The Salford Lung Studies: Demonstrating effectiveness in everyday clinical practice

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Evidence needed for medicines in today’s world

From efficacy to effectiveness

**Efficacy:** The effect of a drug measured in ideal conditions

- Narrow, specific patient population
- Frequent reviews/regular hospital/outpatient visits
- Adherence encouraged
- Medicine(s) provided as clinical trial drug (double blind, double dummy design)
- Efficacy endpoints

**Effectiveness:** The effect of a drug when provided under usual circumstances of healthcare practice

- Broad patient population
- Usual care
- Few visits
- Unsupervised adherence
- Drugs prescribed/dispensed usual way
  - *Open label design*
- Patient-centred endpoints
The Salford Lung Study is the world’s first effectiveness RCT, initiated on what was, at the time, a pre-licence medicine. The study aims to:

- Compare, in everyday practice, the safety and effectiveness of BREO/Relvar Ellipta, with existing maintenance therapy for COPD and asthma in a general practice setting in the UK
- Provide relevant and important information for clinicians, healthcare providers, payers and patients

**Salford Lung Study**
- Evidence representing medicines in everyday practice
- Real-time integrated data

**Effectiveness**
- Broad population – age, comorbidities, disease definition
- Close monitoring
- Open label
- Set in normal care
- Health Outcome and Utilisation Endpoints i.e. Real life
- Unique collaboration
- Drugs prescribed and collected in usual way
- No extra review

**RCTs**
- **Efficacy** Double dummy
- Science to answer specific questions
- **Double blind**
- **Exclusions**
- Frequent reviews
- Minimal intrusion
- One geographical location
- Strict inclusion criteria
- Adherence encouraged
- Traditional Efficacy Endpoints
Study design

A 12 month open-label prospective RCT: COPD

The question:
How effective is initiating treatment with FF/VI compared to continuing treatment with usual care

Safety Reporting:
Reporting as randomised and by actual treatment

2,802 patients
- Patients in primary care
- Aged 40+ years
- GP diagnosis of COPD
- Taking ICS and/or LABA and/or LAMA
- Exacerbation in last 3 years
- Consented

Constant real time data collection and safety monitoring

FF/VI open label*

Randomisation**

Randomisation visit
- Routine respiratory review
- Device instruction
- CAT

Usual care

End of study visit
- Routine respiratory review
- CAT

3 phone calls (if no regular visits)


* Patient allowed to remain on LAMA in addition to FF/VI if already receiving LAMA therapy at randomisation
** Randomisation stratified by recent exacerbation status and existing COPD maintenance therapy at baseline
A linked database captures relevant data on study participants from multiple sources and provides more comprehensive safety information than is usually collected in standard RCTs.

Salford Lung studies in numbers

The BREO/Relvar Salford Lung Studies are RCTs conducted in everyday clinical practice

- 2,802 COPD & 4,237 asthma patients involved
- \(~130\) pharmacies involved
- \(>235\) million rows of data
- \(~80\) GP practices
- 1 electronic health medical record system
- \(>3,000\) people trained as part of study
Relvar/Breo Salford Lung study in COPD

Headline Results

• The Relvar/Breo SLS met its primary end point and demonstrated superior reduction of 8.41% (CI 1.12, 15.17) in the rate of moderate/severe exacerbations compared to usual care (p=0.025). 86% of the patients were on an ICS-containing regimen as part of their usual care.

• Incidence of SAEs were similar between groups (29% FF/VI, 27% usual care) and non-inferiority was confirmed for FF/VI vs usual care on SAEs of pneumonia (7% vs 6%).

• These attributes of FF/VI deliver meaningful patient benefits in everyday clinical practice when compared to other COPD treatments, including BD ICS/LABAs.

Summary

- The Salford Lung Study is the first of its type in the world
- It has generated important information for clinicians, healthcare decision makers and patients
- Partnership and team working has been critical to success
- EHRs provide significant opportunity for efficiency but significant challenges remain
- These type of studies provide a way to address questions about effectiveness in the real world