

**Abstract Title:** Improving Outcomes for Patients with Chronic Obstructive Pulmonary Disease (COPD) and Asthma. Bridgend Valleys Healthier Lungs Project : Joint Working Project Between Abertawe Bro Morgannwg University Health Board (ABMUHB) and GSK.

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**Context:** Chronic Obstructive Pulmonary Disease (COPD) affects up to an estimated three million people in the UK. Providing care and treatment for these people places a significant burden on the NHS<sup>1</sup>. The prevalence of asthma in Wales is amongst the highest in the world, affecting one in ten adults<sup>2</sup>. There are nearly 4,000 hospital admissions per year for asthma in Wales<sup>3</sup>. The charity, Asthma UK (AUK), reported that 75% of these admissions and up to 90% of deaths due to asthma could be avoided with improved management<sup>4</sup>.

**Outline of the problem:** COPD and asthma are two chronic conditions which placed the greatest burden on the NHS in Wales and ABMUHB in particular. Provision, standards and delivery of services for respiratory disease in the Bridgend Locality North Network had been variable.

**Assessment of the problem and analysis of its causes:** Lack of standardisation in the management of patients with COPD and asthma may have contributed to inequality of care and hence, outcomes for patients in the North Network. Addressing the lack of standardisation in the management of patients with COPD and asthma may potentially lead to reducing the variance in provision, standards and delivery of services for respiratory disease within the Bridgend Locality North Network.

**Strategy for change:** The aim of the project was to improve patient outcomes and equity of care of patients with COPD and asthma across the North Network community through an audit in primary care, an educational programme and standardised patient review based on NICE COPD Guideline 2010 and BTS/SIGN asthma standards of care. The view of the steering group was that by providing a respiratory educational programme for Health Care Professionals (HCPs) and understanding the needs of carers, through a consistent programme of education, could lead to improvements in the outcomes for patients with asthma and COPD.

### Primary Objectives

- Up skill /improve HCP ability to correctly diagnose asthma and COPD.
- Improve equity of care by reducing the variability in the current management of COPD and asthma across practices.
- Improve the quality of the COPD and asthma consultation received, as assessed by patients.
- Prevention of COPD and asthma exacerbations.
- Appropriate use of medicines in line with current NICE guidance and BTS/SIGN guidance.

### Secondary Objectives

- Reduce secondary care emergency admission rates in COPD and asthma.
- Reduce overall spend on emergency admissions from COPD and asthma.
- Optimise medicines usage in line with NICE 2010 COPD Guidelines and BTS/SIGN asthma Guidelines.
- Map and raise awareness and access among practices of the patient pathway for asthma and COPD and associated services available.
- Improve the quality and appropriateness of referrals to secondary care and community services.

**Interventions:** During the period November 2012 – May 2014, educational workshops were carried out for Practice Nurses, General Practitioners, Pharmacists and Health Care Support Workers. One Consultant Case Notes Review was conducted in the practice as well as mentorship clinics, supported by Specialists and Practice Nurses.

*[NB: GSK were not involved in patient review and had no access to patient identifiable data].*

Patient Experience and Carer Experience Questionnaires were issued from November 2013 to April 2014 during the ongoing scheduled training of HCPs. The HCP Experience Questionnaires were issued when the project's scheduled training programme had been completed.

**Measurements of improvement:** The project was implemented in the North Network of ABMUHB involving 9 practices that engaged in the project. All 9 practices completed the project successfully.

Jointly agreed measures were assessed using the following tools:

- POINTS<sup>5</sup>, provided by GSK was used to benchmark and monitor practice level COPD and asthma data and activity in order to highlight areas for improvement. The areas selected were in line with NICE standards for COPD<sup>5</sup> and British Thoracic Society (BTS) standards for asthma<sup>6</sup>. Practice level COPD data discussions were facilitated by GSK for each time-point report. *[NB: GSK were not involved in patient review and had no access to patient identifiable data].*
- HCP, Patient and Carer Experience Questionnaires provided by GSK, were used to evaluate the impact of the education.
- Hospital admission data provided by ABMUHB was analysed by the GSK Health Outcomes Team.

#### Effects of changes November 2012 to May 2014:

- **HCP Questionnaire Results:** 60% of HCPs reported improved confidence, 47% reported improved knowledge and 60% reported improved enthusiasm to manage asthma patients. 73% of HCPs reported improved confidence, 80% reported improved knowledge and 60% reported improved enthusiasm to manage COPD patients. 87% of HCPs felt that as a result of the training patients under their care would gain added benefit (n=15)<sup>7</sup>.
- **POINTS Results Asthma:** Adherence to BTS standards for asthma as a composite measure of recording in the 5 key parameters (self management plan use, symptoms, asthma reviews, inhaler technique and PEF/FEV1), increased from around 30% to 59% (n=2282; 5% margin of error)<sup>7</sup>.
- **POINTS Results COPD:** Adherence to NICE standards for COPD as a composite measure of recording in the 7 key parameters (COPD patient review, exacerbation frequency, self management plan, inhaler technique, FEV1, Medical Research Council (MRC) scores and COPD Assessment Test (CAT)), increased from around 35% to 73% (n=1000; 5% margin of error)<sup>7</sup>.
- **Patient Questionnaire Results:** As a result of their latest lung check up, 59% of COPD patients stated their understanding of how to use their inhaler had increased, 48% stated their understanding of how to take care of their COPD had increased, 49% of patients stated their understanding of why they had been given the type of medication had increased (n=53)<sup>7</sup>. 61% of asthma patients stated their understanding of how asthma affects them had increased and around 54% stated their understanding of how to use their inhaler had increased. 55% of asthma patients reported increased knowledge of how to take their inhalers properly with 50% stating their knowledge of what to do if their symptoms got better or worse had increased (n=46)<sup>7</sup>. 90% of COPD patients (n=53) and 98% of asthma patients (n=46) were either satisfied or very satisfied with their last review<sup>7</sup>.
- **Carer Questionnaire Results:** Data from the carers questionnaire showed that 8.3% of them obtained their clinical information from publicity, 33% from the GP surgery, 41.7% from the hospital and 33% from the community nurse (n=24)<sup>8</sup>. 66% of carers felt they were involved in decision making when they visited the GP, 71% felt they were involved in decision making when they visited the hospital, 33% felt they were involved with the decision making when they were dealing with social services and 75% felt they were involved with the decision making process when they were visited at home (n=24)<sup>8</sup>.

*The small sample size and the sampling methodology of the patient, carer and HCP evaluations mean that care must be taken when interpreting these data. The findings should not be generalised to a wider population.*

**Local admissions data:** Compared with 2012/13; there was a reduction in asthma related hospital admissions and an increase in COPD related hospital admissions. Analysis indicated a small reduction in the variation of admission rates for both asthma and COPD. However, this project was not designed to reduce hospital admission rates and further analysis of admission rates is needed before any conclusions can be drawn from these results.

**Lessons learnt:** As a result of this joint working project, improvements were seen in;

- HCP knowledge base, confidence and enthusiasm to manage COPD and asthma patients.
- Data recording and more comprehensive reviews in line with NICE Guidance and BTS/SIGN Guidelines.
- Patient understanding of their condition.
- Clinical knowledge of carers.

**Message for others:** Collaboration between the NHS and the pharmaceutical industry through Joint Working, to implement a structured programme of education, mentorship and audit for HCPs can result in patients having an improved understanding of their condition. Engaging with the patients' carers, offering them the opportunity to improve their clinical knowledge and ensuring they are part of the decision making process can improve outcomes for those they care for.

**References:**

1. Commission for Healthcare Audit and Inspection; *Clearing the Air: A national study of chronic obstructive pulmonary disease; 2006* (P7. Report Hard Copy)
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3. Annual PEDW data tables [http://www.infoandstats.wales.nhs.uk/Documents/869/PrimaryDiagnosis\\_3Digit\\_Residents.xls](http://www.infoandstats.wales.nhs.uk/Documents/869/PrimaryDiagnosis_3Digit_Residents.xls) (accessed 8 May 2015)
4. <http://www.asthma.org.uk/news-centre/facts-for-journalists> (accessed 2 May 2015)
5. NICE; Quick Reference Guide; *Management of chronic obstructive pulmonary disease in adults in primary and secondary care; June 2010*. Also available on <http://pathways.nice.org.uk/pathways/chronic-obstructive-pulmonary-disease> (accessed 1 May 2015)
6. Scottish Intercollegiate Guidelines Network and British Thoracic Society *British guideline on the management of asthma – a clinical guideline 2012* <https://www.brit-thoracic.org.uk/document-library/clinical-information/asthma/btssign-guideline-on-the-management-of-asthma> (accessed 1 May 2015)
7. *Bridgend Results Folder (Data on file UK/RESP/0104/12i)*

\*Employees of ABMUHB, ° Employees of GlaxoSmithKline UK Ltd.

§ The Patient Outcomes and Information Service (POINTS) audit tool was provided by GSK and was delivered on behalf of GSK by Quintiles. It involved the extraction of anonymous data which could be used by practices for assessment of existing services and did not involve the transfer of any patient identifiable data to GSK or Quintiles.