

Abstract Title: Tameside and Glossop Clinical Commissioning Group (CCG) and GSK Joint Working Chronic Obstructive Pulmonary Disease (COPD) Project: Working Collaboratively to Improve the Management of COPD in Primary Care.

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Context: COPD is a progressive life-threatening lung disease that causes breathlessness and predisposes to exacerbations and serious illness. The Global Burden of Disease Study (Ghdx.healthdata.org, 2017) reports a prevalence of 251 million cases of COPD globally in 2016 and estimated that 3.17 million deaths were caused by the disease in 2015 (that is, 5% of all deaths globally in that year). According to British Lung Foundation (Statistics.blf.org.uk, 2017) 1.2 million people in the UK have been diagnosed with COPD and prevalence is increasing. Locally, Tameside and Glossop has one of the highest COPD prevalence across the North West, Tameside and Glossop COPD prevalence (2016) is 2.7%, and continually high rates of admissions for COPD (8,588/1,000 population) compared to the North West (6,200/1,000) and England (4,698/1,000). In Tameside and Glossop, according to Primary Care COPD Registers (November 2017), there are 7098 patients diagnosed with COPD.

Assessment of the problem / analysis of its causes: The primary cause of COPD is exposure to tobacco smoke (either active smoking or second-hand smoke), with other risk factors including exposure to indoor and outdoor air pollution and occupational dusts and fumes. And COPD is likely to increase in coming years due to higher smoking prevalence and aging populations (Ghdx.healthdata.org, 2017). Smoking prevalence in Tameside is 22.4% of adults (about 39,750 people); which is higher than North West (20.1%) and England (18.4%) (Tameside Joint Strategic Needs Assessment, 2015-16).

Although COPD is not curable, treatment can relieve symptoms, improve quality of life and reduce the risk of death.

Project aims: This project aimed to support the optimisation of local COPD management through:

- a) Increasing the knowledge, confidence and motivation of Health Care Professionals (HCPs) and patients
- b) Optimising medicines usage in line with Greater Manchester Medicines Management Group (GMMMGM) COPD Management Plan (Gmmmg.nhs.uk, 2017)
- c) Improving health outcomes through patient empowerment.

Interventions:

- a) Educational programme for HCPs, including COPD workshops, spirometry training and inhaler technique workshops
- b) Practice led COPD annual reviews.

Measurements of improvements: Jointly agreed measures were assessed using the following:

- a) POINTS Plus audit tool, provided by GSK to measure 10 pre-specified, selected changes in COPD parameters in line with NICE Guidelines (Nice.org.uk, 2017) and GMMMGM COPD Management Plan (Gmmmg.nhs.uk, 2017). Three audit reports were produced at baseline, interim and project end for each practice and locality. Practice level COPD data discussions were facilitated by GSK for each audit-point. *[N.B: GSK were not involved in patient review and had no access to patient identifiable data.]*
- b) HCP and Patient Experience Questionnaires, templates provided by GSK and amended by CCG, to evaluate the impact of the education. Patient Experience Questionnaires were issued from April 2017 to November 2017 following the initial HCP training workshops and continued during the duration of the project. HCP questionnaires were issued following the projects scheduled training programme had been completed, although additional complementary training did occur throughout the remainder of the project.
- c) Increased adherence to prescribing formulary to reflect GMMMGM COPD Management Plan (Gmmmg.nhs.uk, 2017) and reduce variance.

Effects of Project interventions: 35 of the 39 general practice sites in Tameside and Glossop CCG involved in a 15 month project, encompassing a 6 month phase of preparation and engagement followed by a 9 month phase of active involvement, between April 2017 and November 2017. The summary of findings presented here is in line with the key findings identified by the Joint Working Steering Project Group at project end.

- **HCP Questionnaire results:** According to the attendance registers for the training events, a total of 91 HCPs attended across 2 scheduled COPD workshops and 41 HCPs attended across 3 scheduled spirometry training sessions. The training sessions were held in April and May 2017.

The following results were collated directly from the HCP questionnaires used as part of the project. Using a scale of 1 to 10 (1= Not at all knowledgeable; 10 = Extremely Knowledgeable) the HCPs were asked to rate their knowledge before the training and after the training and the average score moving from **5.4** (range 4 – 6) to **7.4** (range 3 – 9). With **93%** of HCPs who completed the questionnaire stating that the COPD workshops sessions providing back ground information including prevalence, morbidity & mortality data, NHS Right Care, priorities were valuable or extremely valuable. **81%** of HCPs who completed the questionnaire stating COPD workshops sessions providing information on caring for patients and COPD review templates valuable or extremely valuable. **88%** of HCPs who completed the questionnaire stating COPD workshops sessions providing information on GMMM recommendations and inhaler techniques valuable or extremely valuable. **89%** of HCPs who completed the questionnaire stating COPD workshops sessions providing information on patient experience, including patient testimonial, valuable or extremely valuable. **68%** of HCPs who completed the questionnaire stating spirometry training was valuable or extremely valuable.

HCPs completing questionnaires scored the overall quality of their COPD reviews before the training and after the training using a scale of 1 to 10 (1= Not at all knowledgeable; 10 = Extremely Knowledgeable) and the average score before training was **5** and after training had increased to **9**.

80% HCPs agreed or strongly agreed that attending the training sessions increased their knowledge and **89%** agreed or strongly agreed that attending the training sessions increased their skills. **89%** HCPs agreed or strongly agreed that attending the training sessions increased their enthusiasm and **95%** HCPs agreed or strongly agreed that attending the training sessions would be of benefit to their patients.

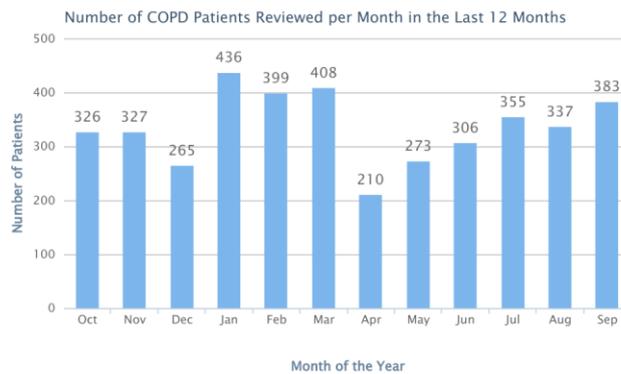
- **POINTS Plus results:** The audit tool includes data from the 35 practices taking part in the project, which includes **5687** patients on the practices COPD registers, giving a COPD prevalence across the practices involved in the project of **2.59%**. Recording of data in relation to 10 parameters as part of COPD annual reviews was measured as in Table 1.

Table 1. POINTS Plus Dashboard Parameters

Dashboard Parameter	Baseline	Final	
% Annual Reviewed Recorded in last 12 months	73%	71%	2% decrease
% FEV1 Recorded in last 12 months	62%	61%	1% decrease
% Inhaler Technique Recorded in last 12 months	47%	50%	3% increase
% COPD Assessment Test (CAT) Recorded in last 12 months	10%	32%	22% increase
% Any Record relating to Pulmonary Rehabilitation Recorded in last 12 months	6%	25%	19% increase
% MRC Recorded in last 12 months	75%	72%	3% decrease
% Any Record of an Annual Count of Exacerbations Recorded in last 12 months	36%	46%	10% increase
% Self Management Plan Recorded in last 12 months	25%	34%	9% increase
% Pulse Oximetry Recorded in last 12 months	67%	68%	1% increase
% Any Record Related to Smoking Recorded in last 12 months	87%	87%	No change

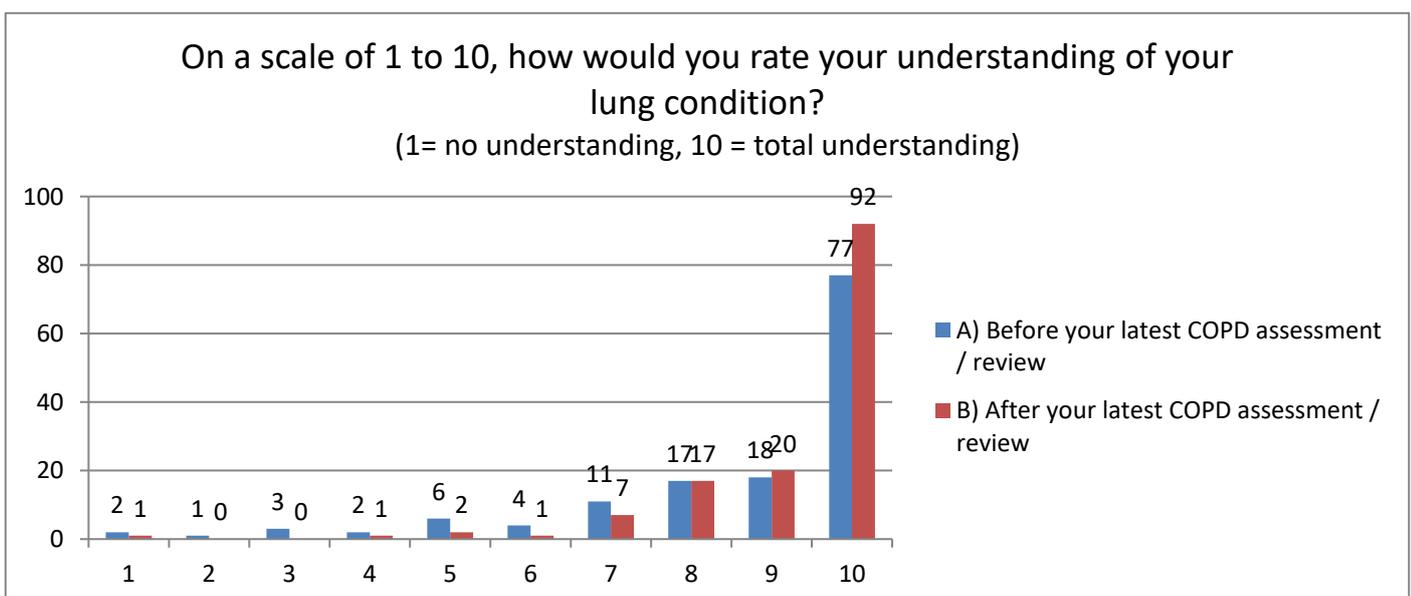
It is observed that the largest volume of COPD reviews are undertaken in the months of January, February and March (see Graph 1. taken from the POINTS Plus audit tool) which means in 2017 these annual reviews were undertaken before the active phase of the project began and the nurses had undertaken the targeted training and that the project has ended before these patient had the opportunity to be reviewed. It can be postulated that the full impact of the above results will not been seen until all the patients have received a COPD annual review following on from the training undertaken by the HCPs.

Graph 1. Number of COPD Patients Reviewed Per Month



- Patient Questionnaire results:** A total of **142** patient questionnaires were returned and analysed. Using the data directly collated from the questionnaires and using a scale of 1 to 10 (1= Not at all knowledgeable; 10 = Extremely Knowledgeable) patients were asked to rate their understanding of their lung condition before and after their COPD review, see Graph 2.

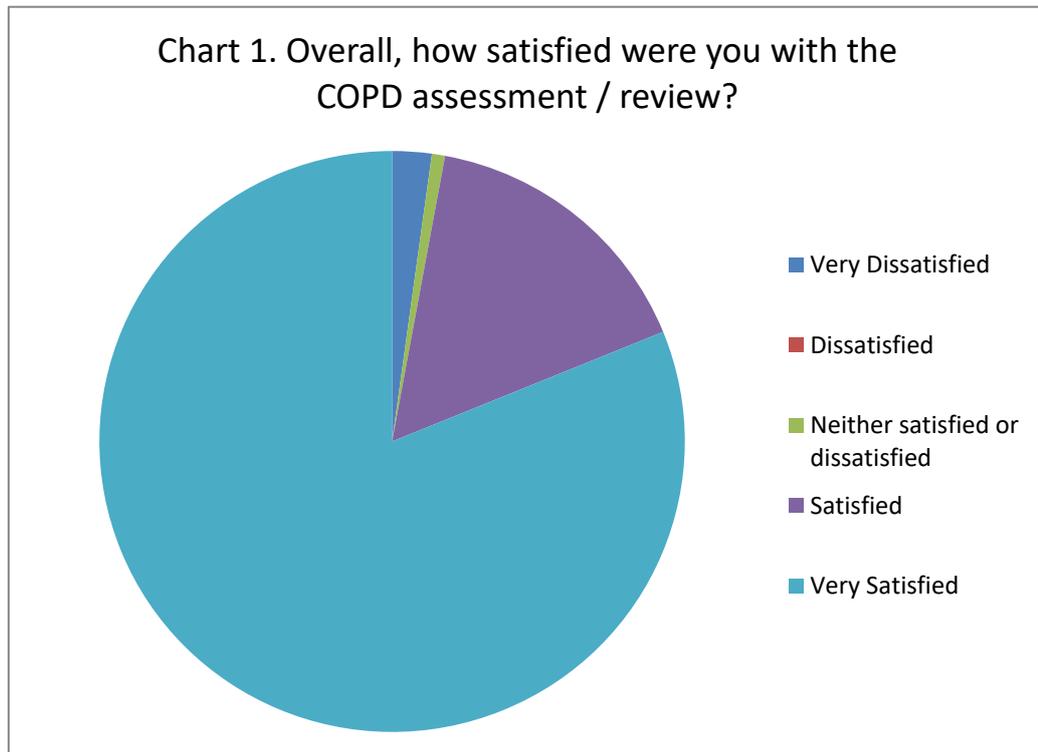
Graph 2. Rating Understanding of Lung Condition



When asked about how their understanding of how COPD affects them had changed due to their COPD review **49%** of patients stated their understanding had stayed the same and **49%** of patients stated their understanding had increased a little or a lot. When patients were asked about how their knowledge of how to use my inhaler(s) properly had changed following to their COPD review **52%** of patients stated their understanding of inhalers had stayed the same and **47%** of patients stated their understanding had increased a little or a lot.

Patients stated that their understanding of how to take care of their COPD, including having enough medication, home temperature, keeping warm etc. had stayed the same, **52%**, and increased a little or a lot, **47%**. And patients' knowledge on what to do if their symptoms get worse had stayed the same for **46%** of patients and increased a little or a lot for **53%** of patients. With patients stating their understanding of why they have been given the type of medicine I have staying the same for **44%** of patients and increasing a little or a lot for **54%** of patients.

Overall **97%** of patients stated they were satisfied or very satisfied with their COPD review (see Chart 1.)

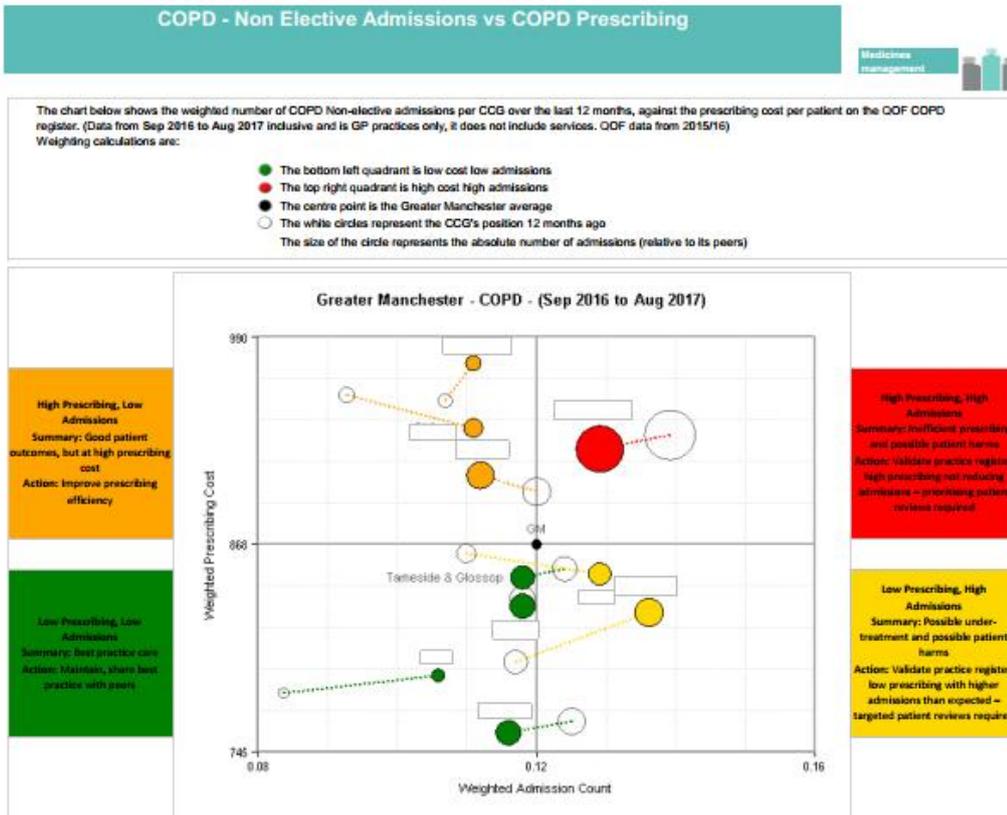


- **Adherence to formulary results: Adherence to formulary results:** Adherence in line with GMMMG COPD Management Plan (Gmmmg.nhs.uk, 2017) was achieved with an increase in prescribing of Inhaled Corticosteroid/Long-Acting Beta₂ Agonist (ICS/LABA) combinations relating to formulary choices by **56%** and a corresponding decrease in medications in this category that are not on formulary of **13%**. In relation to prescribing of Long-Acting Beta₂ Agonist/Long-Acting Muscarinic Antagonist (LABA/LAMA) combinations there was an increase in prescribing of **58%** from before the project, which is recommended by GMMMG COPD Management Plan (Gmmmg.nhs.uk, 2017) (with the exception of one choice which exhibited a small decrease). Long-Acting Beta₂ Agonists (LABAs) on their own are not recommended in COPD and a reduction of **17%** in prescribing of these medications was observed, in line with GMMMG COPD Management Plan (Gmmmg.nhs.uk, 2017).

Long-Acting Muscarinic Antagonists (LAMAs) on their own are indicated for prescribing within the GMMMG COPD Management Plan (Gmmmg.nhs.uk, 2017), but a slight decrease of **26%** in prescribing was observed, however we believe this relates to some these patients having been transferred onto combination medications indicated as part of the GMMMG COPD Management Plan (Gmmmg.nhs.uk, 2017), namely ICS/LABA and LAMA/LABA combinations.

- **Improving health outcomes:** during the time period that the project was taking place overall the CCG observed that non-elective admissions to hospital due to COPD had reduced (by an absolute number of 39 admissions compared to the same period on the previous year) and also costs associated with treating patients in primary care had reduced (combined cost reduction, encompassing admission costs and prescribing costs, of £148,707 for this period compared to the same period in the previous year) (Greater Manchester Business Intelligence, 2017). When compared to the Greater Manchester average and other CCGs within Greater Manchester the Tameside and Glossop CCG has moved into the lower left quartile, this has been summarised as 'best practice care', see Illustration 1. (Greater Manchester Business Intelligence, 2017). The Joint Working Steering Project Group acknowledge that this improvement in health outcomes cannot be exclusively attributed to the work undertaken as part of this project but acknowledge that the work undertaken in the project will most likely have contributed to the improvement in COPD related health outcomes.

Illustration 1. Improvement in Health Outcomes



Lessons learnt:

Message for others: Cooperation between the NHS and the pharmaceutical industry on this project presented an opportunity to support practices nurses to work collaboratively to ensure patients receive excellent COPD care and treatment beyond the scope of working independently.

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