Abstract Title: NHS Lanarkshire and GSK Working Jointly to Improve the Management of Chronic Obstructive Pulmonary Disease (COPD) Across Both North and South Lanarkshire Community Health Partnership Boundaries.

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Context: In 2010 COPD was the only major cause of death in Scotland on the increase. There was thought to be about 100,000 people in Scotland living with COPD, with a predicted increase of 33% in the next 20 years. It accounted for over 122,000 bed days and 4,500 deaths every year. Audit Scotland estimated the direct cost of COPD to NHS Scotland to be around £100 million per annum[1].

Outline of the problem: At the start of the project, NHS Lanarkshire had a COPD prevalence rate of 2.2%[2]. NHS Lanarkshire, the 3rd largest Health Board in Scotland, was highlighted as a COPD hotspot in the 2007 BLF Invisible Lives report[3]. It showed that people in Lanarkshire had a 44% higher risk of future hospital admission with COPD than the UK average[3].

Assessment of the problem/analysis of its causes: The joint working project steering group hypothesised that the absence of a structured review for managing patients with COPD combined with an inconsistent uptake of patient self management plans across the practices was a possible cause for potentially inappropriate and untimely treatment. Additional to the patient benefits, there was a need to improve productivity and reduce inappropriate spend. It was anticipated that a more proactive approach to the management of COPD could reduce inappropriate hospital referrals and unplanned admissions and also help improve the quality of prescribing in primary care.

Strategy for change:

- Up-skilling Health Care Professionals (HCP) in providing a structured review by using a standardised COPD review template in order to support the quality of the annual review consistent with current NICE COPD guidance 2010[4].
- Introducing a standardised patient self management plan to increase patients understanding of their disease aimed to ensure management of COPD across Lanarkshire was consistent with current NICE COPD Guidance 2010[4].

Measurements of improvement:

Jointly agreed measures were assessed using the following;

a) The Patient Outcomes and Information Service[§] (POINTS), provided by GSK to measure pre-specified, selected changes in COPD parameters, in line with NICE Guidelines. *[NB: GSK were not involved in patient review and had no access to patient identifiable data].*
b) HCP questionnaires developed and evaluated by Lanarkshire NHS to measure the impact of the education.

Effects of changes:

Measurements at the defined points in time showed enhanced adherence to NICE standards and increased levels of HCP knowledge and confidence in the management of COPD patients.

- Adherence to NICE standards measured as a composite of seven key parameters increased from around 40% to 76% (n=8383; 5% margin of error allowing for visualising the dials)[5].

- The parameters which made up the composite measure, were the numbers of patients having had the following; COPD patient review, FEV1, exacerbation frequency, Medical Research Council (MRC) scores, COPD Assessment Test (CAT), inhaler technique and self management plan.

Parameter	Baseline (5% margin of error allowing for visualising the dials)[5].	Final (5% margin of error allowing for visualising the dials)[5].	Difference	'n' number
Exacerbations	20%	70%	50%	5916
CAT	8%	65%	57%	5440
COPD Annual Review	70%	97%	27%	8124
FEV1 Recording	60%	78%	18%	6526
MRC	72%	98%	26%	8072
Inhaler Technique	34%	74%	40%	6241
Self Management Plan	20%	53%	33%	4422

- Of the HCPs attending the education sessions, 70% reported the COPD Guidance and the COPD Prescribing sessions to be valuable or extremely valuable, helping to build skills, knowledge and confidence in their management of COPD patients (n=22)[6].

Local admissions data: The absolute number of unscheduled COPD admissions increased year on year 2010/11 to 2011/12 (1,970-2,006 admissions) and 2011/12 to 2012/13 (2,006-2,303 admissions) however during the project intervention (July 2012-June 2014) there was a decline in admissions 2012/13 to 2013/14 (2,303-2,006 admissions)[7]. It should be noted that this abstract is not drawing a causal relationship between the project intervention and reduction in absolute number of admissions as it is acknowledged there are many factors outside the scope of this project that may have an influence on unscheduled COPD admissions.

Lessons learnt: Standardising COPD patient review through usage of a COPD review template supported HCP's to deliver a structured COPD review. Additionally supporting the HCPs in building their knowledge, confidence and enthusiasm in COPD, resulted in more thorough patient data recording during review in line with the NICE COPD Guideline 2010.

Message for others: Collaboration between the NHS and the pharmaceutical industry through pooling of resources presented an opportunity to support local patient benefits beyond the scope of working independently.

References:

1. *NHS Quality Improvement Scotland. Chronic Obstructive Pulmonary Disease: Clinical Standards. March 2010 http://www.healthcareimprovementscotland.org/his/idoc.ashx?docid=514ce762-21ee-43f2-b230-eb55028170e7&version=-1 (Accessed August 2015)*
2. *QOF Database 2011 http://www.gpcontract.co.uk/browse/L/Chronic%20obstructive%20pulmonary%20disease/11 (Accessed August 2015)*
3. *British Lung Foundation (2007) Invisible Lives COPD Finding the missing millions https://www.blf.org.uk/Search?query=invisible+lives&searchButton.x=0&searchButton.y=0 (Accessed August 2015)*
4. *National Institute for Health and Clinical Excellence (NICE) (2010), 'CG101. Chronic Obstructive Pulmonary Disease'. London: NICE. http://guidance.nice.org.uk/CG101 (Accessed August 2015)*
5. *POINTS cluster report provided by Quintiles, data analysis by GSK, Date of Preparation: July 2014 UK/RESP/0029p/13*
6. *Lanarkshire Respiratory MCN Post education questionnaire run results*
7. *ISD Scotland hospital admissions data for 2013- Data source: ISD linked data IS/NHSL (Ref. Adhoc 3619)*

*Employees of NHS Lanarkshire, [O] 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*.