

ADMIT Annual Report for 2017

Introduction

Inhaled therapy is the cornerstone of medical management of obstructive pulmonary diseases (asthma and COPD). Inhaled medication may be very effective if inhaled correctly, but poor inhaler technique is a very common problem: indeed this problem is the leading cause of poor disease control. For the patient this means an increased risk of potentially life-threatening exacerbations, hospitalisation, and reduced quality of life. For the health service this means greatly elevated costs due to non-elective health care utilisation and thinning of resources.

The aim of the **Aerosol Drug Management Improvement Team** (ADMIT) is to advise health care workers about inhaled therapy to improve evidence-based best practice for optimal use of different inhaler and spacer devices. ADMIT provides unique, independent, comprehensive and up-to-date information about inhaler devices, including volume-holding chambers, advice about matching particular patients or groups of patients to particular devices and training tools to facilitate teaching and assessment of the critical aspects of inhaler technique.

Moreover, on the newly redesigned ADMIT website (<http://www.inhalers4u.org>) patients and health-care personnel can find information which helps them understand how the various inhaler devices work and exactly what they can do to ensure that the inhalers they use will work as well as possible for them. In the past nine years ADMIT has published 13 papers about inhalation therapy in peer reviewed journals.

Current Members

The thirteen members of ADMIT come from a variety of European countries: Mark Levy (UK); Christopher Corrigan (UK); Richard Dekhuijzen (NL)[co-chair]; Peter Barnes (UK); Lorenzo Corbetta (Italy); Federico Lavorini (Italy); Jane Scullion (UK); Nicolas Roche (France); Omar Usmani (UK); Walter Vincken (Belgium), Borja Garcia-Cosio (Spain) Roland Buhl (Germany) and Søren Pedersen (Denmark)[co-chair]. All members have an interest in inhalation therapy and have several original articles and review publications within this area. *Roland Buhl joined ADMIT in 2017.*

Irene Bellesi (based in Firenze with Consorzio Futuro in Ricerca) works with ADMIT as an administrator, organises the logistics of all meetings and records and submits minutes and action points to all members after the meetings.

The steering committee consists of 5 members: Mark Levy; Christopher Corrigan; Richard Dekhuijzen (scientific chair); Lorenzo Corbetta and Søren Pedersen (chair). The committee meets at least twice a year and discusses strategies and topics.

Meetings in 2017

The ADMIT team came together for two, two-day meetings in 2017, one in March in London and one in October in Bologna. The minutes from the meetings are enclosed with the annual report.

In addition the Steering Committee had two, one-day meetings (one in London and one in Bologna) with the company responsible for designing and maintaining our website.

Finally, three members (SP, PB and RD) attended an annual meeting with the CEO of Chiesi (Dr Paolo Chiesi) and his colleagues to update on ongoing achievements and discuss upcoming actions and strategy.

Achievements

Our main achievements included:

1) Website and exposure

- a. Unfortunately, the traffic on the website is still not as satisfactory as it deserves to be and at our first meeting in 2017 the steering committee met for one day with programmers and experts on improving website visibility. One problem was that when people used our web address or searched for us on Google they were often directed to the old web-site that has not been maintained for several years. We therefore purchased a new [URL: www.inhalers4u.org](http://www.inhalers4u.org) which will henceforth be widely publicised by members of ADMIT in their lectures and also in all our new and revised presentations and slides on the web-site.
- b. A firm strategy to monitor web traffic more carefully in the future and promote it further through the use of Facebook, Twitter and other means. Our Twitter handle is @ADMIT_inhale now has 242 followers. We discussed the possibility of paying Google for preference in the searches, but no decisions have been made to date whether or not to proceed.
- c. A firm strategy and timetable to produce and append new and better demonstration videos. We have obtained some quotations for the costs but it remains to clarify the precise numbers. The videos will be instructional but should also be used in studies on correct inhaler use (see later).
- d. Complete overhaul of the design and infrastructure of the website. Most of the existing history and clinical material were removed and new headings constructed related to the most relevant issues pertaining to inhalation therapy (please see the web). We also have plans to construct links to other relevant websites.

- e. Continuous and extensive updating of the site with new and important papers on inhalation therapy on a rolling, 3 monthly basis with a system for ongoing identification and incorporation of relevant manuscripts on a 3 monthly basis.
- f. In association with the publications on training devices and gadgets it is intended to update the material on these devices continuously at the website.

2) Production of scientific papers on different topics within the area of inhalation therapy.

- a. **One paper was published** (Lavorini F, Pedersen S, Usmani OS; on behalf of ADMIT Dilemmas, Confusion, and Misconceptions Related to Small Airways. Chest 2017,151(6):1345-1355)
- b. **One paper was submitted** (Walter Vincken et al. Spacers or holding chambers: practical issues for their use and maintenance, Prim Care Resp J)
- c. **Two papers were developed to a near final stage** (1) Nebulisers, practical issues for their use and maintenance and (2) Inhaler Gadgets, e-health & m-health) but not yet submitted

Papers at more preliminary stages

- d. 1) Inhalation technique with DPI, Lead author Omar Usmani
- e. 2) Adherence: Patient- related factors in asthma and COPD, Lead author Richard Dekhuijzen
- f. 3) Adherence: Treatment-related factors in asthma and COPD: associations between compliance, technique, adherence and clinical outcomes related to inhaled therapy, Lead author Nicolas Roche.
- g. 4) Standards for reporting on inhaler technique in respiratory studies, Lead author Christopher Corrigan

3) Improving and updating our teaching slide deck on inhalation therapy. In the autumn we comprehensively reviewed our extensive collection of slides for presentations about inhaled therapy to a variety of audiences to ensure that they were up-to-date and to add new slides from more recent publications. This work is in progress and we expect it to be completed during the spring of 2018

4) We also reviewed, revised and updated our comprehensive table on the website providing device-specific generic descriptions and guidelines for patient/carer use for all currently available inhaler devices (a total of 9 new devices was added in 2017). In addition we commenced work on improving the design of the table. This is needed because of the large number of inhaler devices now available. We are negotiating with the web designers as to how access to, and searching of the table for devices with particular characteristics and attributes can be made optimally user-friendly.

- 5) Working towards developing a global, objective performance scoring system for commercially available DPI devices facilitating the assessing and ranking of their “global” effectiveness (the Global Inhaler Effectiveness Score, GIES). The various features and performance factors that should be used to assess the score, as well as how much weight should be given to each factor were discussed at our meeting in Bologna and will be continued.
- 6) Developing a web-based study on the ability of health-care personnel to spot correct and incorrect inhalation technique. The end objective of this exercise is to provide HCPs with a comprehensive checklist enabling them to verify correct and spot incorrect usage of any given inhaler device. The intention is to develop this as an on-line assessment, training and teaching tool.
- 7) Citations and visibility
 - a. In spite of high competition, the contribution of ADMIT to the care of patients taking inhaled therapy for obstructive airways diseases has been acknowledged by GINA in its latest guidelines (January 2017).
 - b. The Global Inhaler Effectiveness Score (GIES) was presented as a poster at the Drug delivery to the lungs annual meeting Edinburgh December 2017.
 - c. ADMIT unsuccessfully lobbied for representation at the ERS. An application to organise a a small stand at the exhibitions were was also rejected.
 - d. Members of ADMIT have presented a variety of individual lectures on behalf of the group at various meetings and advertised and quoted ADMIT as much as possible. We have now decided that in the future we will include slides with our new logo and web URL whenever giving talks about inhalation therapy at various meetings.

Abandoned projects

1. A web-based study of the ability of health-care professionals to assess correct and incorrect usage of a variety of inhaler devices has been designed, based on responses to questions following short videos. Suitable videos and standardised assessment forms were been produced in 2016. Uptake for this study was very poor and plans are to redesign and simplify this work as part of the web redevelopment.
2. *The Inhaler Training in Europe (ITE)* survey had been planned. The aim of this survey was to gain insight into where and how patients across Europe are instructed to use inhalers and spacers and their thoughts on how this might be improved. This would be effected using an electronic questionnaire directed in the first instance at 150 adult patients with asthma or COPD from each ‘ADMIT’ country (UK, Spain, Italy, France, Belgium, Netherlands, Denmark) in the local language directed through national patient

organisations. Richard Dekhuijzen was the project lead. However, four months after initiation of the project it appeared that a similar project is ongoing in Europe. We therefore made the decision to discontinue this project.