



# A survey to investigate patients' inhaler technique: an MPharm research project



Helen Hull, Nicola Gilchrist, Raj Kanabar, Meg Snelgrove and Naomi South

## Introduction:

Inhaler technique is key for controlling symptoms of chronic respiratory diseases such as asthma and COPD.

Without clear instruction and consultation patients may not fully understand their inhaler device and could use it incorrectly.

Poor inhaler technique could result in poor control of respiratory conditions and unnecessary treatment or hospital admissions <sup>1</sup>.

## Aim:

The aim of this study was to investigate patients' inhaler technique, provide individualised advice and measure the impact advice had on technique.



## Research Methodology:

Four final year MPharm students were trained to use a Vitalograph AIM device; to check inhaler technique; and how to provide corrective advice, before data collection.

Patients attending a respiratory clinic using metered dose inhalers (MDIs) and/or dry powder inhalers (DPIs) had inhaler techniques assessed.

Individualised corrective advice was provided and results were forwarded to the respiratory nurse.

Patients were also asked where and from whom they had previously received advice about their inhaler technique.

## Results and Findings:

23 patients participated, 35% used both MDI and DPI, 56% used MDI alone and 9% used DPI alone. Of the patients using MDIs, 4 used spacers.

The technique of 82% of MDI users was categorised as 'fail', 14% as 'suboptimal' and 4% as 'good'.

Meanwhile for users of DPIs, 25% were categorised as 'fail', 50% as 'suboptimal' and 25% as 'good'.

A nurse had provided inhaler technique advice for the majority of patients (83%). Pharmacists had provided advice to only 21% of patients in this study, lagging behind GPs for 30%.

Individualised advice improved AIM scores, and 'good' was recorded for 50% of DPI users and 23% of MDI users.

However, 55% of MDI users were still categorised as 'fail'.

Main causes of poor MDI technique were lack of deep breathe intake, failing to shake the device and incorrect synchronisation of canister activation with breathe intake.

## Conclusion:

This survey worked well as an MPharm research project, students gained experience working with patients and other healthcare professionals.

A positive impact on inhaler technique was observed following individualised advice.

Patients need regular advice to achieve and maintain management of respiratory condition. Few patients in this study received advice from a pharmacist.

Clinical pharmacists in GP surgeries and community pharmacists are ideally placed to support and advise patients on their inhaler use.

There is scope to use trained MPharm undergraduates in suitable locations should the opportunity be made available.

## References:

1. Crane MA, Jenkins CR, Goeman DP, Douglass JA. Inhaler device technique can be improved in older adults through tailored education: findings from a randomised controlled trial. *NPJ Primary Care Respiratory Medicine*. 2014;24:14034.

### Contact details:

Helen Hull  
School of Pharmacy and Biomedical Sciences,  
White Swan Road, Portsmouth, PO1 2DT  
Email: [helen.hull@port.ac.uk](mailto:helen.hull@port.ac.uk)  
Twitter: [@helenhull12](https://twitter.com/helenhull12)