Right Breathe
An electronic information portal and decision support system for respiratory medicines

Ben Rehman
Director, London Medicines Information Service
Themes

• The complexities of respiratory prescribing

• Building a tool to guide

• Delivering it and a request for help!
The complexities of respiratory prescribing

- You’ve probably already heard this today, but getting things right is complicated!
Responsible respiratory prescribing

Should be based on:

• Evidence based efficacy (grade A)

• Safety (*primum non nocere*)

• Value (cost-effectiveness)

“clinicians will need to accept that they are responsible for the stewardship of resources and not just their use”  Sir Muir Gray BMJ Oct 6 2012
Right Care

• Do the right thing
• Do the right thing right
• Doing the right thing right first time should delivery quality and value
Responsible respiratory prescribing: key messages

- Respiratory Medicines are expensive
- Doing the right things
- Doing the right things right
Respiratory medicines are expensive

The top five costliest drugs in the NHS (Feb 2015)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Drug Name</th>
<th>Cost/Quarter (£m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Sitagliptin 100mg</td>
<td>£5.6 million/mo</td>
</tr>
<tr>
<td>4</td>
<td>Seretide 500 Accuhaler</td>
<td>£7 million/mo</td>
</tr>
<tr>
<td>3</td>
<td>Symbicort 200</td>
<td>£7.6 million/mo</td>
</tr>
<tr>
<td>2</td>
<td>Seretide 250 Evohaler</td>
<td>£10.7 million/mo</td>
</tr>
<tr>
<td>1</td>
<td>Spiriva</td>
<td>£12.8 million/mo</td>
</tr>
</tbody>
</table>

Thus, of the top 5 costliest drugs to the NHS currently, 4 ARE RESPIRATORY INHALERS

Total for high potency Seretide, approx £260 million per year

Source: NHSBA Feb 2015
Doing the right things

• When prescribing any new respiratory inhaler, ensure the patient has undergone NICE-recommended support to stop smoking

• Pulmonary rehabilitation is a cost-effective alternative to stepping up triple therapy and should be the preferred option is available and the patient is suitable
Doing the right things right

- When prescribing any inhaled medication, ensure that the patient has undergone patient centred education about the disease and inhaler technique training by a competent trainer. When prescribing an MDI (except salbutamol), ensure that a spacer is also prescribed and will be used.

- When prescribing high dose inhaled corticosteroids (>1000 microgram BDP equivalent), ensure that the patient is issued with an inhaled steroid safety card.

- No Prednisolone EC prescribing without good reason.
Doing the right things right can be hard

• As opposed to tablets which are straightforward for patients to use, inhaler devices are relatively complex

• Inhalers need more specifically tailored information to support their use than is summarised in the BNF or MIMs

• Non-specialists struggle with the sheer number and combinations of devices and drugs
There are too many options!
At the last count…

- Drug-device-dose combinations
  - 18 device types (17 actively marketed)
  - over 90 unique device-drug-dose combinations
  - 42 device & drug class variants
  - 15 different types of spacers
  - spacer intra-compatibility with pMDI variants
- And even with all this… it’s still not possible to get from one end to the other of BTS or GOLD using a single device!
What do we do?

- How do I know whether this patient can use that device?
- How do I know where that inhaler fits in with BTS/NICE guidelines?
- Where are suitable inhaler technique videos and other supportive content for my patient?
Initial and continued good device use

- Variable estimates of exact prevalence of improper inhaler technique

- Both patients and professionals often unable to demonstrate correct technique

- Training (for both groups) undoubtedly patchy

- Poor technique often = poor control

- A lot of good existing e-products and resources, but disparate and don’t cover everything
Scattered resources

- NHS Choices
- Asthma UK
- medicines.org.uk
- Manufacturers’ own websites
- Youtube
Themes

• The complexities of respiratory prescribing

• Building a tool to guide

• Delivering it and a request for help!
Building a tool to guide

A digital clinical-decision support product and “one-stop-shop” of information that covers every device, device-drug-dose combination, and spacer on the UK market
Key components and functionality

• all of the options, mapped and displayed against the appropriate pathway points

• independently evaluated information for the full range of asthma and COPD inhaler devices, drugs, and spacers

• ability to select, navigate, filter, and view information of particular interest using an intuitive interface

• enables signposting of patients to evaluated supportive material (pictorial content and videos) to help achieve adherence
Key components and functionality

- development engages clinicians and delivers functionality they want and need in practice
- presentation in a range of digital formats (website and two native apps - iOS and android)
- underpinned by continually updated dataset
- editorial control and intellectual property completely within the NHS
Some of the potential benefits…

• Ensure initial prescribing is appropriate to the pathway point and the patient

• Unification of all of a patient’s inhalers to one device type

• Ensuring a patient is on a device that they can actually use independently

• Enabling an appraisal of all the device and drug types for a given situation

• Reduction of amount of inhalers being used from 3 to 2 and losing the need for a spacer
What else comes in the box?

• Enable professionals and patients to work through the potential prescribing options together, consistent with the principles of shared-decision making

• Be professional focused but open-access, and designed to enable clinicians to signpost patients to resources to support on-going adherence

• Information on practical device characteristics such as method of operation; the presence of a dose counter; the presence of feedback features to indicate correct use; and size and portability
What else comes in the box?

- Map at the touch of a button what inhalers should be used at which stage of Asthma or COPD
- Easily find easily good, appraised supportive content on technique on your smartphone and share that with patients (working in conjunction with UKIG)
- Filter prescribing choices by dose e.g. <1000mcg BDP equivalence, asthma licence, COPD licence etc.
- Eventually… embed all this in existing CDSSs in primary care
Themes

• The complexities of respiratory prescribing

• Building a tool to guide

• Delivering it and a request for help!
Delivering it and a request for help!

- Secured £100k of unrestricted funding to enable digital development
- Formally appointed a digital developer with whom to work
  - Strong track record in health app development
  - Recent products bought by Google DeepMind
- Currently working our way through the first product build
Core project team

- Ben Rehman and Dr Azhar Saleem
  Project co-leads

- Ali Winstanley
  Project Manager

- Mark Thomsit
  Technical Director, Make + Ship

- Simon Heys
  Creative Director, Make + Ship
Where we are with delivery

- Accurate library of all available UK prescribing options
- Initial mapping of the library against clinical pathways in asthma and COPD
- Building the library into a content management system
- Mapping the library against DM+D (for medicines identification and future interoperability)
- Building the user interfaces for 3 versions of the product (website, and two native apps - iOS and Android)
A call for help!

- We have a core team, but we’re not going to have a decent product without collaboration!

- Help us with testing and building the user interface

- Help us to ensure we are mapping all the available prescribing options appropriately against the clinical pathways

- We think we can provide something genuinely useful and that will improve decision making in respiratory prescribing and inhaler use, particularly for the generalist GP or pharmacist and their patients
Questions?