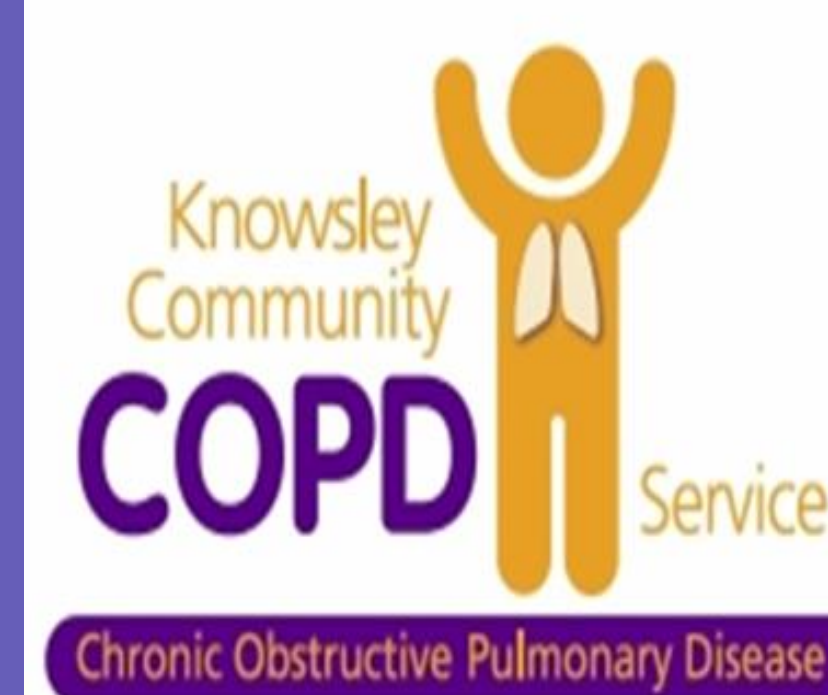


A service evaluation into the effectiveness of a community chronic obstructive pulmonary disease service



Pilsworth, S 1,7, Matata, B 1, Gossage, E 1, Barr, B 2, Meadowcroft, N 3, Wilson, K 1,5 Shaw, M 1, Rutherford, P 1, McIntosh, Z 1, Saini, P 2, 4 Downing, J 2,4, Wat, D 1, Sibley, S 1 Pemberton, A 1,4,5 McNulty, S 6
 1 Liverpool Heart and Chest Hospital NHS Foundation Trust, 2 University of Liverpool, 3 Knowsley CCG 4 CLAHRC NW 5 Patient representative, 6 Knowsley Public Health, 7 Intern

This is a summary of independent research funded by the National Institute for Health Research (NIHR) CLAHRC NWC Programme. The views expressed are those of the author and not necessarily those of the NHS, the NIHR or the Department of Health

BACKGROUND

Chronic Obstructive Pulmonary Disease (COPD) is a heterogeneous (1, 2,) and frequently debilitating respiratory condition, characterised by persistent respiratory symptoms and progressive airflow limitation due to alveolar and/or airway abnormalities (3). The pathophysiological process in COPD can cause a combination of small airway disease, parenchymal destruction and structural changes resulting in narrowed airways (3). COPD is currently the fourth largest cause of mortality worldwide which is only expected to rise (4) despite the condition being both preventable and treatable (3). COPD causes an important public health challenge on a local, national and global scale, (5), with increasing prevalence it is predicted to be the 3rd most prevalent disease worldwide by 2020 (3).

The locality of this evaluation is Merseyside, in the North West of England and makes this study highly relevant. The borough has twice the national average of people with a confirmed diagnosis of COPD, 3.5% compared with 1.7% (6), it has higher than average smoking rates and increased premature mortality rates from COPD compared with the rest of England. The borough has recently been listed as the second most deprived borough in England (7).

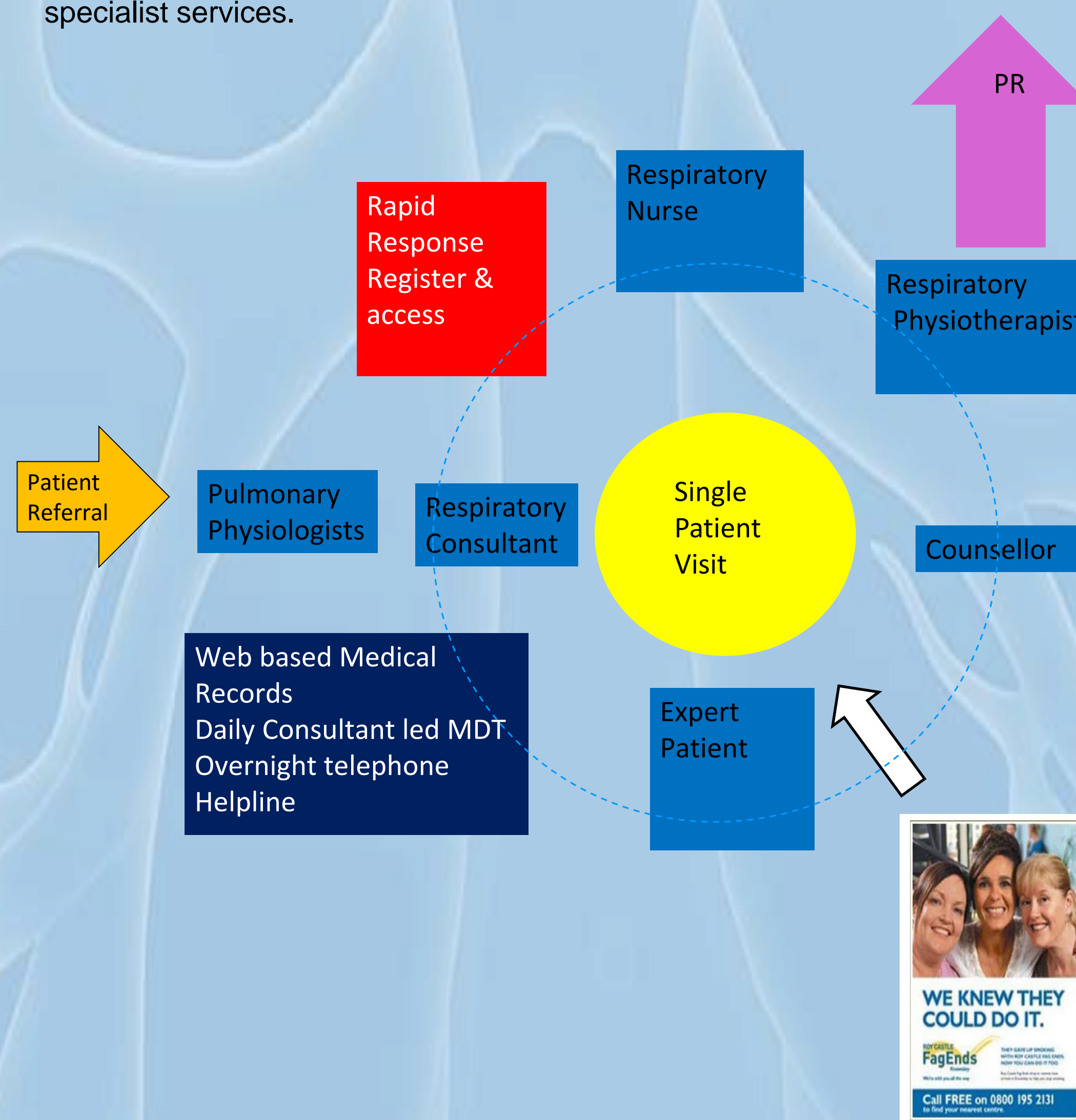
Of concern is the increasing healthcare cost, predominately related to unplanned emergency admissions (5). The north west of England has one of the highest rates of emergency admissions attributed to COPD in the UK (8). Recent figures suggest that as many as 1:8 of all emergency admissions are a result of COPD (9), this equates to 1 million bed days per year. The national cost of COPD is estimated to be in the region of £810 – £930 million (10), this figure also includes indirect costs such as loss of earnings (5).

Increasing demands on the acute care setting are believed to be strongly influenced by the rapidly increasing numbers of patients with long term conditions (11), COPD is one of these conditions. It is hypothesised that improving and increasing patient's access to care in the community it will reduce the number of emergency admissions (11). There is however little evidence to support this claim, this evaluation may help to address this unknown.

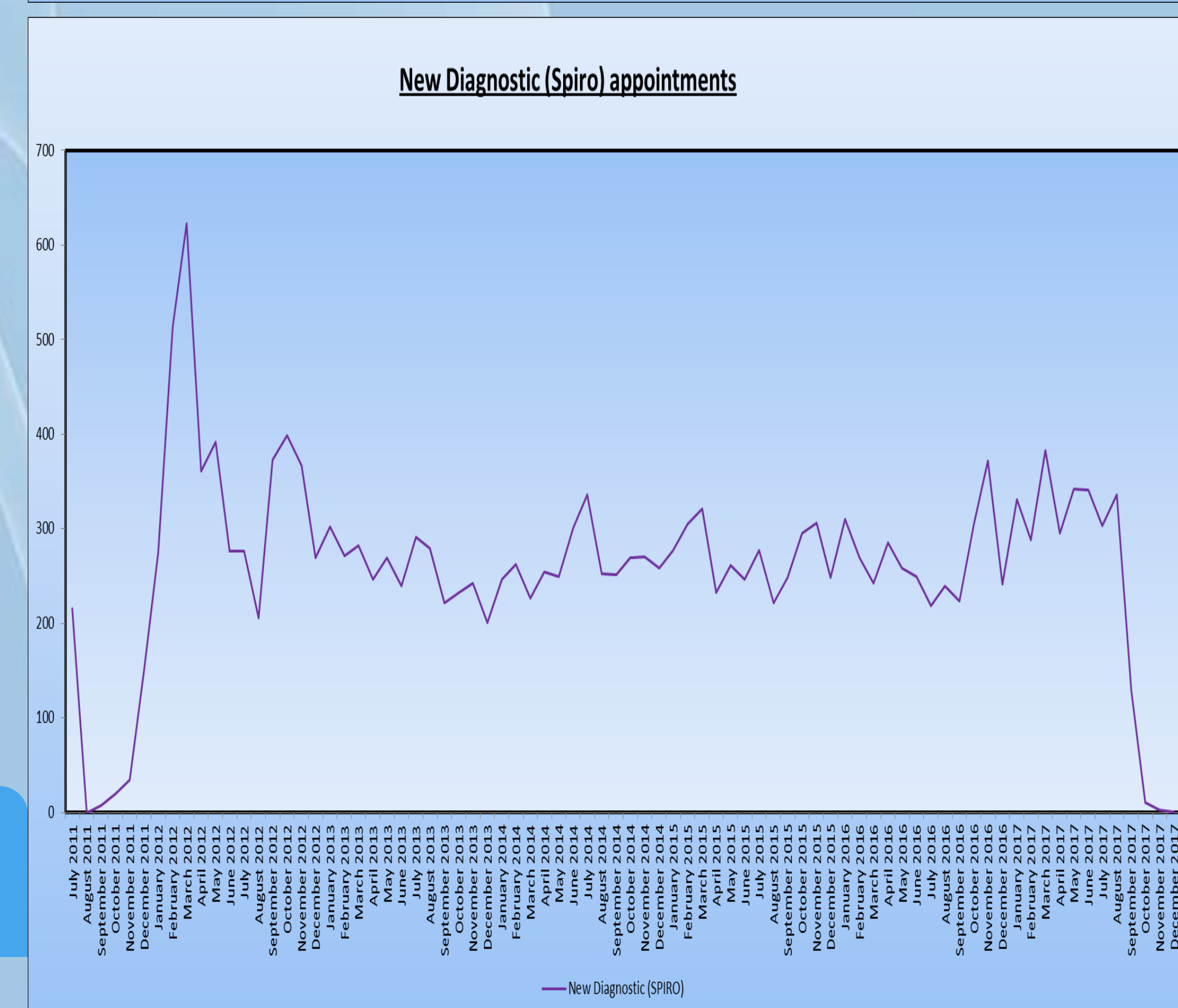
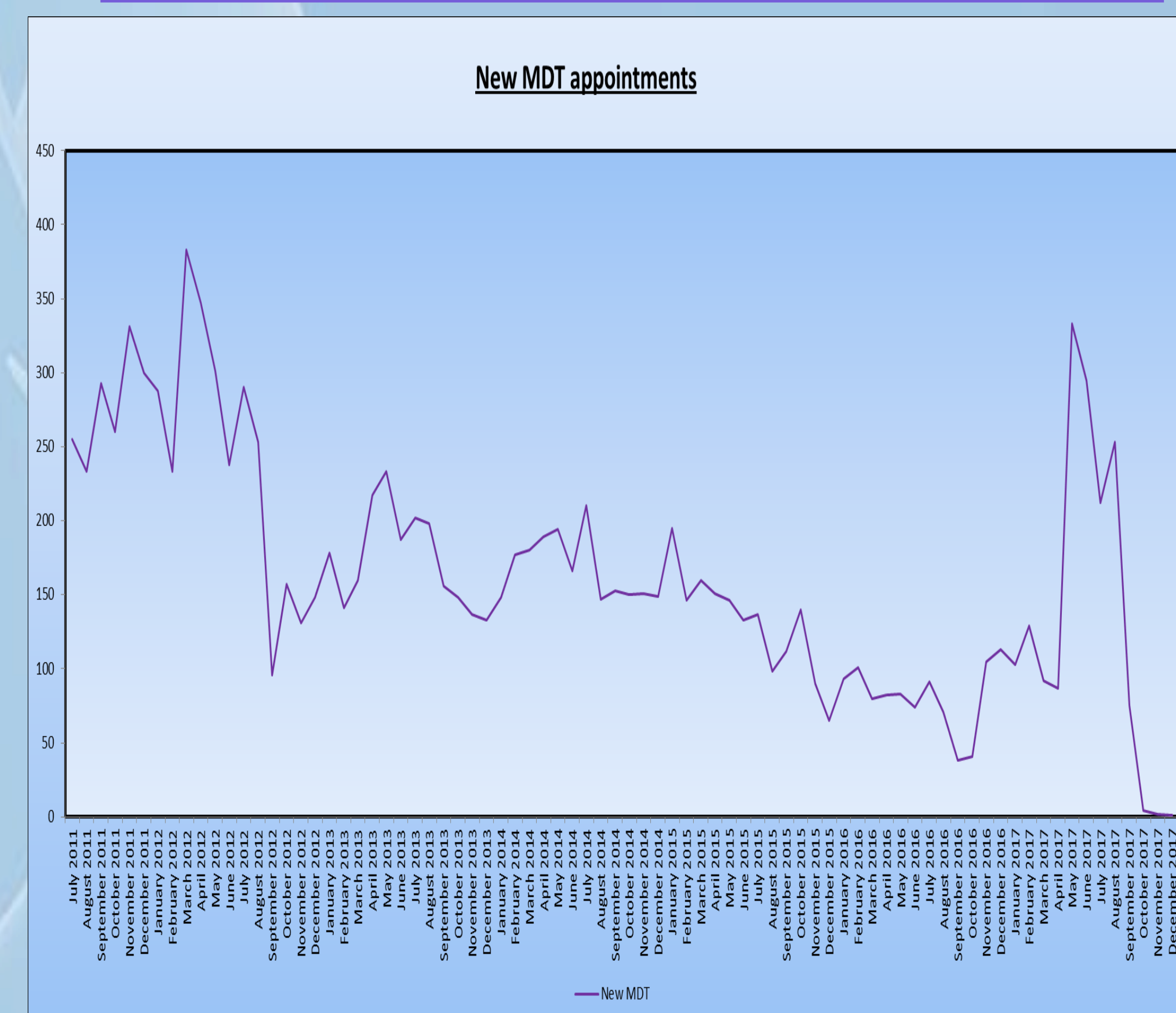
SERVICE OVERVIEW

In 2011, following extensive consultation with the public and NHS providers the local Clinical Commissioning Group commissioned Liverpool Heart and Chest Hospital to provide a borough wide single consultant lead COPD service. The service was designed to be a "one-stop shop" to include diagnostic spirometry, consultant lead MDT clinic, chest clearance, counseling support, breathlessness management, pulmonary rehabilitation (PR) and early supported discharge. The clinics are to be provided close to where the population lives to ensure easy access.

The aim of the service model is to improve access, reduce COPD related deaths, reduce cost, reduced unnecessary hospital admissions and length of stay. It is hypothesized that moving the care closer to the patients home will improve patient experience and increase access to specialist services.



RESULTS OR FAR



AIMS

This evaluation is of the effectiveness of a community COPD service pathway within the North West of England, the aim is to support service transformation and improve service delivery

The study will over the time the service has been running (August 2011 – present):

The aims of this study were conducted by working with patients and public involvement representatives. These were achieved by evaluating the followings:

- Referral rate into the service linked to GP practice
- Referrals into secondary care, linked to GP practice.
- Attendance of new and annual diagnostic spirometry
- Attendance at new and follow up consultant-led clinic appointments
- Emergency hospital admissions due to COPD over the time of the service and the run up to service commencement.
- Utilization of the rapid response element of the service, linked to patient postcode.
- Patient and G.P satisfaction

The evaluation will utilise both quantitative and qualitative methods to answer the key evaluation questions and assess the initiative's effectiveness in meeting its objectives.

We aim to work together with patients, public involvement representatives to assess whether the initiative is delivering better patient outcomes and experience as well as addressing the health inequalities agenda set out in its commissioning brief.

- The results above are preliminary only and data collection is not complete
- Early results show a 30% reduction in emergency hospital admissions and a 13% reduction in respiratory bed days in 2013/14., with continued reductions in the following years up to present. Some data is awaiting verification.
- Consistent numbers of patients being referred into the service for diagnostics over the 6 years of the service.
- Number of new patients seen within consultant lead MDT has been variable.

THE NEXT STEPS.....

1. Internal data extraction from the service itself has been completed, however data that has been requested from the local clinical commissioning group has been slow to appear. This needs to be collected to enable historical comparison prior to the service commencement.
2. Full analysis of the internal data needs to be completed
3. Analysis of the qualitative data regarding patient and GP satisfaction needs to be carried out
4. Completion of the report and dissemination of the findings are then required



References: (1) Camiciottoli G, Bigazzi F, Bartolucci M, Cestelli L, Paoletti M, Diciotti S, et al. BODE-index, modified BODE-index and ADO-score in chronic obstructive pulmonary disease: relationship with COPD phenotypes and CT lung density changes. COPD: Journal of Chronic Obstructive Pulmonary Disease 2012 Jun-1;9(3):297-304. (2) Global Initiative for Chronic Obstructive Pulmonary Disease (GOLD). Global strategy for the diagnosis, management and prevention of Chronic Obstructive Pulmonary Disease - Updated 2016. 2016a (3) Global Initiative for Chronic Obstructive Pulmonary Disease (GOLD). Global strategy for the diagnosis, management and prevention of chronic obstructive pulmonary disease - 2017 report. 2016b. (4) Lozano R, Naghavi M, Foreman K. Global and regional mortality from 235 causes of death for 20 age groups in 1990 and 2010: a systematic analysis for the global burden of disease study 2010. Lancet 2012; 380(9859):2095-9128. (5) Department of Health. AN outcome strategy for COPD and asthma: An NHS companion document. 2012 (6) Knowsley Council and Clinical Commissioning Group. Respiratory Disease JSNA report. 2016. (6) Langton P. Knowsley Public Health Annual Report Statistical Compendium 2014/15. 2015a. (7) Department for Communities and Local Government. The English Indices of deprivation 2015. 2015. (8) British Lung Foundation. Chronic Obstructive Pulmonary Disease (COPD) statistics. Available at: <https://statistics.blf.org.uk/copd>. Accessed 2nd June, 2017. (9) Rightcare. NHS atlas of variation in healthcare for people with respiratory disease - Reducing unwarranted variation to increase value and improve quality. 2012. (10) British Thoracic Society. The burden of lung disease - 2nd edition. 2006. (11) Damery, S.;Flanagan, S.; Combes, G. Does integrated care reduce hospital activity for patients with chronic diseases? An umbrella review of systematic reviews. BMJ open 2016; 6: e011952