

Special Feature: Peak Flow Meters - 'single patient use'

For personal use only

Not to be reproduced without the permission of the *Primary Care Respiratory Journal*

Hospitals and surgeries normally purchase direct from Vitalograph and we sell many meters of the No NHS type to such clinics for multiple subject use. Our standard Peak Flow Meter (Cat Nr 43201) would be an example. But the use of disposable mouthpieces with an integral one-way valve, is essential.

The SafeTway mouthpiece protects against cross contamination between patients due to its unique patented valve which stops inhalation from the Pea

Flow Meter. Due to the low cost compared to Bacterial Viral Filters and their simple yet effective patented design, the SafeTway mouthpieces are increasingly popular in Clinics. They also have special coating certified to 90/128/EEC to prevent li bleeding and an inner lining to guard against cardboard dust inhalation. ■

Vitalograph donates £1 to Lung Research for every SafeTway mouthpiece box sold

Peak flow meter manufacturers comment - single patient use Ferraris Medical Limited

Graham Peck

Intended use

The now common, low cost, plastic, peak-flow indicators, available by prescription, intended for personal use in asthma management programmes, are single patient use devices. 'Single patient' means that only one subject, due to the risks of cross contamination, should use the device. Single use devices are available for the masses, in low cost form but by design will often have some of the following properties

- No inbuilt cross-contamination counter-measures
- Poor resilience to disinfection
- Limited service life
- Lowest absolute accuracy amongst peak-flow measurement devices

For these reasons, any question of use of such device in multi patient applications must be dispelled

The provision of such a device to the 'single patient' is consistent with these properties. The issue of self contamination is mute, the service life is consistent with the duration of use, and the relative measurements soon become more important than the absolute, (regardless of Wright or differences)

Where multi-patient use is necessary for a peak-flow device, a suitable multi-patient device should be chosen, the chief differences being the improved disinfection properties of this type of device, longer service life and better durability of measurement accuracy

What contamination

When a sick person visits the doctor's office with symptoms that require peak-flow measurement, is there a chance the person has a respiratory infection

If this person blows with all their might into a peak flow device, will any aerosol be deposited in or about the peak-flow device

If another person uses the device with no intermediate disinfection, could that person contract a cross infection

It would seem unlikely that the answers to all the above questions are negative in all cases, but we need

to cater for all cases

Mitigating circumstance

Some devices are specified to have non-return valves and with disposable cardboard mouthpieces, they might seem safe

Some devices may be specified as being usable with microbial filter

There is a wealth of anecdotal evidence amongst experienced workers in the field of respirator measurement that cross contamination is a non issue gone of them ever having cultivated a significant bug from a breath hose or the innards of a spirometer bell

Responsibility

For a few years now the European directives, to which manufacturers are increasingly bound, have unambiguously stated that where a device is able to be disinfected between multi-patient uses, the instructions should be supplied by the manufacturer and invariably a validation on such instruction will be required. (The American FDA deals particularly strictly on this issue)
As responsible manufacturers, we have to put patient safety first, and be sure every application of our devices is beyond question

Cost

Being manufactured for prescription, the low cost plastic peak-flow devices are easily obtained for next to nothing. A proper multi-patient device, on the other hand, may cost several hundred pounds. However, the significance of intended purpose must not be overlooked, and the top-drawer, plastic device with cardboard attachments should be seen as something between at best a cheap solution, and at worst an unacceptable risk

Trend

The use of disposables on a disposable device is something of a paradox, but in the extreme, the cost of the throw away part is all-important

Some manufacturers appear to be addressing this by the use of filters, plain mouthpieces or valve mouthpieces.

The absence of reported cross infection is surely not enough to substantiate this practice, and cost may be compromising good practice.

Graham Peck
Head of Product
Development

Correspondence to
Graham Peck
Ferraris Medical Ltd
4 Harford Court
John Tate Road
Wertford SG13 7N

Tel: +44 (0)1992 526300
Fax: +44 (0)1992 52632

info@ferrarismedical.co

http://www.ferrarismedical.co

Date submitted: 14/08/0
Date Accepted: 22/08/0

Prim Care Resp 2002
11(3) 94-9

For personal use only

Not to be reproduced without the permission of the *Primary Care Respiratory Journal*

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

Added mouthpieces and filters add some resistance to the flow, and being a peak-flow measurement, this cannot be ignored. The error could be a significant portion of the difference between predicted and measured values

Alternative

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

Since the value of absolute peak flow measurement alone, on a one-off basis, is questionable, perhaps the spirometry option would be a better choice, where multi-patient-use devices are the norm, and 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 is possibly inadequate

The disposable peak-flow devices would thus be left exclusively for comparative performances as part of a 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 *Primary 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

¹4D Communications, Oxford UK, ²Whitstable Health Centre, UK, ³National Asthma Campaign, UK, ⁴Old Bank Chemist, UK, ⁵National Respiratory Training Centre, UK, ⁶Respiratory Education Resource Centre, UK

Introduction: Generic prescribing is officially encouraged in the UK ¹ Concerns have been raised that there is a potential for patients to be dispensed an unfamiliar device in which they have received no training ² risking poor technique, inadequate dosing and loss of asthma control

Method An independent market research agency has been commissioned to conduct telephone-based interviews with a random sample of 100 general practitioners, 100 practice asthma nurses and 100 pharmacists to determine their attitudes to generic prescribing and their 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 breath actuated and dry powder inhalers generically. 56% of GPs stated they felt under pressure to prescribe generically, although 87% were concerned that this may lead to problems for the patient. 46% of respondents were aware of actual incidents in which patients have received an unfamiliar inhaler. Examples of problems experienced included patient confusion, ineffective inhaler technique risking loss of asthma 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 policies for generic prescribing, awareness of the consequences of generic prescribing of inhalers and specific examples of problems which have arisen. Interviews with community pharmacists will provide data about dispensing policies and their perception of any problems presented by generic prescribing

Conclusion There are concerns that generic prescribing may compromise patient care if unfamiliar inhalers are dispensed. This study will 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** 22

The occurrence and healthcare cost of acute exacerbations in patients with chronic obstructive pulmonary disease (COPD) managed in Dutch general practice *Prim Care Respir* 2002 **11**(3) 95-96

Harjard Scherme ¹, Christian Sari ¹, Niels Chavanne ², Onno van Schayc ², Chris van Wee ¹

¹ Department of General Practice/Family Medicine, University Medical Centre St Radboud, Nijmegen, The Netherlands. ² Department of General Practice/Family Medicine, University of Maastricht, Maastricht, The Netherlands

Objective To examine the occurrence rate and health care cost of acute exacerbations in patients with chronic obstructive pulmonary disease (COPD) in Dutch general practice

Methods Data are from the COPD on Primary Care Treatment (COOPT) study, a randomised controlled trial investigating the effectiveness of fluticasone and N-acetylcysteine in COPD. For the 2-year period preceding trial inclusion, details on the occurrence and management of acute exacerbations were collected for each trial participant by retrospective general practice chart review. Patients were divided into