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ABSTRACTS

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Reduced cost of managing exacerbations with stable dose treatment with salmeterol/fluticasone (SFC) compared with adjustable maintenance dosing (AMD) with formoterol/budesonide (FBC)

Willem R. Pieters[a,*], Angela E. Williams[b], Richard Follows[b]

[a]Respiratory Medicine, Elkerliek Hospital, Helmond, The Netherlands; [b]R&D, GlaxoSmithKline, Greenford, UK

*Tel.: +31 492 595555.
E-mail address: wr.pieters@worldonline.nl

Background: The high cost of asthma care is largely attributed to poor control of disease, in particular the treatment of exacerbations. ***Method:*** A 1-year, randomised, double blind, double dummy study in adult asthmatics currently receiving >500—1000 mcg ICS or 200—500 mcg ICS + LABA daily. Both AMD and stable dose regimes were followed in accordance with registered indications. Cost savings from a reduction in exacerbation rates was estimated by applying UK healthcare costs to each of the exacerbation events. ***Results:*** The ITT population comprised 688 patients (344 in each treatment arm). Thirty-nine (11.3%) patients who received stable dosing SFC experienced an asthma exacerbation compared with 61 (17.7%) patients who received AMD of FBC. Overall there were 48% fewer exacerbations with stable dosing treatment with SFC than AMD with FBC (50 vs. 96 exacerbations respectively). A significant difference between stable dosing treatment with SFC and AMD with FBC in the rate of exacerbations (wks 1—52) requiring oral steroid use or ER/hospital visit, annual adjusted mean rate SFC: 0.18 versus FBC 0.33, $p = 0.008$. The total annual healthcare costs of managing exacerbations for the SFC group was €3770.73 (€5553.36) compared with €6717.25 (€9892.86) for the AMD with FBC group. Difference in annual costs of managing exacerbations was €2946.52 (€4339.50). ***Conclusion:*** This analysis showed that stable dose treatment with SFC halves the exacerbation rate and reduces the cost of managing exacerbations by 44% compared with the AMD with FBC group.

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Three little words: an empirical test of the optimum scoring method for the RCP 3 questions

David Price*, Stan Musgrave, Amanda Lee, Jamie Curtis, Rob Horne

Department of Primary Care and General Practice, University of Aberdeen, Foresterhill Health Centre, Westburn Road, Aberdeen, Scotland, UK

*Tel.: +44 1224 554588; fax: +44 1273 643986. *E-mail address:* d.price@abdn.ac.uk

Background: The Royal College of Physicians three questions are widely used in clinical practice and research for assessing the impact of asthma on individuals. These simple questions assess core experiences of asthma assessing impact on sleep, daily symptom experiences and interference with normal functioning. The 3 questions are usually scored categorically by eliciting a 'Yes' vs. 'No' response to each question. Responses are scored 0 or 1 giving a scale score of 0—3 (RCP 0—3). This has the advantage of simplicity and ease of completion. However, the lack of differentiation in the response frame may compromise responsiveness to change. Small but clinically significant changes, such as an improvement from 3 to 1 night of disturbed sleep in a week, might not register if the patient ticks 'yes' to indicate that their sleep is still disturbed by asthma. For this reason an alternative response frame has been developed where the patient is asked to indicate the number of times over the past week they have experienced each of the three asthma 'impacts'. In this method responses are scored 0—7 for each item giving a scale range of 0—21 (RCP 0—21). The aim of the study was to compare the RCP (0—3) against the RCP (0—21) in terms of patient acceptability, sensitivity and concurrent validity. ***Method:*** In a cross-sectional survey of community-managed patients at Step 2 or 3 of the asthma guidelines, participants were asked to complete a study questionnaire incorporating the RCP (0—3), RCP (0—21), Juniper's Asthma Control Questionnaire (ACQ) and a Medication Adherence Report Scale assessing adherence to inhaled corticosteroids (ICS). The acceptability of the RCP (90—21) was assessed according to its

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performance on 3 criteria:

1. Equivalent patient acceptability: no significant differences in number of incomplete responses to RCP questions.
2. Equivalent validity as a measure of asthma control: correlations between the RCP (0—21) and ACQ should be of a similar order to correlations between the RCP (0—3) and ACQ.
3. Sensitivity to treatment: as a preliminary test we hypothesised that, compared with the RCP (0—3), the RCP (0—21) would be more strongly correlated with reported adherence to ICS.

Results: The study questionnaire was completed by 78 community-managed patients at Step 2 or 3 of the asthma guidelines. The was no difference in response rates between RCP (0—3) and RCP (0—21), suggesting equivalent patient acceptability. The RCP (0—21) demonstrated high concurrent validity. Both RCP (0—21) and RCP (0—3) were highly correlated with the ACQ but the RCP (0—21) attaining a numerically higher correlation and stronger relationship with ACQ (RCP (0—21) $r = 0.87$: $p < 0.001$; RCP (0—3) $r = 0.73$; $p < 0.001$). A statistically significant correlation was found between the RCP (0—21) and reported adherence to ICS ($r = 0.24$; $p < 0.05$) wheras reported adherence to ICS was not correlated with the RCP (0—3), suggesting that the RCP (0—21) may be more sensitive to the effects of treatment. ***Conclusion:*** These data provide preliminary evidence in support of the RCP(0—21) scoring system. Using a 0—7 day response frame, in place of the 0—1 score appears to be equally acceptable to patients and equally valid. The RCP (0—21) may confer additional advantages in sensitivity and responsiveness to change. The findings justify further work to evaluate the RCP (0—21).

Conflict of interest

The project was supported by an educational grant from ALTANA Pharma UK.

Asthma inhalers and patient choice

J. Coomber[a,*], M. Fletcher[a], B. Karbal[b], A. Hardy[a], S. Walker[a]

[a]National Respiratory Training Centre, The Athenaeum, 10 Church Street, Warwick CV34 4AB, UK; [b]Astra Zeneca UK Ltd., Luton, UK

*Tel.: +44 1926 836999; fax: +44 1926 493224. *E-mail address:* j.coomber@nrtc.org.uk

Asthma-trained nurses view patient preference as the most important consideration when selecting inhaler devices [1]. This is because they perceive that actively involving patients in treatment decisions and taking into account their device preferences can improve adherence to treatment. The aim of this study was to explore patients' perceptions of their inhalers in relation to choice and preference.

A postal questionnaire identifying potential influences on adherence was constructed using statements from interviews with asthma patients and then piloted among a wider sample to identify ambiguities and errors. The final questionnaire was sent to 757 asthma patients on preventer therapy randomly selected from 69 general practices who were asked to give their responses to each statement on a Likert scale of 1 (strongly disagree) to 5 (strongly agree).

332 (44%) replies to the questionnaire were received. Although almost half of the respondents (46.7%) stated that they were confident that they could choose the most suitable inhaler devices for themselves, only two-fifths (38.2%) said they would take this opportunity if it was offered. Only one third (32.4%) of the patients reported that they had been offered a choice of inhaler devices. Two-fifths (39.3%) said they would prefer to use particular inhalers and two-thirds (59.3%) would prefer to take only one inhaler.

In this study, the majority of patients expressed an interest in choosing their inhaler devices, although most had not had the opportunity. Patient choice should be encouraged, whilst simplifying patients' medication regimens may assist in asthma self-management.

Conflict of interest

Study funded by Astra Zeneca UK Ltd.

Reference

[1] Hardy A, Fletcher M, Karbal B, Morrison K, Walker S. Improving adherence: nurses perceptions of patients inhaler needs. Am J Crit Care Med 2004;169(7):A327.

Prevalence of hayfever symptoms and diagnosis in UK teenagers

S. Walker[a,*], S. Khan-Wasti[a], M. Fletcher[a], A. Sheikh[b]

[a]Research Department, National Respiratory Training Centre, Warwick, The Athenaeum, 10 Church Street, Warwick CV34 4AB, UK; [b]Division of Community Health Sciences:GP Section, University of Edinburgh, Edinburgh, UK

*Tel.: +44 1926 836975; fax: +44 1926 493224. *E-mail address:* s.walker@nrtc.org.uk

Hayfever is a common condition which reaches peak prevalence in adolescence. Symptoms occur during periods of high grass pollen exposure (May/June in the UK), at a time when important examinations take place. Despite evidence that allergic rhinitis itself, as well as the medication taken to treat it, can interfere with learning and concentration, symptoms are often trivialised by patients and health professionals. The aim of this study was to investigate the prevalence of self-reported hayfever diagnosis, hayfever symptoms, respiratory health and use of allergy medication in UK secondary school children. All students aged 15/16 ($n = 3286$) in 14 schools in the West Midlands area of the UK were invited to participate via parental letter and consent. A pre-piloted questionnaire asking about respiratory health, smoking and hayfever treatment was developed (using, where appropriate, validated questions from the ISAAC study) and piloted among a group of 16 year olds to identify ambiguities and errors. The resulting questionnaire was distributed to all year 11 students in April 2004. 3189/3286 (97%) students agreed to participate in the study, and questionnaires were completed and returned by 2282 (72%). 51% (1153) students reported symptoms indicative of hayfever although only 21% (485) reported a diagnosis of hayfever by their nurse or doctor. 25% (570) reported a diagnosis of asthma, whilst 20% (461) smoked cigarettes. 22% (502) reported taking medication for their hayfever.

Of responders, 51% of UK 15/16 year olds report symptoms indicative of hayfever, although only 21% reported having had a confirmed diagnosis. Those children without a formal diagnosis may have untreated symptoms which could impact on exam performance and other social and psychological outcomes. The high prevalence of hayfever symptoms in this age group, and their potentially disruptive nature, should prompt health professionals to diagnose and treat hayfever symptoms more appropriately.

Conflict of interest

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Preliminary data from the Lung Information Needs Questionnaire (LINQ)

R.C.M. Jones[a,*], M.E. Hyland[b], K.E. Hanney[c]

[a]Respiratory Research Unit, Peninsula Medical School, Plymouth, UK; [b]School of Psychology, University of Plymouth, UK; [c]Respiratory Research Unit, Peninsula Medical School, Plymouth, UK