contacted to advise of the attendance. Following discussion with the consultant it was recommended that 11 (42%) continued to be managed in primary care (follow-up attendance unknown), and 15 (58%) be reviewed by the Respiratory Service. 13 (86%) attended the appointment.

62 (70%) were contactable, one was a nursing home resident (Respiratory nurses subsequently visited), one declined to answer questions. 35 (39%) had already made an appointment to see their general practitioner. Following discussion one patient was re-admitted (same day), 30 (48%) patients continued to be managed in primary care (follow-up attendance unknown) and 31 (50%) were reviewed by the Respiratory service. 27 (87%) attended the appointment.

Conclusions The introduction of a telephone conversation/management plan improves follow-up of patients with asthma exacerbations discharged from A&E.

M7 DESIGNING AROUND PLACEBO INHALER DEVICE CONCERNS AND IMPROVING ASTHMA HEALTHCARE PROFESSIONAL PATIENT TRAINING

MJ Sanders, R Bruin. *Clement Clarke International Ltd, Harlow, UK*

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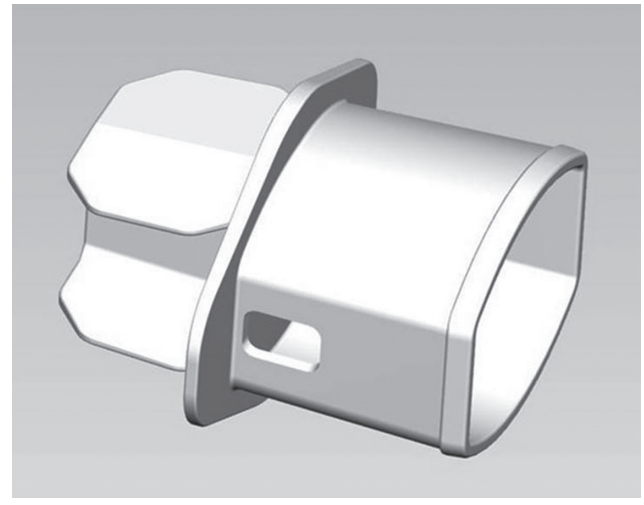
Introduction Effective asthma control with drug therapy delivered via pressurised metered dose inhalers (pMDIs) is critically dependent on good inhaler technique. Healthcare professionals (HCPs) dedicate significant time and resources to patient education and review sessions, which tend to focus on the co-ordination of pMDI actuation with the slow inspiratory breath. Tools exist to facilitate this experience: dummy pMDIs, add-on devices which whistle at the ideal inspiratory flow rate and the highly valued but difficult-to-obtain placebo pMDIs. The latter currently offer the closest real-life training experience but are hampered by the multiple-use concerns of cross-infection (or confident decontamination), HCP-only demonstration, and unnecessary exposure to fluorocarbon propellants. The alternative of training with the active pMDI raises the issues of overdosing and drug wastage.

Methods Our self-imposed project brief was to design an improved low-cost solution to the placebo/drug pMDI training conundrum which included patient participation as an absolute, the ability of the HCP to visually assess technique, avoidance of contamination, and compatibility with different actuator formats; and specifically excluded, for example, validation and implementation of new decontamination techniques.

Results The solution is an add-on device, confirmed to fit all UK active and placebo pMDIs. The device (Figure 1, Flo-Checkä) is inserted into the pMDI actuator mouthpiece orifice and completely occludes the aerosol path. The lip-guard feature prevents mouth-contact contamination of the actuator and, when the patient inhales, inspiratory air is drawn in via side vents engineered to mimic the general resistance of a pMDI.

Conclusions A survey of manufacturer-supplied respiratory support devices in relation to all UK inhaled products (London Medicines Evaluation Network, 2013) revealed an almost universal lack of product specific devices with the exception of the Accuhalerâ (Glaxo Group Limited) and Symbicortâ (AstraZeneca AB) training whistles; neither of which addresses the issues raised above. Several specific placebo pMDIs are available but the pharmaceutical industry is cognizant of fluorocarbon use justification, the danger of misinterpretation as an active product, and manufacturing a low volume high unit-cost product. It is hoped that developments such as the Flo-Check address some of the issues: for manufacturer, patient and HCP.



Abstract M7 Figure 1 Flo-Check device

M8 ASTHMA MANAGEMENT IN AN INNER-CITY TEACHING HOSPITAL EMERGENCY DEPARTMENT: REAL-LIFE AFTER NATIONAL REVIEW OF ASTHMA DEATHS (NRAD)

FR Ali, Z Mangera, A Downes, S Obaray. *Barts Health NHS Trust, London, UK*

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Background The National Review of Asthma Deaths (NRAD) made multiple recommendations in the form of quality indicators linked to improving care of asthma patients in light of a review of all asthma deaths.[1] We undertook an audit to establish the degree to which a busy Emergency Department in inner London adheres to these.

Method Patients admitted in the month of June 2015 with an asthma related admission were identified via the coding department. This list was reviewed to include those patients confirmed to have an acute asthma admission and seen and discharged directly from the ED department (including the short stay ED ward). The electronic records of those included were reviewed using a data collection form relating to the NRAD quality indicators.

Results A total of 42 patients were included. Our findings included the following: 83% had mild or moderate severity, the remainder having acute-severe. Almost one third of patients did not have their peak flow documented on arrival, 76% did not have their usual best or predicted best documented and 66% did not have a discharge peak flow documented. There was no documentation if any patient had been provided with a personal asthma action plan (PAAP). Checking of inhaler technique was only documented for 14% of patients. One third of patients were presenting for the 2nd or more time with acute asthma. Finally only 3 patients had a recommendation for GP follow up but no timeframe was suggested.

Discussion Simple measurements and interventions were omitted in a significant number of patients, highlighting the need for improvement. Some of these were straightforward such as more meticulous recording of peak flow. Others may have reflected lack of competency in the healthcare professional e.g. inhaler

technique training and PAAP. The development of an asthma care pathway that captures the essence of the NRAD quality indicators, together with staff training, is urgently required to ensure that EDs lead the way in reducing the morbidity and mortality associated with acute asthma presentations.

Funding Sponsorship for the audit was provided by Novartis.

REFERENCE

1 Royal College of Physicians. *Why Asthma still kills, The National review of asthma deaths. Confidential enquiry report*, 2014.

M9 A HIGH PREVALENCE OF OBSTRUCTIVE SLEEP APNOEA (OSA) IN THE SEVERE/DIFFICULT TO TREAT ASTHMA (SDTA) POPULATION

[1]SE Davies, [2]N Cachada, [2]A Turner, [2]S Wharton, [1]A Mansur. *[1]Birmingham Regional Severe Asthma Service, Heartlands Hospital, Birmingham, UK; [2]Respiratory Department, Heartlands Hospital, Birmingham, UK*

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Introduction An association between OSA and asthma has been demonstrated. The exact prevalence in the SDTA population is unknown.

Aim To determine the prevalence and predictors of OSA in the SDTA population

Methods All patients who attended a severe asthma regional centre between January 2013 and August 2016 with confirmed SDTA were asked to participate. All patients without a pre-existing OSA diagnosis had an overnight limited-channel sleep study. Patients underwent bioelectrical impedance measurements and completed the Epworth Sleepiness Score (ESS).

Results 72 patients consented and were included in the analysis. 69.4% (n = 50) had OSA. 33.3% (n = 24) had a pre-existing diagnosis of OSA and 79% (n = 19) of this group were receiving Continuous Positive Airway Pressure (CPAP). 36% (n = 26) had a new diagnosis of OSA. 31% (n = 22) had OSA excluded with a negative sleep study. Mild OSA (Apnoea Hypopnoea Index (AHI) ≥5–14.9) = 31.9% (n = 23), moderate OSA (AHI ≥ 15–29.9) = 16.7% (n = 12), severe OSA (AHI ≥ 30) = 4.2% (n = 3). AHI was unknown for 16.6% (n = 12) with pre-existing OSA receiving CPAP from a specialist centre.

The mean age was 47.7 years (18–73) and 72.2% (n = 52) were female. Mean Body Mass Index (BMI) was 32 (18.6–65.7). ESS was higher in the OSA group compared to the no-OSA group (11.0 vs 8.7, p = 0.091). The OSA group had significantly higher BMI (34.7 ± 8.00 vs 28.8 ± 9.62, p = 0.007) and body fat percentage (38.7 ± 12.37 vs 28.3 ± 14.03 fat%, p = 0.003) compared to the no-OSA group. The OSA group had a significantly higher incidence of hypercholesterolaemia compared to the no-OSA group (32.6% vs 8%, p = 0.0239). There was a higher incidence of diabetes (18.6% vs 8%, p = 0.0932), hypertension (27.9% vs 16%, p = 0.1643) and gastro-oesophageal reflux (60.5% vs 54.2%, p = 0.6189) in the OSA group. Blood eosinophil levels were significantly lower in the OSA group compared with the no-OSA group (0.23 ± 0.18 vs 0.39 ± 0.29 x10^9/L, p = 0.004).

Conclusion A significant prevalence of OSA was noted in this SDTA population. BMI, percentage body fat and hypercholesterolaemia were the strongest predictors of OSA. Patients with OSA had significantly lower blood eosinophil levels when compared to the no-OSA group. Alternatives to eosinophilic inflammation as a driver for severe/difficult to treat asthma should always be considered.

Symptom Assessment and Investigation of Lung Disease

M10 LIVING WITH RELAPSING POLYCHONDRITIS; A PATIENT AND CARER ENGAGEMENT EXPLORATION

[1]J Haines, [2]J Hull, [3]J Swaison, [3]T Clark, [1]R Niven. *[1]North West Lung Centre, University Hospital of South Manchester, Manchester, UK; [2]Department of Respiratory Medicine, Royal Brompton Hospital, London, UK; [3]Relapsing Polychondritis Support Group, National, UK*

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Introduction Relapsing polychondritis (RP) is a poorly understood rare condition in which recurrent bouts of inflammation affect the cartilage of the ears, nose, larynx and tracheobronchial tree. Prospective research is extremely limited and true prevalence data unknown. There are no identified optimal diagnostic pathways and treatment is not standardised. Seeking patient experience and opinion is invaluable to support and inform clinical and research strategies. We report the first known public involvement data relating to living with RP.

Method The RP patient support group hosted a patient engagement event to provide a reciprocal education environment for healthcare professionals, sufferers and their carers. A one-hour patient and carer focus group, aiming to identify key issues

Abstract M10 Table 1 Priority resource allocation for addressing themed issues of living with RP

RP Suffer (n = 13)			RP Carer (n = 9)		
Group defined theme	*Resource coins assigned (n = 52)*	*% resource (priority rank)*	*Group defined theme*	*Resource coins assigned (n = 36)*	*% resource (priority rank)*
Lack of understanding of health care providers	15	29 (1)	Pain	15	42 (1)
Loss of identify	10	19 (2)	Lack of understanding of health care providers	7	19 (= 2)
Breathlessness	8	15 (3)	Restrictions on planning ahead	7	15 (= 2)
Pain	7	13 (4)	Impact on relationships	4	11 (4)
Fatigue	5	10 (5)	Financial worry	2	6 (5)
General side effects	3	6 (6)	Frustration	1	3 (6)
Restrictions on planning ahead	2	4 (= 7)			
Impact on relationships	2	4 (= 7)			