If the demand for multi-patient-use ever justifies itsel by this argument, then there will still need to b validation of the use of such intermediat components, both for disinfection effectiveness an characteristics imposed on the measurement accuracy

Valved mouthpieces and filters add some resistance t the flow, and being a peak-flow measurement, thi cannot be ignored. The error could be a significan portion of the difference between predicted an measured values

Alternative
It is clear that either a single patient use device shoul be supplied to the patient for continued use, or disinfectable device should be used with the correc disinfection procedure employed between uses

Since the value of absolute peak flow measurement alone, on a one-off basis, is questionable, perhaps th spirometry option would be a better choice, wher multi-patient-use devices are the norm, an disinfection is intended and documented

Spirometry can address the issues of small airway disorders more accurately than the peak-flow device thus even for a first line diagnosis, peak-flow i possibly inadequate

The disposable peak-flow devices would thus be lef exclusively for comparative performances as part of management protocol by the single patient. ■

Late Entry Abstract

The following abstracts were presented at the World International Primary Care Respiratory Group Conference (IPCRG on 7th-9th June 2002 in Amsterdam. Unfortunately, they were not able to be published in our June edition of *Primar Care Respiratory Journal*

ABI061: Generic Prescribing of Breath Actuated and Dry Powder Inhalers in the UK *Prim Care Respir* 2002 11(3)95
Buchanan [1], Pinnock [2], Barnes [3], Hawksworth [4], Weller [5], Lynes [6]
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Introduction: Generic prescribing is officially encouraged in the UK [1]. Concerns have been raised that there is a potential for patients to b dispensed an unfamiliar device in which they have received no training [2], risking poor technique, inadequate dosing and loss of asthm control
Method: An independent market research agency has been commissioned to conduct telephone-based interviews with a random sample o 100 general practitioners, 100 practice asthma nurses and 100 pharmacists to determine their attitudes to generic prescribing and thei experience of potential problems
Pilot study result: Pilot results from 30 GPs, 30 nurses and 30 pharmacists indicate that 69% of GP and nurse respondents prescribe breat actuated and dry powder inhalers generically. 56% of GPs stated they felt under pressure to prescribe generically, although 87% wer concerned that this may lead to problems for the patient. 46% of respondents were aware of actual incidents in which patients have receive an unfamiliar inhaler. Examples of problems experienced included patient confusion, ineffective inhaler technique risking loss of asthm control, and having to re-issue prescriptions for patients in order to ensure they received the intended inhaler
Results: The results of the full study will be presented. Interviews with GPs and nurses will provide information about attitudes to policie for generic prescribing, awareness of the consequences of generic prescribing of inhalers and specific examples of problems which hav arisen. Interviews with community pharmacists will provide data about dispensing policies and their perception of any problems presented b generic prescribing
Conclusion: There are concerns that generic prescribing may compromise patient care if unfamiliar inhalers are dispensed. This study wil provide an insight into the experience of healthcare professionals and provide data about actual problems that have arisen
Funding: The research project is supported by an unrestricted educational grant from Chiesi, Ivax and Celltech
Keywords: asthma, generic prescribing, inhalers, dispensing policies, patient care, poor inhaler technique, inadequate dosing
1 Guidance on prescribing. British National Formulary September 2001; p
2 Anon. Asthma nurse reports on problems with generic beclomethasone. *Pharma* 2000 **36** 222

The occurence and healthcare cost of acute exacerbations in patients with chronic obstructive pulmonary disease (COPD) manage in Dutch general practice *Prim Care Respir* 2002 **11(3)** 95-96
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Objective: To examine the occurrence rate and health care cost of acute exacerbations in patients with chronic obstructive pulmonary diseas (COPD) in Dutch general practice
Methods: Data are from the COPD on Primary Care Treatment (COOPT) study, a randomised controlled trial investigating the effectivenes of fluticasone and N-acetylcysteine in COPD. For the 2-year period preceding trial inclusion, details on the occurrence and management o acute exacerbations were collected for each trial participant by retrospective general practice chart review. Patients were divided int

subgroups of severity of airway obstruction based on their post-bronchodilator FE_1 percentage predicted value (FE_1 % predicted; 80% no obstruction; 70-80%: mild obstruction; 50-70%: moderate obstruction; <50%: severe obstruction). Exacerbation-related health care cost were determined by counting the units of resources consumed and converting these into monetary values (€).

Results: Mean age of the 286 patients involved was 59.2 (SD 9.6) years, post-bronchodilator FE_1 % predicted was 67.1 (SD 16.2). Of all patients, 220 (77%) experienced at least one exacerbation during the 2-year observation period. Mean annual exacerbation rate was 0.88 (SD 0.79). The annual exacerbation rate did not differ between the subgroups of severity of airway obstruction (p=0.628). Mean health care cost per exacerbation was €67 (95% CI 57, 77). When costs were expressed as the annual exacerbation cost per patient, the mean costs in the severity subgroups were €80, €106, €122 and €183, respectively (p=0.013). The gradual increase of the annual exacerbation cost across severity subgroups was mainly attributable to more physician consultations and more prescriptions for bronchodilators and other relieve medication.

Conclusions: The occurrence rate of exacerbations in COPD may not depend on the severity of airway obstruction, but the annual exacerbation-related health care cost per patient appear to increase as obstruction becomes more severe.

Discontinuation of inhaled steroid treatment in chronic obstructive pulmonary disease. An observational study in general practice (*Prim Care Respir* 2002 **11(3)** 96)

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Objectives To assess the probability and explore determinants of an adverse respiratory outcome after discontinuation of inhaled corticosteroid treatment in subjects with chronic obstructive pulmonary disease (COPD) diagnosed in general practice. Design - Prospective observational inhaled steroid withdrawal study.

Setting: 45 Dutch general practices. Participants - 232 subjects with a general practice based diagnosis of COPD with various degrees of airflow limitation. All subjects were treated with inhaled steroids.

Main outcome measures Probability of, and time to an adverse respiratory event within 3 to 7 months after inhaled steroid withdrawal.

Results: Overall probability of an adverse respiratory event was 0.37 (95% CI 0.31, 0.44). Mean number of days until adverse respiratory event was lowest when steroid withdrawal was initiated in January through April and July through August (p=0.072). Univariately, those experiencing an adverse respiratory event tended to be more often female, were older and showed higher reversibility of airflow limitation. Multivariate survival analysis resulted in a hazard ratio for females of 2.14 (95% CI 1.31, 3.50) compared to males. For age, the hazard ratio was 1.05 (95% CI 1.02, 1.08) per year of increased age. Depending on the baseline inhaled steroid dosage, age, gender, smoking status and reversibility were independent predictors of adverse respiratory event after discontinuation of inhaled steroid treatment.

Conclusions Abrupt withdrawal of inhaled steroids is likely to harm at least some patients with COPD. Probability of an adverse respiratory response after inhaled steroid withdrawal may vary throughout the year and appears to be higher in women, elderly subjects, smokers and subjects with reversible airflow limitation.

Accuracy of spirometry in general practice. results of an evaluation study in patients with chronic obstructive pulmonary disease (COPD) (*Prim Care Respir* 2002 **11(3)** 96)

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Background At this time, many general practices in the Netherlands have their own spirometer. However, there are indications in the literature that spirometry performed in the general practice setting may be inaccurate.

Aims: To compare FE_1 and FVC values obtained in general practice to a 'gold standard', i.e. the same parameters obtained in a pulmonary function laboratory by an experienced lung function technician.

Methods General practitioners and practice assistants from 61 Dutch general practices were trained to perform spirometry. Subsequently these practices recruited patients with COPD for study participation. For each patient, pre- and post-bronchodilator (BD) FE_1 and FVC values were first assessed in a pulmonary function laboratory and within a few days again in the patients' own general practice. The same type of spirometer (Microloop II, MicroMedical Ltd.) and spirometry software (Spirare, Diagnostica Ltd.) was used in all practices as well as in the pulmonary function laboratory.

Results: Pairs of spirometric tests were available for 299 patients. (197 males, mean age 59.2 [SD 9.6], mean FE_1 % predicted 62.8 [SD 17.6]). Pre-BD FE_1 was on average 79 ml (95% CI 55, 103) and FVC 99 ml (95% CI 54, 143) higher for the general practice measurements. For post-BD measurements, FE_1 was 61 ml (95% CI 39, 84) and FVC 49 ml (95% CI 3, 95) higher, also in favour of the general practice measurements.

Conclusion Relevant spirometric values (FE_1 and FVC) obtained in general practice appear to be equivalent to values obtained in a pulmonary function laboratory. Further analyses of our data are required to eliminate possible alternative explanations for this rather unexpected finding.