inhibitors. When divided into quartiles, the BODE index was equally distributed in both groups.

Mean FEV1 decline was 38.8 and 40.6 mL \cdot year $^{-1}$, while BODE scores increased 0.19 and 0.23 units per year, for younger and older COPD, respectively. The proportion of rapid decliners (≥ 40 mL \cdot year $^{-1}$) was similar in both groups ($p=0.41$).

The younger group was small in number and the majority of these

were active smokers. The use of a FEV1/FVC lower limit of normal of 0.70 potentially led to over diagnosis of COPD in the older group. Both groups were predominantly male and as noted in the accompanying editorial by Miller *et al* (*Eur Respir J* 2014;44:280-283), the absence of data on females, the exclusion of overlap phenotype and lack of information on other risk factors for COPD reduces the applicability of the findings.

This study suggests that younger individuals presenting with COPD develop the disease from an already compromised pulmonary and systemic status, complementing the model of steeper decline of lung function proposed by Fletcher and Peto and illustrates the importance of understanding the early stages of COPD.

Exacerbation like respiratory symptoms in individuals without COPD: results from a population-based study

Thorax

Tan WC *et al. Thorax* 2014;69:709-717
doi:10.1136/thoraxjnl-2013-205048

<http://thorax.bmj.com/content/69/8/709.full.pdf+html>

Exacerbations in COPD are important because of their adverse effect on quality-of-life, mortality and lung function and the financial impact they have on the health service. While exacerbations are important health events in patients with COPD and asthma, there is no information on whether such exacerbation-like events occur in the absence of chronic airway disease and whether such events have health and economic impacts for the affected individuals. This large Canadian cross-sectional, multi-site population-based study on lung health data collected from 5,176 people from the general population aged 40 years and older. The aim was to determine the occurrence of exacerbation like events in individuals without airflow limitation, their associated risk factors, health care utilization and social impacts. Participants completed interviewer administered respiratory questionnaires and pre and post bronchodilator spirometry.

The questionnaire sought information on chronic respiratory symptoms (chronic cough or phlegm, wheezing and breathlessness) not associated with a cold. A validated standardised questionnaire on exacerbation of symptoms was administered to all participants. The study definition for "exacerbation" was "a period of worsening of breathing problems that got so bad that it interfered with usual daily activities or caused the individual to miss work".

The study cohort was stratified into spirometrically-defined COPD (Post bronchodilator FEV1/FVC >0.7) and non-COPD (post-bronchodilator FEV1/FVC >0.7 and without self-reported doctor diagnosis of airway diseases) subgroups and then into those with and without respiratory "exacerbation-like" events in the past year.

Compared to the COPD group ($n=3,379$), the non-COPD group ($n=838$) was younger, had higher lung function and included more women, more never smokers, and fewer individuals with chronic respiratory symptoms and exacerbations.

3.9% of those without COPD reported exacerbation-like events within the previous year compared to 8.2% with COPD ($p<0.001$). The proportion of subjects in the non-COPD versus the COPD group that had chronic respiratory symptoms were as follows: chronic cough (8.4% vs 22.3%); phlegm (5.9% vs 19.3%); wheezing (19.1% vs 45.1%); breathlessness (20.6% vs 38.6%) - all p values <0.0001.

**** RECOMMENDED PUBLICATION ******An early rehabilitation intervention to enhance recovery during hospital admission for an exacerbation of chronic respiratory disease: randomised controlled trial**

Greening NJ *et al. BMJ* 2014;349:g4315 doi: 10.1136/bmj.g4315.
<http://www.bmj.com/content/bmj/349/bmj.g4315.full.pdf>.



Pulmonary rehabilitation (PR) has established efficacy in stable chronic respiratory disease, and small-scale trials of PR delivered after discharge from hospital for COPD have suggested a reduction in short-term risk of readmission. This prospective, parallel-group, single-blind randomised controlled trial was designed to investigate the impact of rehabilitation delivered at the time of the acute illness.

The primary outcome was unplanned readmission to hospital at 12 months for all causes. Secondary outcomes included number of hospital bed days, mortality, physical performance, and health status.

Patients were randomly allocated to one of two treatment groups: an early rehabilitation group (n=196) and a usual care group (n= 193). Participants were recruited and randomised within 48 hours of admission to hospital with an exacerbation of chronic respiratory disease. Inclusion criteria were a diagnosis of COPD, chronic asthma, bronchiectasis, or interstitial lung disease, self-reported breathlessness on exertion (MRC grade 3 or worse), and age 40 years or greater. Exclusion criteria included; concomitant cardiac event; presence of musculoskeletal, neurological or psychiatric co-morbidities that would prevent delivery of the PR intervention; and more than four emergency admissions to hospital for any cause in the previous 12 months.

The treatment group received daily supervised strength and aerobic training and neuromuscular electrical stimulation techniques in addition to usual care. It was performed on the acute medical ward by physiotherapists and trained nurses at the patient's bedside. After discharge patients carried out an unsupervised home-based programme supported by telephone consultations. Patients also received a self-management and educational package.

Participants in the control group received standard care from the physiotherapy team as required. This included airway clearance,

assessment and supervision of mobility and smoking cessation advice. All patients had a nutritional assessment and were referred for dietetic advice if required. Outpatient PR was offered to all participants three months after discharge as part of standard care.

Of the 389 participants, 320 (82%) had a primary diagnosis of COPD. There were no statistically significant differences between the two groups in readmissions. 233(60%) were readmitted at least once in the following year (62% in the intervention group and 58% in the control group). Apart from a difference in endurance shuttle walk test at six weeks, there was no significant improvement in physical performance in the intervention group over usual care. However, an increase in mortality was seen in the intervention group at one year (OR 1.74, 95% confidence interval 1.05 to 2.88). This study did not provide PR as defined in recent guidelines, but rather an exercise-based intervention modified to suit the setting of the acute illness. Patients had a greater burden of disease and co-morbidities and had lower muscle strength and exercise capacity than reported in most PR studies. The authors recognise that the relatively short length of hospital stay limited the number of supervised rehabilitation sessions and that the home segment of the intervention was unsupervised.

The increased mortality at 12 months cannot be explained and could have occurred by chance. Uptake of outpatient PR at 3 months was lower in the intervention group, suggesting that the intervention might have influenced health behaviour.

This trial suggests that the acute admission is not the time to enrol patients in a progressive rehabilitation process, which may be beyond the capabilities of many participants in this situation and moreover might cause harm.

Logistic regression revealed that in the non-COPD group the independent associations with exacerbations included female gender, presence of wheezing, the use of respiratory medications and self-perceived poor health. In the non-COPD group, those with exacerbations were more likely to have poorer health related quality of life, miss social activities (58.5% vs 18.8%), be absent from work (41.5% vs 17.3%) and miss housework (55.6% vs 16.5%). This large population study highlights the presence of exacerbation-like events with significant health and social impact in individuals with no spirometric evidence of airway obstruction. The investigators recognise that some of those in the non-COPD group may have undiagnosed asthma and in a small subset of the non-COPD group who had CT scans of the thorax, an interim analysis showed a higher prevalence of radiologically defined emphysema in those with exacerbations compared with those without exacerbations. Numbers however were too small for statistical analysis. This study

highlights the impact of exacerbation of respiratory symptoms is not confined to those with known obstructive airway diseases. The presentation of exacerbation-like events may contribute to the false positive diagnosis of COPD if spirometry is performed during such an exacerbation.

The clinical and genetic features of COPD-asthma overlap syndrome



Hardin M *et al. Eur Respir J* 2014; 44: 341–350
 doi: 10.1183/09031936.00216013

<http://erj.ersjournals.com/content/44/2/341.abstract>

The overlap of asthma and COPD is well recognised, and is an exclusion criterion in most studies. Growing evidence, however, suggests that subjects with asthma and COPD represent a distinct

population. The aim of this study was to identify clinical features and genetic risk factors for COPD and asthma overlap. It formed part of the COPD Gene Study recruiting over 10,000 patients in numerous sites throughout the U.S.A.

Subjects were current or former smoking non-Hispanic whites or African-Americans with COPD. All subjects completed study questionnaires, performed standardised spirometry and had chest CT scans at full inspiration and relaxed expiration. Overlap subjects reported a history of physician-diagnosed asthma before the age of 40 years. The researchers compared clinical and radiographic features between COPD (n=3,120) and overlap subjects (n=450). They performed genome-wide association studies (GWAS) in the non-Hispanic whites and African-American populations, and combined these results in a meta-analysis.

Subjects with COPD and asthma overlap were younger (60 years versus 64 years), had a higher body mass index (BMI) and had fewer pack-years of smoking. There were a greater percentage of females and African-Americans in the overlap group compared to the COPD group.

In multivariate analyses adjusting for age, race, sex and pack-years of smoking, overlap subjects had worse measures of disease severity than those with COPD alone, including higher BODE (BMI, air-flow obstruction, dyspnoea and exercise capacity score) and higher St George's Respiratory Questionnaire scores. Overlap subjects had more exacerbations per year and a greater percentage of these subjects had severe exacerbations resulting in an emergency room visit or hospital stay in the previous year (34.0% vs 20.7%, $p=0.007$).

On CT scan, subjects with both COPD and asthma demonstrated greater airway wall thickness and less emphysema than subjects with COPD alone.

The genetic analyses, identified several variants associated with the overlap of COPD and asthma.

Subjects with COPD and asthma are an important clinical population that may have distinct genetic risk factors. Future therapeutic studies are needed to identify optimal treatment approaches for patients with concurrent asthma and COPD.

The effect of an outpatient care on-demand system on health status and costs in patients with COPD.

A randomised trial

Berkhof FF *et al. Respiratory Medicine* 2014
<http://dx.doi.org/10.1016/j.rmed.2014.05.011>

An "on demand system" which allowed patients to arrange outpatient visits when they considered they were needed instead of fixed outpatient appointments, has already been trialled in patients with inflammatory bowel disease and rheumatoid arthritis.

This pilot study, from the Netherlands, was a single-centre prospective randomised controlled trial to determine the effect of an 'on-demand system' for people with COPD on health status, COPD-related healthcare resource use and costs.

Eligible patients were ≥ 40 years, COPD GOLD stage ≥ 2 (defined as post bronchodilator FEV1 $< 80\%$ and FEV1/FVC $< 70\%$), smoking history > 10 pack-years. Exclusion criteria were prior history of asthma; drugs or alcohol abuse; inability to complete questionnaires.

Randomisation was performed to achieve balanced groups for: gender, age (< 70 years or ≥ 70 years), and predicted FEV1 (FEV1 $< 40\%$ or $\geq 40\%$).

Patients randomised to the on-demand group (n=49) had one fixed appointment a year, other outpatient visits were initiated by the patient who were instructed to call the pulmonary nurse practitioners (PNP) when they experienced an increase in symptoms. The PNP followed an 'on demand' protocol, to decide on urgency and what action was required.

Patients in the control group (n=51) continued with traditional outpatient visits to the pulmonologist or the PNP at a frequency determined by the pulmonologist. Follow up was a minimum of 24 months.

Health status was assessed with the Clinical COPD Questionnaire (CCQ). Secondary endpoints were: St. George's Respiratory Questionnaire (SGRQ), Short Form-36 (SF-36) scores, visits to general practitioners (GP), pulmonologists, and PNP, exacerbations and total treatment costs from healthcare providers and healthcare insurance perspectives.

CCQ total scores deteriorated in both groups, with no significant difference between them. CCQ symptom domain showed a significant and clinically relevant difference in favour of the on-demand group. Visits to pulmonologists and exacerbations were equally frequent in both groups, but PNP visits were significantly increased ($p=0.003$). Mean total costs per patient were lower in the on-demand-group in comparison with the control group from both the healthcare provider and the healthcare insurance perspective. The reduction in total costs for both perspectives was not significant, however this pilot study was not designed for cost analysis.

Interestingly, the tendency for cost-savings for the on-demand-system in secondary care was not achieved at the expense of increased demand on primary care: patients in the on-demand-group visited the GP significantly less ($p=0.01$).

This pilot suggests that an on-demand out-patient system for patients with COPD is safe and could convey advantages in health status, perhaps increasing self-efficacy skills. This needs to be tested in a larger randomised controlled trial where cost-effectiveness can be studied in more detail.

The association between childhood asthma and adult chronic obstructive pulmonary disease

Tai A *et al. Thorax* 2014; 69: 805–810.
doi: 10.1136/thoraxjnl-2013-204815

While the main risk factors for COPD are genetic and tobacco smoke, failure to attain maximal lung growth during childhood constitutes a significant risk. Impaired growth of lung function during childhood and adolescence, caused by premature gestation, asthma, recurrent infections or tobacco smoking, may lead to lower maximally attained lung function in early adulthood and also predispose to development of COPD.

The aim of this longitudinal prospective study was to explore the association between childhood asthma and adult COPD.

The Melbourne Asthma Cohort was recruited from a 1957 birth cohort at the age of 7 and reviewed from age 7 to current study at age 50 years. 401 subjects were randomly identified and, following parental interview and examination of the child, were classified as:



non-asthmatic controls (n=105); mild wheezy bronchitis (MWB) - children with <5 episodes of wheezing associated with bronchitis (n=74); wheezy bronchitis(WB) ≥5 episodes of wheezing associated with bronchitis (n=104); asthma (n=113) with wheezing not associated with respiratory tract infection; and severe asthma (n=83) with onset of symptoms before 3 years age, persistent symptoms at age 10 years, barrel-chest deformity and/or FEV1/FVC ≤50%. Those with MWB and WB were regarded as children with intermittent asthma.

At the age of 50, 197 subjects (who completed a questionnaire and full pulmonary function tests) were classified to the following sub-groups: non-asthmatics, asthma remission, current asthma, and COPD (post bronchodilator FEV1/FVC <0.7).

When compared with children without symptoms of wheeze to the age of 7, children with severe asthma had an adjusted 32 times higher risk for developing COPD (95% CI 3.4 to 269). In this cohort, 43% of the COPD group had never smoked. There was no evidence of a difference in the rate of decline in FEV1 (mL/year, 95th CI) between the COPD group (17, 10 to 23) and the other groups: non-asthmatics (16, 12 to 21), asthma remission (20, 16 to 24) and current asthma (19, 13 to 25).

In an accompanying editorial, Mattes and Gibson (*Thorax* 2014; 69:789-790: doi:10.1136/thoraxjnl-2014-205401) point out that despite the severe asthma cohort being enhanced by a further sampling of 30,000 children from the birth cohort at age 10 years, numbers were still small and there were difficulties in ascertaining smoking behaviours - hence the study may be underpowered to detect smoking related COPD cases and lung function decline.

Children with severe asthma, however, are at an increased risk of developing fixed airway limitation.

Friday and weekend hospital stays: effects on mortality



Suissa *et al.* *ERJ* September 1, 2014 vol. 44 no. 3 627-633
doi: 10.1183/09031936.00007714

Patients admitted to hospital on weekends have been observed to have higher mortality than those admitted on weekdays. It is difficult to distinguish whether excess mortality is the result of sicker patients being admitted at the weekend or to differences in quality of care delivered at that time.

This large Canadian population-based cohort study of patients hospitalised for COPD or pneumonia assessed the effect of weekend and Friday admissions on in-hospital mortality.

Using data from the Quebec healthcare databases, they identified 323,895 hospitalisations (COPD 69% and pneumonia 31%) between 1990 and 2007 in those over the age of 50 years. They used the Cox proportional hazards model to estimate the hazard ratio (HR) of death as a function of the day of admission and day of stay as a time-dependent factor. Adjustment factors were made for age, sex, calendar year of admission, number of prior admissions and comorbidity measured on admission.

On cohort entry the average age was 75 years and 55% were males.

32,414 deaths occurred (rate of death 8.06 per 1000 admissions per day). Mortality was higher for weekend (HR 1.06: 95%CI 1.03 to 1.09) but not Friday admissions (HR 0.97: 95%CI 0.95 to 1.00),

relative to Monday-Thursday admissions. Independently of the admission date, mortality was higher during weekend stays (HR 1.07: 95% CI 1.04 to 1.09) and Friday stays (HR 1.05: 95%CI 1.02 to 1.08).

While this study relied solely on diagnoses based on discharge codes the sample size was large and adjustment was made for age, sex and co-morbidities.

Patients admitted with COPD and pneumonia, are at an increased risk of death when staying in hospital over a Friday or weekend. The authors conclude that adjustments in the organisation of care of patients staying in hospital could avert a significant number of probably preventable deaths.

Improvement in COPD management by access to asthma/COPD clinics in primary care: Data from the observational PATHOS study



Lisspers K *et al.* *Respiratory Medicine* (2014) 108, 1345-1354
<http://dx.doi.org/10.1016/j.rmed.2014.06.002>

There is a need for an efficient and proactive primary healthcare structure to enable optimal management and symptom relief of COPD patients. Longitudinal evaluations of structured management of COPD in primary care are lacking. The population-based, retrospective, observational PATHOS study was conducted by linking data from primary care electronic medical records with data from mandatory Swedish national registries from 1999 to 2009.

The baseline population included patients with physician diagnosed COPD. The index date was defined as the date of first COPD diagnosis. Starting from 1 January 1999, patients were followed to 31 December 2009, emigration, or death. Patients eligible for matching were classified according to the type of centre at index (with asthma/COPD clinic vs. without asthma/COPD clinic). No exclusion criteria were predefined.

Primary healthcare centres covered a representative sample of rural and urban areas, public and private providers, and centre size. A total of 76 centres were included, with a catchment area of ~800,000 individuals corresponding to 8% of the Swedish population. Access to an asthma/COPD clinic was defined as availability of a disease-specialist primary care nurse.

The study included 21,361 patients (mean age, 68.0 years; 53% female). Access to asthma/COPD clinics increased from 34% to 85% during the study period. Patients at primary healthcare centres with asthma/COPD clinics had 27% fewer exacerbations a year (0.71 vs. 0.98) and 37% fewer hospitalisations annually (0.36 vs. 0.58) (p <0.0001).

Asthma/COPD clinics reduced the annual cost of medication and healthcare contacts by 37% (€5,858 to €3,700 per patient).

This real-world design and large population studied provides data that are increasingly more demanded in respiratory disease research and have a high level of applicability to the general population. The authors acknowledge that there may be unknown confounding factors which may have affected the outcomes.

This study highlights the importance of structured care to improve patient management, clinical outcomes, and reduce treatment costs associated with COPD care. There is a need for more primary care

studies to determine asthma/COPD clinic parameters that influence patient outcomes and related costs.

Repeating pulmonary rehabilitation: Prevalence, predictors and outcomes

Heng H *et al. Respirology* (2014) 19, 999–1005
doi: 10.1111/resp.12365



Pulmonary rehabilitation (PR) is well established as an integral component of COPD management, with improvements in health-related quality of life (HRQOL) and exercise capacity, as well as reductions in acute exacerbations and hospitalisations. Benefits in other respiratory diseases have also been demonstrated.

Decline in PR-related benefits has been found over 12 to 24 months following programme completion. Although reasons for this decline are not fully understood, a clinical consequence is that a proportion of people with respiratory disease are often referred for a repeat course of PR. Given the small proportion of patients who need PR that are able to access this recommended treatment on even one occasion, programme repetition has significant implications for healthcare resources and programme planning.

This retrospective cohort study of people who completed PR in a single centre in Melbourne, Australia, aimed to establish the proportion of 'repeaters', identify characteristics that predict repetition and compare the magnitude of benefits achieved between initial and subsequent programmes.

Outcome measures included the 6-min walk distance (6MWD) and the Chronic Respiratory Disease Questionnaire-Self-Reported (CRDQ-SR). Independent predictors of repeating were identified.

Over a 9-year period, 296 patients completed PR at the centre, 158 (53%) of whom were male. The mean age was 67 years old with a range of 22–91 years and the mean FEV1% predicted was 52% (range: 13–125).

Fifty-nine patients (20%) repeated PR during the study period. Eleven patients repeated twice and one patient repeated three times, most within 1–3 years.

Following the initial programme, repeaters had significant decline in 6MWD (-96.1 metres \pm 84.6; $P < 0.001$) and CRDQ-SR scores (mean decline -3.6 points, range -0.1 to -7.9 points; $P < 0.005$). The improvement in 6MWD was less in the repeat programme compared with the first (38.4 ± 50.7 m vs. 67 ± 40.4 m; $P = 0.005$), while the change in all domains of the CRDQ-SR was similar. A COPD diagnosis increased the odds of repeating PR (odds ratio (OR) 4.8; $P = 0.005$) while improved mastery in the initial programme reduced the odds (OR 0.9; $P = 0.033$).

These results suggest that care should be taken to ensure that pa-

tients undergoing PR have adequate improvements in mastery during the initial programme. As one in five patients repeated PR in this study (achieving clinically significant improvements in exercise tolerance and quality of life), this should be considered when planning for programme capacity and throughput.

Continuous positive airway pressure in older people with obstructive sleep apnoea syndrome (PREDICT): a 12-month, multicentre, randomised trial

McMillan A *et al. The Lancet Respiratory Medicine*
[http://dx.doi.org/10.1016/S2213-2600\(14\)70172-9](http://dx.doi.org/10.1016/S2213-2600(14)70172-9)

While the therapeutic and economic benefits of CPAP have been established in middle-aged people, the benefits in older people are unknown

This UK multicentre randomised controlled trial identified consecutive patients aged 65 years and older with newly diagnosed obstructive sleep apnoea (OSA) and eligible patients were randomised to receive continuous positive airway pressure (CPAP) plus best supportive care (BSC) ($n=140$) or just BSC ($n=138$). Criteria for diagnosis were a 4% or greater oxygen desaturation index with >7.5 events/hour, and Epworth Sleepiness score (ESS) of 9 or greater. Exclusion criteria were previous CPAP use, awake oxygen saturation $<90\%$ in air, FEV1/FVC ratio $< 60\%$, professional drivers, sleepiness while driving, shift work or where it was deemed by referring physician that CPAP was mandatory. BSC comprised of advice on minimising daytime sleepiness.

Co-primary end points were ESS at 3 months and cost effectiveness over 12 months.

At 3 months, ESS was significantly reduced in patients receiving CPAP treatment (-3.8 , SD 0.4) compared with those given BSC (-1.6 , 0.3) with a treatment effect of -2.1 (95% CI -3.0 to -1.3 ; $p < 0.0001$). The treatment effect at 12 months was -2.0 points (-2.8 to -1.2 ; $p < 0.0001$). The effect was greater in patients with higher CPAP usage or higher baseline ESS.

Quality-adjusted life-years were similar between the groups (treatment effect 0.01 (95% CI -0.03 to 0.04 ; $p=0.787$) and health-care costs were marginally reduced with CPAP ($-\pounds35$, $-\pounds390$ to 321 ; $p=0.847$).

Of the secondary outcomes CPAP improved objective sleepiness ($p=0.024$), mobility ($p=0.029$), total cholesterol ($p=0.048$), and LDL cholesterol ($p=0.042$) at 3 months, but these were not sustained at 12 months.

This real-world clinical management study revealed CPAP to be marginally more cost effective than BSC alone and should be offered routinely to older patients with OSA.

PCRS-UK News Round-Up

AWARD OF LIFE MEMBERSHIP TO NPJ PRIMARY CARE RESPIRATORY MEDICINE EDITORS

Honorary Life Membership of the Primary Care Respiratory Society UK was awarded at this year's Annual General Meeting to Dr Paul Stephenson and Professor Aziz Sheikh in recognition of their many years of service, most recently as Joint Editors-in-Chief of the *Primary Care Respiratory Journal* and to recognise the major landmark reached in re-launching the journal as npj Primary Care Respiratory Medicine in partnership with Nature Publishing Group.

Honorary membership is only awarded to individuals who have made an outstanding and lasting contribution to the advancement, organisation and/or delivery of care for patients with respiratory disease within primary care or to anyone who has made an outstanding and lasting contribution to the development and/or management of the Primary Care Respiratory Society UK.

SUCCESSFUL STUDY DAY RUN BY FORD IN CONJUNCTION WITH PCRS-UK AND THE BRITISH LUNG FOUNDATION

Congratulations to Heather Matthews, PCRS-UK regional Lead, East of England and the FORD (focus on respiratory disease) group on running a successful study day 'Joined up Thinking' on 9th October at Newmarket Racing School. The day was conducted jointly with the BLF. The meeting, supported by local pharmaceutical company representatives, and chaired by Lindi Staunton and Heather Matthews, attracted 60 delegates. Topics included the primary care aspects of alpha 1 trypsin, IPF to end of life care, paediatric asthma, new therapies as well as discussions on working together for people with lung disease.

The delegates were most complementary about the content of the talks but the one which really seemed to get people thinking was the talk by Dr Ravi Mahadeva on Alpha One Antitrypsin Disease. He really put across the message to primary care that it is essential these patients are actively found so that appropriate treatment and counselling

can be commenced. The other speaker who seemed to touch people's hearts was Mike Bray who spoke from the patients perspective on IPF. He has definitely prompted us to start up a local IPF support group!

GIVING YOUR COPD PATIENTS MORE CONTROL OVER THEIR LIVES - NEW COPD PATIENT PASSPORT

The British Lung Foundation (BLF) has developed a COPD passport in conjunction with the Primary Care Respiratory Society UK to provide people with COPD with the information they need to actively support their own care.

The passport, a handy wallet sized booklet designed to be given to people with COPD during consultations, will be launched on World COPD day (17 November). Ten copies of the COPD Patient passport with a covering letter from PCRS-UK and BLF will be mailed to all GP practices, so look out for your copies.

PCRS-UK QUALITY AWARD

Congratulations to Dr Liz Reece and her practice team at Lovemead Practice, Trowbridge, Wiltshire who have successfully completed the Quality Award. A copy of her certificate is winging its way to the practice and this can be proudly displayed by the practice as a marker of the quality of their respiratory care. Even better, the duration of the Award has now been extended from three to five years, so Dr Reece will be able to display her certificate for longer.

With the new modular format of the Award and the extended timeframe in which practices now have to submit the evidence required (18 months) it's now easier to participate in the Award. If you are interested call us for a chat on how you can get started, 01675 477600.

NEW PROFESSIONAL DEVELOPMENT MATERIALS

In addition to its regular professional development forms to support members who

have attended our events the PCRS-UK has recently published three further tools to support members with their professional development requirements:

- **Nurse Skills Document.** This popular resource detailing the skills required to deliver nursing respiratory services in the practice has now been updated. The document can be used to evaluate learning/training requirements and used as evidence to support learning/training
- **Self-rating checklist:** This document acts as a checklist to help evaluate how much we know (or feel confident about) and can be used in collaboration with a friend or mentor to test our self-perceptions and identify areas for further development
- **GP appraisal resource information:** This document provides advice and guidance to general practitioners working in primary care who have an interest or responsibilities in respiratory medicine and wish to reflect this in their appraisal documentation. Guidance is tailored to the role the GP has within their organisation.

To access these tools log-in to our website and visit <http://www.pcrs-uk.org/resource-types-professional-development>

UPDATED QUICK GUIDES TO ASTHMA AND COPD MANAGEMENT

Our two very popular Quick Guides to the diagnosis and management of asthma and COPD are currently in the process of being updated. The Asthma Quick Guide is being revised in line with recent changes to the national guideline by the Scottish Intercollegiate Guideline Network and British Thoracic Society. The COPD Quick Guide is being updated to take account of emerging evidence and best practice such as the COPD value pyramid, changes in drug therapy and a focus on treating the patients holistically. Both Quick Guides provide simple, succinct, evidence-based guidance specifically for those working in primary care and are a useful reference tool and training guide within the practice for anyone caring for patients with respiratory disease. Watch out for news soon on their launch.



Delivering Excellence Locally

A round-up of the activities of PCRS-UK regional leads, champions and affiliated groups from around the UK plus the latest PCRS-UK developments to equip you to improve respiratory care locally.

How to lead a successful project: Respiratory Leaders event



Francesca Robinson talks to **Noel Baxter**, GP, Chair PCRS-UK Respiratory Leaders Programme and Lead for Quality Southwark CCG



'Empowering people to take the lead in respiratory care' was the theme of the July Respiratory Leaders meeting.

The event focused on developing new skills and knowledge about setting up projects in local areas using examples from established projects.

The workshop offered delegates the opportunity to practice their skills and techniques and share learning with other like-minded colleagues.

Catherine Blackaby, Senior Improvement Manager, NHS Improving Quality, explained why projects sometimes fail and how important it is to have a plan. She said the essentials for a successful project were: be clear about what you want to achieve; engage the right people; work out what is needed; agree who will do what, by when and how; monitor progress; make sure it sticks and celebrate successes.

Eleri Jones, Respiratory Lead Nurse, Whittington Hospital, shared learning from the Islington Nurse Champions Project 2013, which aimed to improve COPD care in a borough where COPD is a major cause of premature mortality and morbidity and is the second commonest cause of emergency admission to hospital. The project up-skilled nurses in COPD diagnostic, review and treatment interventions through a series of workshops, strengthened the collaboration between practice nurses and the specialist COPD community team, provided clinical and peer support with the over-arching aim of improving the patient experience. She demonstrated what can be achieved with a relatively small amount of funding and time when working with people who want to make change happen.

Bronwen Thompson, policy adviser to PCRS-UK, gave a presentation on why context is important when tailoring a project specification. She explained how to identify the local health priorities and how to gather local data and find the national reports, guidelines and strategies for respiratory care that are significant when setting up a project.

Dr Noel Baxter, GP and PCRS-UK Executive and Regional Lead, London, gave a presentation on the new developments that can be used to drive improvements and Dr Steve Holmes, GP and PCRS-UK Education Lead, talked about setting up a project and how to run meetings.

Dr Baxter said: "People attending the meeting were at various stages of thinking and embarking upon projects. In the hopes and fears section it was clear that people felt a little daunted and there was some concern about not being up to speed with business language and being left behind. The group agreed that together, we could ensure that everyone stayed on track and feel they were making a valuable contribution.

"Catherine helped to alleviate people's concerns about jargon and technicalities by working through the process in the same way that you might plan a holiday - a project that needs to consider all stakeholders, plan an outcome and visualise where you want to get to and when.

"It wasn't all easy and people did volunteer themselves to practice being in new situations such as chairing a board, or presenting a case. All agreed that it was hard but that it felt safe to try and they were glad it wasn't happening in real life - just yet!"

Presentations from the event can be accessed on the PCRS-UK website at <http://www.pcrs-uk.org/feedback-last-meeting>

Our next event, to be held at Studley Castle, Warwickshire 14-15 November, continues with the theme of 'Bringing about change in practice'. If you have a project you have been trying to get underway for some time - no matter how big or small or what your level of experience is - then please come along and learn about 'the secrets for a successful project'. Simply register at

<http://www.pcrs-uk.org/respiratory-leaders-events>

Working together locally: Group Leaders and Champions share good practice at networking workshop



Francesca Robinson reports from the PCRS-UK joint Affiliated Group Leaders and Champions Workshop in Hinckley, Leicestershire.

Big projects and big results can be delivered by people working in small groups, and you can make that happen, Dr Stephen Gaduzo, PCRS-UK Executive Chair told the meeting

The current climate in primary care was harsh and improving respiratory care was not necessarily top of the agenda but with PCRS-UK support, local leaders could make a difference to patient care at a local level.

"We ask our champions to be an ambassador for the society and to promote the PCRS-UK. If you are a nurse leader, you are already a champion because you are leading that group of interested people. If you are a leader at local level, we are here to support you. We have a fantastic set of open access resources online and we have a new set of member-exclusive tools – the EQUIP modules and the Practice Improvement Tools," he said.

Dr Gaduzo explained that the EQUIP modules describe a structured approach to reviewing care and identifying areas for improvement in a practice or across a group of practices at CCG level while the 10 Improvement Worksheets set out how to address the specific issues identified such as stepping down triple therapy in COPD.

Carol Stonham, PCRS-UK Nurse Committee Chair said there were currently 51 local multidisciplinary respiratory groups across the country and the numbers were continuing to grow. "Our aim is to deliver ex-

cellence locally something that really makes a difference to patients."

June Roberts, Co-Chair of the Regional Development Group Committee, said: "You are the activists and at PCRS-UK we are trying to develop real grassroots change."

The aim of bringing together the group leaders and champions was to build networks that would enable them to make connections and share ideas that could be taken back and rolled out into practice. "We have a mission to go out there and make a difference," she said.

Dr Iain Small, GP in Peterhead and a member of the PCRS-UK Education Committee, who has piloted the tools in his area, said: "These new tools and opinion sheets can be used in the practice to bring about change. They have got all the references, and knowledge behind them so that you can stand up in a practice meeting and say, "This is why we should be doing this". They can also be used as an education resource by those of you running respiratory groups."

The meeting also included a practical workshop enabling members to share experiences and ideas for developing local groups and networks and on how to contact and influence people locally.

The PCRS-UK Improvement Tools can be accessed at <http://www.pcrs-uk.org/pcrs-uk-improvement-tools>

Running an affiliated group: keeping the momentum going



Francesca Robinson talks to **Sally King**, *PCRS-UK affiliated Group Lead in Gloucestershire*

For Sally King, running a local PCRS-UK affiliated group is a professionally fulfilling role - it not only supports enthusiastic practitioners who want to extend their knowledge, it also impacts on patient care. A respiratory specialist physiotherapist, who leads the Gloucester-

shire Care Services NHS Trust respiratory team, Sally organises three meetings a year for her group. On each occasion there is a therapists' meeting and a nurse meeting but often everybody in the multidisciplinary group tends to attend both sessions. Numbers are

limited to 40 because of fire regulations at the venue where they meet and there is usually a full house.

Speakers are invited from a range of healthcare backgrounds and the challenge for Sally is to ensure that meetings remain relevant to the needs of attendees. The talks have changed a lot over the last two years. They used to be pitched at quite a specialist level with an academic focus, reflecting the needs of a very skilled respiratory workforce. But many of those well-trained practitioners have retired or moved on, and the people from general practice and the community attending the meetings are less experienced.

"Many people coming to our meetings now are not necessarily respiratory specialists although they see respiratory patients in their day-to-day work. We're trying to support them by focusing more on updating basic skills such as good inhaler technique, spirometry and how to carry out a holistic patient assessment. We will build the content back up when these practitioners become more experienced," says Sally.

A key success of the group has been its multidisciplinary make-up which Sally says gives attendees a better understanding of each other's roles and encourages multidisciplinary working and networking.

She finds the role rewarding because the practitioners who attend are always enthusiastic. "At the end of the day these people dedicate from 6 to 9 pm, after a day's work, to come to the event in their own time, knowing that there is probably no chance of getting that time back from their employer. I usually get emails after the meetings from people telling me what they found interesting and what they learned."

Sally also enjoys being group leader because she gets to meet practitioners from across the county who will often use her as a sounding board. "I get emails and calls in between meetings when people ask for

your advice. But I like that because that's part of my role as a respiratory specialist. I'm there to provide education and support and it means I have an indirect impact on other people's patients - I just don't know who they are – that's the way I like to think of it."

She says that having PCRS-UK affiliation is really helpful because it gives the group professional recognition when the agenda is sent out and it also enables her to refer practitioners, who want to know more about improving patient care, to the Society's Practice Improvement Tools, workshops and conferences.

Local groups are a powerful means of educating and supporting health professionals in respiratory care and can also play a key role in influencing service delivery or commissioning. Local groups are very diverse in how they are set up and what they do and most evolve over time. At one end of the spectrum a group may be exclusively involved with education and support for practice nurses, whilst at the other it may be a multi-disciplinary group concerned with service delivery and commissioning - or it may be involved across the full spectrum. By understanding what the members are involved with, information and support can be tailored to their needs.

PCRS-UK welcomes affiliation with any local health professional groups interested in respiratory care: offering local groups enhanced credibility through being associated with a nationally recognised professional society. See <http://www.pcrs-uk.org/affiliation-pcrs-uk-0>.

If you are not already involved with a local group, PCRS-UK can help you set up and run a local respiratory group. We can provide our resource pack for local groups, put you in touch with an experienced group leader willing to share their experience and help you. See <http://www.pcrs-uk.org/local-groups>

Get Involved – Become a PCRS-UK Respiratory Champion

The PCRS-UK is keen to identify members who are willing to be PCRS-UK champions.

A PCRS-UK champion is a PCRS-UK member who is actively involved in the Society (e.g. uses PCRS-UK website, resources and/or attends the annual conference regularly) and is willing to be an ambassador for PCRS-UK and a point of contact in their local area for primary care health professionals wanting to find out more about our work.

PCRS-UK maintains a list of its Champions and, from time to time, will put people interested in PCRS-UK in touch with you. We will

keep you regularly updated on activities, and provide you with information in a format that can be readily forwarded to colleagues to encourage and help them improve respiratory care. Champions will have access to promotional materials that can be used locally to promote PCRS-UK and what we offer. Being a PCRS-UK champion is an entirely voluntary role, that should not take up a lot of your time – and we predict that the opportunity to influence local care will make it a worthwhile experience. You can, of course, step back from being a champion at any point.

If you are interested in becoming a PCRS-UK Champion please contact info@pcrs-uk.org

Practice Improvement

PCRS-UK Practice Improvement Tools make it easier to achieve high standards of care



Francesca Robinson talks to **Anne Rodman**, Nurse Practitioner

The idea of improving respiratory care may seem like a mountain to climb to healthcare professionals who are already working flat out just to keep up with the day-to-day pressure of general practice.

However Anne Rodman, an independent advanced respiratory nurse practitioner, who is passionate about improving standards, says the new suite of Practice Improvement Tools, written by PCRS-UK respiratory experts, provide practices with a set of easy-to-implement steps that will enable them to make a difference to patient care.

Anne, who is a regional trainer for Education for Health and a Care Quality Commission adviser, has worked in a practice which achieved the PCRS-UK Quality Award, which promotes and recognises the highest standards of respiratory care.



Practices can work towards this gold standard of care by using the PCRS-UK Practice Improvement Tools. These include the new EQUIP (Effecting Quality in Practice) modular tool which sets out an evidence-based, systematic way of reviewing the asthma and COPD care being delivered in the practice or across a group of practices in a locality. The five modules identify ways in which standards of care can be optimised and enable practices to scrutinise how they are doing via data sources, search and audit tools.

In addition a set of Practice Improvement Worksheets can be used to provide step-by-step advice on how to address problems that commonly occur in practice and how these can be addressed to improve patient outcomes (see box).

Anne explains: "The Quality Award is the Oscar of respiratory care. What EQUIP is trying to do is to say there are intermediate steps which are easier to manage and will make a difference, particularly when used at the practice level."

As part of the approach to improving respiratory care in Anne's practice the team worked on diagnosing patients with COPD more accurately and speedily. The importance of monitoring prevalence and making an early and accurate diagnosis and how this can be

achieved is set out in EQUIP Module 2. There is also an Improvement worksheet on accurate diagnosis of COPD.

In the ten years she worked at the practice they doubled the number of people on the COPD register. This enabled them to provide patients with structured care and to help them to self-manage their condition. This resulted in the practice achieving a COPD hospital admission rate below half the national average.

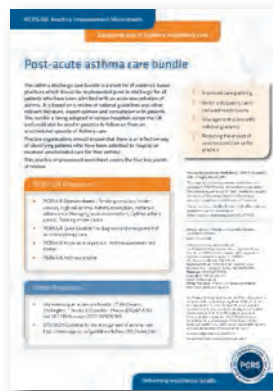
Another example of a simple, but effective, improvement measure Anne's practice introduced was a template for recording exacerbations which enabled them to improve the coding of exacerbations by around 200 per cent. The names of any patient reporting an exacerbation were put on a list which was reviewed daily and followed up by the nurse practitioners.

EQUIP Module 3 sets out good practice in how to achieve optimal respiratory review, achieve optimal care, improve self care, responsible respiratory prescribing, exception reporting and access and risk stratification. Module 4 sets out how to reduce inappropriate hospital admissions and avoid readmissions.

Anne's practice reduced prescribing costs by using effective approaches such as sending patients for pulmonary rehabilitation and promoting smoking cessation. EQUIP Module 1 on prevention explains how to support people to stop smoking and reduce the need for stronger medication and the importance of pneumococcal vaccination.

Anne says: "The beauty of the EQUIP tools is that they are linked to the practice improvement worksheets which are very specific. They set out how particular problems can be resolved and give really good, clear guidance to clinicians on providing excellent respiratory care.

"It's worthwhile making the effort to improve respiratory care because you will find that patients will have a much better experience when they come to the practice. Our patients really did appreciate that clinicians were taking the time to think about what they required and to offer support where it was needed."



Practice Improvement Worksheets cover:

- Reviewing asthma diagnosis in children
- Reviewing high-dose ICS in asthma
- Post-acute asthma care bundle
- Identifying undiagnosed COPD
- Accurate diagnosis of COPD
- Stepping down triple therapy in COPD
- Post-acute COPD care bundle
- Identifying high-impact COPD
- Assessing patients with advanced COPD
- Management of advanced COPD

PCRS-UK members can download the free EQUIP modules and Practice Improvement Worksheets from www.pcrs-uk.org/pcrs-uk-improvement-tools.

Get in Touch

We are keen to evaluate the evidence for how effective our Practice Improvement Tools are in practice and would love to hear from anyone who is using them or who has any ideas for how they can be improved.

You can fill in our online questionnaire (available at <https://www.surveymonkey.com/s/EQUIPIIW> or click the



QR code), contact us via email <http://www.pcrs-uk.org/contact> or write to us at Primary Care Respiratory Society UK, Unit 2 - Warwick House, Kingsbury Road, Curdworth, Warwicks B76 9EE.

Baby steps... family gains

Planning on implementing practice improvement worksheets in your practice



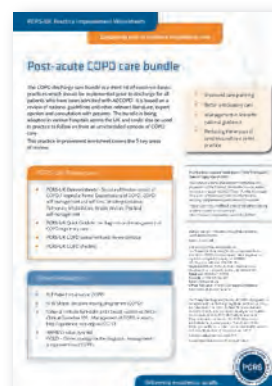
Deirdre Siddaway, Respiratory Nurse Specialist, Suffolk

We were awarded the Quality Award last year but as a Practice, we are aware that this is no reason for complacency. We are planning to use the recently launched Practice Improvement Worksheets to ensure that we continue to deliver high quality care to our patients with respiratory disease. These worksheets are an excellent resource, which clearly set out the process to follow, with references and supporting information, making seemingly onerous projects manageable.

Stepping down triple therapy in COPD improvement worksheet: We plan to follow the process on the worksheet, to ensure that we do not have any patients who are on high dose combination inhalers and a long acting muscarinic, who do not meet the criteria for their use. The review of medication has been undertaken at annual review in the past, but use of this worksheet will enable us to ensure, that only appropriate patients are prescribed these treatments.



Post-acute COPD care bundle improvement worksheet: This worksheet will support all members of our clinical team to be clear about the interventions they must provide when reviewing one of our patients with COPD, following an exacerbation of COPD. The worksheet concludes with a reminder of stratifying for future risk - helping to identify high-risk patients. This will enable us to focus on these patients.



Identifying high-impact COPD improvement worksheet:

Following review of this worksheet, and attending some excellent presentations at the recent PCRS-UK Conference, we are planning to implement use of the DOSE score. This scoring system is validated for use, and is a practical tool for use in Primary Care. If you haven't seen this scoring system before, do look at the worksheet and consider implementing it in your clinics.



Call for feedback on EQUIP and Practice Improvement Worksheets

We would be really interested to hear your feedback on both the practice improvement worksheets and EQUIP materials including how you plan to use them locally. You can submit your feedback easily by completing our simple questionnaire at <https://www.surveymonkey.com/s/EQUIPIIW> or clicking the QR code. It is only through your feedback that we are able to improve our resources and services so please let us know what you think. If you have any questions about the improvement tools please contact us for assistance at tricia@pcrs-uk.org or call us at 01675 477600.



PCRS-UK Practice Improvement Worksheets

Simple, quick and effective ways to improve your respiratory clinical practice, one step at a time.

In most practices there will be elements of clinical care where we perform very well, but others where there could be improvement and which if addressed would lead to better outcomes for patients, more cost effective practice, and more efficient use of clinical time.

The PCRS-UK practice improvement worksheets address issues that occur commonly in practice and where there is the biggest gain to be had from improvement. Each Improvement Worksheet describes the reasons for changing what we do, the evidence that supports us in doing so, and a simple work plan to put into action.

Sustainable and effective improvement requires change across the whole practice. We suggest that very early on you meet as a team agree that there is room for improvement and agree the priority area to concentrate on.

The improvement worksheets, supported by the linked PCRS-UK opinion sheets, audits and external resources, can then help you agree as a team the steps that need to be taken and to put the changes into practice. Meeting regularly as team to review progress and to ensure the improvement is sustained is important.

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PERSPECTIVE **OPEN**

A woman with asthma: a whole systems approach to supporting self-management

Hilary Pinnock¹, Elisabeth Ehrlich¹, Gaylor Hoskins² and Ron Tomlins³

A 35-year-old lady attends for review of her asthma following an acute exacerbation. There is an extensive evidence base for supported self-management for people living with asthma, and international and national guidelines emphasise the importance of providing a written asthma action plan. Effective implementation of this recommendation for the lady in this case study is considered from the perspective of a patient, healthcare professional, and the organisation. The patient emphasises the importance of developing a partnership based on honesty and trust, the need for adherence to monitoring and regular treatment, and involvement of family support. The professional considers the provision of asthma self-management in the context of a structured review, with a focus on a self-management discussion which elicits the patient's goals and preferences. The organisation has a crucial role in promoting, enabling and providing resources to support professionals to provide self-management. The patient's asthma control was assessed and management optimised in two structured reviews. Her goal was to avoid disruption to her work and her personalised action plan focused on achieving that goal.

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CASE STUDY

A 35-year-old sales representative attends the practice for an asthma review. Her medical record notes that she has had asthma since childhood, and although for many months of the year her asthma is well controlled (when she often reduces or stops her inhaled steroids), she experiences one or two exacerbations a year requiring oral steroids. These are usually triggered by a viral upper respiratory infection, though last summer when the pollen count was particularly high she became tight chested and wheezy for a couple of weeks.

Her regular prescription is for fluticasone 100 mcg twice a day, and salbutamol as required. She has a young family and a busy lifestyle so does not often manage to find time to attend the asthma clinic. A few weeks previously, an asthma attack had interfered with some important work-related travel, and she has attended the clinic on this occasion to ask about how this can be managed better in the future. There is no record of her having been given an asthma action plan.

WHAT DO WE KNOW ABOUT ASTHMA SELF-MANAGEMENT? THE ACADEMIC PERSPECTIVE

Supported self-management reduces asthma morbidity

The lady in this case study is struggling to maintain control of her asthma within the context of her busy professional and domestic life. The recent unfortunate experience which triggered this consultation offers a rare opportunity to engage with her and discuss how she can manage her asthma better. It behoves the clinician whom she is seeing (regardless of whether this is in a dedicated asthma clinic or an appointment in a routine general practice surgery) to grasp the opportunity and discuss self-management and provide her with a (written) personalised asthma action plan (PAAP).

The healthcare professional advising the lady is likely to be aware that international and national guidelines emphasise the importance of supporting self-management.¹⁻⁴ There is an extensive evidence base for asthma self-management: a recent synthesis identified 22 systematic reviews summarising data from 260 randomised controlled trials encompassing a broad range of demographic, clinical and healthcare contexts, which concluded that asthma self-management reduces emergency use of healthcare resources, including emergency department visits, hospital admissions and unscheduled consultations and improves markers of asthma control, including reduced symptoms and days off work, and improves quality of life.^{1,2,5-12} Health economic analysis suggests that it is not only clinically effective, but also a cost-effective intervention.¹³

Personalised asthma action plans

Key features of effective self-management approaches are:

- Self-management education should be reinforced by provision of a (written) PAAP which reminds patients of their regular treatment, how to monitor and recognise that control is deteriorating and the action they should take.¹⁴⁻¹⁶ As an adult, our patient can choose whether she wishes to monitor her control with symptoms or by recording peak flows (or a combination of both).^{6,8,9,14} Symptom-based monitoring is generally better in children.^{15,16}
- Plans should have between two and three action points including emergency doses of reliever medication; increasing low dose (or recommencing) inhaled steroids; or starting a course of oral steroids according to severity of the exacerbation.¹⁴
- Personalisation of the action plan is crucial. Focussing specifically on what actions she could take to prevent a

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Box 1 What self-management help should this lady expect from her general practitioner or asthma nurse? The patient's perspective

- The first priority is that the patient is reassured that her condition can be managed successfully both in the short and the long term. A good working relationship with the health professional is essential to achieve this outcome. Developing trust between patient and healthcare professional is more likely to lead to the patient following the PAAP on a long-term basis.
- A review of all medication and possible alternative treatments should be discussed. The patient needs to understand why any changes are being made and when she can expect to see improvements in her condition. Be honest, as sometimes it will be necessary to adjust dosages before benefits are experienced. Be positive. 'There are a number of things we can do to try to reduce the impact of asthma on your daily life'. 'Preventer treatment can protect against the effect of pollen in the hay fever season'. If possible, the same healthcare professional should see the patient at all follow-up appointments as this builds trust and a feeling of working together to achieve the aim of better self-management.
- Is the healthcare professional sure that the patient knows how to take her medication and that it is taken at the same time each day? The patient needs to understand the benefit of such a routine. Medication taken regularly at the same time each day is part of any self-management regime. If the patient is unused to taking medication at the same time each day then keeping a record on paper or with an electronic device could help. Possibly the patient could be encouraged to set up a system of reminders by text or smartphone.
- Some people find having a peak flow meter useful. Knowing one's usual reading means that any fall can act as an early warning to put the PAAP into action. Patients need to be proactive here and take responsibility.
- Ongoing support is essential for this patient to ensure that she takes her medication appropriately. Someone needs to be available to answer questions and provide encouragement. This could be a doctor or a nurse or a pharmacist. Again, this is an example of the partnership needed to achieve good asthma control.
- It would also be useful at a future appointment to discuss the patient's lifestyle and work with her to reduce her stress. Feeling better would allow her to take simple steps such as taking exercise. It would also be helpful if all members of her family understood how to help her. Even young children can do this.
- From personal experience some people know how beneficial it is to feel they are in a partnership with their local practice and pharmacy. Being proactive produces dividends in asthma control.

repetition of the recent attack is likely to engage her interest. Not all patients will wish to start oral steroids without advice from a healthcare professional, though with her busy lifestyle and travel our patient is likely to be keen to have an emergency supply of prednisolone. Mobile technology has the potential to support self-management,^{17,18} though a recent systematic review concluded that none of the currently available smart phone 'apps' were fit for purpose.¹⁹

- Identification and avoidance of her triggers is important. As pollen seems to be a trigger, management of allergic rhinitis needs to be discussed (and included in her action plan): she

may benefit from regular use of a nasal steroid spray during the season.²⁰

- Self-management as recommended by guidelines,^{1,2} focuses narrowly on adherence to medication/monitoring and the early recognition/remediation of exacerbations, summarised in (written) PAAPs. Patients, however, may want to discuss how to reduce the impact of asthma on their life more generally,²¹ including non-pharmacological approaches.

Supported self-management

The impact is greater if self-management education is delivered within a comprehensive programme of accessible, proactive asthma care,²² and needs to be supported by ongoing regular review.⁶ With her busy lifestyle, our patient may be reluctant to attend follow-up appointments, and once her asthma is controlled it may be possible to make convenient arrangements for professional review perhaps by telephone,^{23,24} or e-mail. Flexible access to professional advice (e.g., utilising diverse modes of consultation) is an important component of supporting self-management.²⁵

The challenge of implementation

Implementation of self-management, however, remains poor in routine clinical practice. A recent Asthma UK web-survey estimated that only 24% of people with asthma in the UK currently have a PAAP,²⁶ with similar figures from Sweden²⁷ and Australia.²⁸ The general practitioner may feel that they do not have time to discuss self-management in a routine surgery appointment, or may not have a supply of paper-based PAAPs readily available.²⁹ However, as our patient rarely finds time to attend the practice, inviting her to make an appointment for a future clinic is likely to be unsuccessful and the opportunity to provide the help she needs will be missed.

The solution will need a whole systems approach

A systematic meta-review of implementing supported self-management in long-term conditions (including asthma) concluded that effective implementation was multifaceted and multidisciplinary; engaging patients, training and motivating professionals within the context of an organisation which actively supported self-management.⁵ This whole systems approach considers that although patient education, professional training and organisational support are all essential components of successful support, they are rarely effective in isolation.³⁰ A systematic review of interventions that promote provision/use of PAAPs highlighted the importance of organisational systems (e.g., sending blank PAAPs with recall reminders).³¹ A patient offers her perspective (Box 1), a healthcare professional considers the clinical challenge, and the challenges are discussed from an organisational perspective.

WHAT ARE THE CLINICAL CHALLENGES FOR THE HEALTHCARE PROFESSIONAL IN PROVIDING SELF-MANAGEMENT SUPPORT?

Due to the variable nature of asthma, a long-standing history may mean that the frequency and severity of symptoms, as well as what triggers them, may have changed over time.³² Exacerbations requiring oral steroids, interrupting periods of 'stability', indicate the need for re-assessment of the patient's clinical as well as educational needs. The patient's perception of stability may be at odds with the clinical definition^{1,33}—a check on the number of short-acting bronchodilator inhalers the patient has used over a specific period of time is a good indication of control.³⁴ Assessment of asthma control should be carried out using objective tools such as the Asthma Control Test or the Royal College of Physicians three questions.^{35,36} However, it is important to remember that these assessment tools are not an end in

themselves but should be a springboard for further discussion on the nature and pattern of symptoms. Balancing work with family can often make it difficult to find the time to attend a review of asthma particularly when the patient feels well. The practice should consider utilising other means of communication to maintain contact with patients, encouraging them to come in when a problem is highlighted.^{37,38} Asthma guidelines advocate a structured approach to ensure the patient is reviewed regularly and recommend a detailed assessment to enable development of an appropriate patient-centred (self)management strategy.¹⁻⁴

Although self-management plans have been shown to be successful for reducing the impact of asthma,^{21,39} the complexity of managing such a fluctuating disease on a day-to-day basis is challenging. During an asthma review, there is an opportunity to work with the patient to try to identify what triggers their symptoms and any actions that may help improve or maintain control.³⁸ An integral part of personalised self-management education is the written PAAP, which gives the patient the knowledge to respond to the changes in symptoms and ensures they maintain control of their asthma within predetermined parameters.^{9,40} The PAAP should include details on how to monitor asthma, recognise symptoms, how to alter medication and what to do if the symptoms do not improve. The plan should include details on the treatment to be taken when asthma is well controlled, and how to adjust it when the symptoms are mild, moderate or severe. These action plans need to be developed between the doctor, nurse or asthma educator and the patient during the review and should be frequently reviewed and updated in partnership (see Box 1). Patient preference as well as clinical features such as whether she under- or over-perceives her symptoms should be taken into account when deciding whether the action plan is peak flow or symptom-driven. Our patient has a lot to gain from having an action plan. She has poorly controlled asthma and her lifestyle means that she will probably see different doctors (depending who is available) when she needs help. Being empowered to self-manage could make a big difference to her asthma control and the impact it has on her life.

The practice should have protocols in place, underpinned by specific training to support asthma self-management. As well as ensuring that healthcare professionals have appropriate skills, this should include training for reception staff so that they know what action to take if a patient telephones to say they are having an asthma attack.

However, focusing solely on symptom management strategies (actions) to follow in the presence of deteriorating symptoms fails to incorporate the patients' wider views of asthma, its management within the context of her/his life, and their personal asthma management strategies.⁴¹ This may result in a failure to use plans to maximise their health potential.^{21,42} A self-management strategy leading to improved outcomes requires a high level of patient self-efficacy,⁴³ a meaningful partnership between the patient and the supporting health professional,^{42,44} and a focused self-management discussion.¹⁴

Central to both the effectiveness and personalisation of action plans,^{43,45} in particular the likelihood that the plan will lead to changes in patients' day-to-day self-management behaviours,⁴⁵ is the identification of goals. Goals are more likely to be achieved when they are specific, important to patients, collaboratively set and there is a belief that these can be achieved. Success depends on motivation^{44,46} to engage in a specific behaviour to achieve a valued outcome (goal) and the ability to translate the behavioural intention into action.⁴⁷ Action and coping planning increases the likelihood that patient behaviour will actually change.^{44,46,47} Our patient has a goal: she wants to avoid having her work disrupted by her asthma. Her personalised action plan needs to explicitly focus on achieving that goal.

As providers of self-management support, health professionals must work with patients to identify goals (valued outcomes) that are important to patients, that may be achievable and with which they can engage. The identification of specific, personalised goals and associated feasible behaviours is a prerequisite for the creation of asthma self-management plans. Divergent perceptions of asthma and how to manage it, and a mismatch between what patients want/need from these plans and what is provided by professionals are barriers to success.^{41,42}

WHAT ARE THE CHALLENGES FOR THE HEALTHCARE ORGANISATION IN PROVIDING SELF-MANAGEMENT SUPPORT?

A number of studies have demonstrated the challenges for primary care physicians in providing ongoing support for people with asthma.^{31,48,49} In some countries, nurses and other allied health professionals have been trained as asthma educators and monitor people with stable asthma. These resources are not always available. In addition, some primary care services are delivered in constrained systems where only a few minutes are available to the practitioner in a consultation, or where only a limited range of asthma medicines are available or affordable.⁵⁰

There is recognition that the delivery of quality care depends on the competence of the doctor (and supporting health professionals), the relationship between the care providers and care recipients, and the quality of the environment in which care is delivered.⁵¹ This includes societal expectations, health literacy and financial drivers.

In 2001, the Australian Government adopted a programme developed by the General Practitioner Asthma Group of the National Asthma Council Australia that provided a structured approach to the implementation of asthma management guidelines in a primary care setting.⁵² Patients with moderate-to-severe asthma were eligible to participate. The 3+ visit plan required confirmation of asthma diagnosis, spirometry if appropriate, assessment of trigger factors, consideration of medication and patient self-management education including provision of a written PAAP. These elements, including regular medical review, were delivered over three visits. Evaluation demonstrated that the programme was beneficial but that it was difficult to complete the third visit in the programme.⁵³⁻⁵⁵ Accordingly, the programme, renamed the Asthma Cycle of Care, was modified to incorporate two visits.⁵⁶ Financial incentives are provided to practices for each patient who receives this service each year.

Concurrently, other programmes were implemented which support practice-based care. Since 2002, the National Asthma Council has provided best-practice asthma and respiratory management education to health professionals,⁵⁷ and this programme will be continuing to 2017. The general practitioner and allied health professional trainers travel the country to provide asthma and COPD updates to groups of doctors, nurses and community pharmacists. A number of online modules are also provided. The PACE (Physician Asthma Care Education) programme developed by Noreen Clark has also been adapted to the Australian healthcare system.⁵⁸ In addition, a pharmacy-based intervention has been trialled and implemented.⁵⁹

To support these programmes, the National Asthma Council (www.nationalasthma.org.au) has developed resources for use in practices. A strong emphasis has been on the availability of a range of PAAPs (including plans for using adjustable maintenance dosing with ICS/LABA combination inhalers), plans for indigenous Australians, paediatric plans and plans translated into nine languages. PAAPs embedded in practice computer systems are readily available in consultations, and there are easily accessible online paediatric PAAPs (<http://digitalmedia.sahealth.sa.gov.au/public/asthma/>). A software package, developed in the UK, can be downloaded and used to generate a pictorial PAAP within the consultation.⁶⁰

One of the strongest drivers towards the provision of written asthma action plans in Australia has been the Asthma Friendly Schools programme.^{61,62} Established with Australian Government funding and the co-operation of Education Departments of each state, the Asthma Friendly Schools programme engages schools to address and satisfy a set of criteria that establishes an asthma-friendly environment. As part of accreditation, the school requires that each child with asthma should have a written PAAP prepared by their doctor to assist (trained) staff in managing a child with asthma at school.

THE CASE STUDY CONTINUES...

The initial presentation some weeks ago was during an exacerbation of asthma, which may not be the best time to educate a patient. It is, however, a splendid time to build on their motivation to feel better. She agreed to return after her asthma had settled to look more closely at her asthma control, and an appointment was made for a routine review.

At this follow-up consultation, the patient's diagnosis was reviewed and confirmed and her trigger factors discussed. For this lady, respiratory tract infections are the usual trigger but allergic factors during times of high pollen count may also be relevant. Assessment of her nasal airway suggested that she would benefit from better control of allergic rhinitis. Other factors were discussed, as many patients are unaware that changes in air temperature, exercise and pets can also trigger asthma exacerbations. In addition, use of the Asthma Control Test was useful as an objective assessment of control as well as helping her realise what her life could be like! Many people with long-term asthma live their life within the constraints of their illness, accepting that is all that they can do.

After assessing the level of asthma control, a discussion about management options—trigger avoidance, exercise and medicines—led to the development of a written PAAP. Asthma can affect the whole family, and ways were explored that could help her family understand why it is important that she finds time in the busy domestic schedules to take her regular medication. Family and friends can also help by understanding what triggers her asthma so that they can avoid exposing her to perfumes, pollens or pets that risk triggering her symptoms. Information from the national patient organisation was provided to reinforce the messages.

The patient agreed to return in a couple of weeks, and a recall reminder was set up. At the second consultation, the level of control since the last visit will be explored including repeat spirometry, if appropriate. Further education about the pathophysiology of asthma and how to recognise early warning signs of loss of control can be given. Device use will be reassessed and the PAAP reviewed. Our patient's goal is to avoid disruption to her work and her PAAP will focus on achieving that goal. Finally, agreement will be reached with the patient about future routine reviews, which, now that she has a written PAAP, could be scheduled by telephone if all is well, or face-to-face if a change in her clinical condition necessitates a more comprehensive review.

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IV as per the "New York Heart Association". Consistent with its anticholinergic activity, dry mouth has been observed and may in the long term be associated with dental caries. Also, use with caution in patients with symptomatic prostatic hyperplasia or bladder-neck obstruction or with narrow-angle glaucoma. Patients with rare hereditary problems of galactose intolerance, Lapp lactase deficiency or glucose-galactose malabsorption should not take this medicine. **Interactions:** Although co-administration with other anticholinergic-containing medicinal products is not recommended and has not been studied; no clinical evidence of interactions when taking the therapeutic dose has been observed. **Pregnancy and lactation:** Aclidinium bromide should only be used during pregnancy if the expected benefits outweigh the potential risks. It is unknown whether aclidinium bromide and/or its metabolites are excreted in human milk. The benefit for the breastfeeding child and long-term benefit of therapy for the mother should be considered when making a decision whether to discontinue therapy. **Ability to drive and use machines:** The effects on the ability to drive and use machines are negligible. The occurrence of headache or blurred vision may influence the ability to drive or use machinery. **Adverse Effects:** **Common:** Sinusitis, nasopharyngitis, headache, cough, diarrhoea. *Consult SmPC in relation to other side-effects.* **Legal Category:** POM **Marketing Authorisation Number(s):** EU/1/12/778/002 - Carton containing 1 inhaler with 60 unit doses. **NHS Cost:** £28.60 (excluding VAT)

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Adverse events should be reported. Reporting forms and information can be found at yellowcard.mhra.gov.uk. Adverse events should also be reported to Almirall Ltd.

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