- Ensure patients whose admission is their first presentation receive a quality assured diagnosis
- Ensure medicines optimisation during the in-patient stay
- Ensure every patient who has an admission for exacerbation of COPD has active follow-up and case management.
- Ensure every patient admitted for exacerbation of COPD receives pulmonary rehabilitation following discharge.

Many of these principles have long been accepted as best practise in respiratory care however the limited adoption of these factors indicates that barriers to implementation still exist. The project sites demonstrated that care bundles and checklists can be an effective way of achieving elements of the structured admission model with up to 80% of COPD admissions being managed through a care bundle approach. In addition the effective prioritisation of workloads to better match case load and demand on the service allowed more patients to receive high quality care and increased job satisfaction for staff. The achievement of high quality care for all patients requires organisational change and an integrated systems approach within hospital organisations.

P286 IMPLEMENTING A COPD DISCHARGE CARE BUNDLE: THE CHALLENGES AND FACILITATORS REVEALED

doi:10.1136/thoraxjnl-2012-202678.378

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Introductions/Objectives The National Institute for Health Research (NIHR) Collaboration for Applied Health Research and Care (CLAHRC) for Northwest London worked with clinicians and patients to develop a COPD discharge care bundle, which has been implemented across 7 acute hospitals using quality improvement (QI) methodology. The aim of this study is to identify the challenges encountered by teams in implementing the care bundle and the associated solutions and facilitators which will inform future implementation across other sites.

Methods An initial retrospective documentary analysis of data from the clinical implementation teams was undertaken. Data sources included minutes from 6, 12 and 18 month review meetings as well as contemporaneous records documented by the implementation team. The second stage involved collaborative learning workshops with 4 implementation teams. These workshops focused on reviewing the challenges identified in the first stage of analysis and identifying any challenges that had been missed. A discussion followed where the teams identified the solutions and facilitators that were developed during the project.

Results The first stage of analysis identified a number of challenges, some of which were common to all sites. The most common challenges related to the 5 following high-level themes: staffing, infrastructure, process, QI methodology and patient and public involvement. Within these themes 28 key challenges were identified. In the second stage of analysis teams demonstrated that they had developed solutions to address specific challenges. For example, a project team shared their experience of a mapping session which helped them better understand the flow of patients in their setting and led to improvements in compliance to the COPD discharge care bundle.

Conclusions There has been increasing enthusiasm to adopt the COPD bundle across the region but the implementation of new interventions poses challenges to both those planning and delivering such initiatives. Understanding and learning from the challenges faced by previous endeavours and the facilitators to overcoming these barriers provides an opportunity to mitigate issues that cost time and resource and ensure training tailored to the anticipated challenges.

Abstract P286 Table 1

High Level Themes	Key Challenges
Staffing	<ul style="list-style-type: none"> • Staff shortages • High staff turnover • Training of staff on bundle implementation • Training of staff on inhaler technique and smoking cessation • Staff not following the whole patient journey • Capability to make COPD referral-A&E nurse/doctor not referring to appropriate ward • Lack of staff engagement • Low buy in from pharmacists • Staff too busy
Process	<ol style="list-style-type: none"> 1. Lack of prompt data capture 2. Patient coding issues 3. Lack of prompt feedback to staff on the progress of the project 4. Poor quality of spirometry 5. Completion status unsure because of community bundle end point
Infrastructure	<ol style="list-style-type: none"> 1. Added workload of bundle 2. Bed shortages 3. Ward moves 4. Lack of pulmonary rehab service 5. Issues with government plans 6. GP involvement 7. Sustainability and costs of BLS booklet 8. Lack of communication and collaboration across sites
Patient and Public Involvement	<ol style="list-style-type: none"> 1. Patient involvement declined over time 2. Patient 's focused on own interest and not the projects' 3. Patient illness 4. Patient engagement poor-amount or quality?
QI Methodology	<ol style="list-style-type: none"> 1. Issues using PDSAs-not completed 2. Sustainability tool-Too generic not context specific 3. Unfamiliarity with tools

P287 IS YOUR COPD SERVICE IMPROVING OR DETERIORATING? TREND ANALYSIS OF MORTALITY, BED-DAYS AND READMISSIONS SHOWS GREAT VARIABILITY ACROSS ENGLAND DURING THE LAST DECADE

doi:10.1136/thoraxjnl-2012-202678.379

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The White Paper "Equity and Excellence. Liberating the health service" stated that health service must focus on outcomes and quality standards. The aim must be to improve. Comparison of a trend in improvement/deterioration of over time of outcomes would be beneficial to both clinicians and commissioners.

Methods Trend was analysed in 3 key outcome measures for COPD for all 153 PCTs in England. The 3 outcome measures are COPD mortality per 1000 PCT population for 1993–2010, bed-days per 1000 PCT population for 2006/7–2010/11, and re-admission at 28 days for 2004/5–2010/11. Data from INHALE (www.inhale.nhs.uk) has been used and Dr Foster Intelligence for readmissions. Linear regression lines were fitted to the annual data for each PCT. An upward trend scored +1 (deterioration), no trend 0, downward trend -1(improvement). The scores were summated for each PCT resulting in a possible range of scores of +3 to -3.

Results The Table shows summated results. PCT mortality data was available for 152, bed-days for 151 and readmissions for 150 PCTs. Newham was the only PCT to improve in all 3 outcomes (score -3). 23 PCTs (15%)scored -2, of these 21 improved in one outcome, 2 improved in two outcomes but deteriorated in one; 78 PCTs (52%) scored -1, of these 74 improved in one outcome and 4 improved in two but deteriorated in one as well; 41 PCTs (27%) scored 0, of these 15 had improved in one outcome but deteriorated in another; 8 PCTs (0.5%) scored +1. There were no scores of +2 or +3.

Conclusions These data shows considerable variation in outcome trend data across England. COPD mortality has improved in most but not all areas over 17 years. Mortality has improved in more PCTs compared to a reduction in bed-days for COPD and readmissions. Readmissions have increased in more PCTs than the other 2 outcome measures. These variations are unexplained and need investigating. Analysis of trend data for outcomes is essential, for providers and commissioners, to identify services that are improving or deteriorating.

Abstract P287 Table 1 Table of number of PCTs with a trend for improving, remaining stable, and deteriorating in three outcome measures over time

Number of PCTs	Mortality	Beddays	Readmissions
Improved	106	38	3
Stable	46	111	122
Deteriorated	0	2	25

P288 A UNIFIED RANKING SYSTEM FOR KEY COPD OUTCOME MEASURES SHOWING VARIATION BETWEEN PCTS AND HOSPITALS-HELPING TO DRIVE CHANGE

doi:10.1136/thoraxjnl-2012-202678.380

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The White Paper "Equity and Excellence. Liberating the NHS" stated that the health service must be focused on outcomes and quality standards that deliver them. INHALE (Interactive Health Atlas for Lung in UK), www.inhale@nhs.uk contains over 70 outcome measures for all the Regions and PCTs in UK. Demonstrating variation in outcomes drives service change. Hospital mortality has been reduced using this methodology. Wright J, Dugdale B, Hammond I et al Learning from death. A hospital mortality reduction programme. JRSMB 2006; 99: 303-308.

Methods Four key outcome measures which reflect hospital, community and primary care of COPD have been selected from INHALE. These are COPD mortality rate per 100,000 PCT population 2008-10, hospital bed-days per 1000 population 2010-11, % hospital readmissions within 28 days for COPD 2010-11, ratio of expected to observed COPD cases over the PCT for 2010-11. An action list of COPD service improvements has been prepared by the EoE Respiratory Team.

Abstract P288 Table 1

PCT	Readmissions within 28 days (%) 2010/11	Mortality 2010	Beddays per 1000 PCT population 2010/11	Ratio of observed: expected COPD prevalence 2010/11	Ranksum	Summary rank
Norfolk	4	2	4	5	11	1
Cambridgeshire	5	4	6	1	11	2
Mid Essex	1	3	2	10	15	2
North East Essex	2	8	5	3	16	4
Suffolk	6	1	3	9	13	5
Hertfordshire	7	7	1	6	14	6
Great Yarmouth and Waveney	10	6	8	4	18	7
South West Essex	3	13	12	2	27	8
West Essex	9	9	9	7	25	9
Bedfordshire	8	12	11	8	31	10
Luton	11	5	13	12	30	11
Peterborough	13	11	7	11	29	12
South East Essex	12	10	9	13	32	13

Results There is considerable variation for each outcome measure across the East of England (EoE). 2.04 fold for mortality, 2.61 fold for bed-days, 1.67 fold for hospital readmissions and 1.56 for Observed/Expected. These measurements have been ranked across the PCTs. The ranking of these 4 outcome measures have been summated and then ranked to give an overall PCT ranking. The Table shows ranking of each outcome measure and unified summated ranking.

Conclusion The wide variation in outcomes across the EoE has been more clearly demonstrated by using a ranking system. An EoE data pack has been produced demonstrating this and includes the overall ranking, bar charts and funnel plots of the outcome measures, a trend analysis of the outcome measures, and the suggested service improvements. This has been circulated to all respiratory consultants, CCG leads, local respiratory networks, and hospital chief executives in the Region. This allows comparisons to be made and helps to drive change. Localities and hospitals have started to draw up service improvements.

P289 FINDING THE MISSING MILLIONS – THE IMPACT OF A LOCALLY ENHANCED SERVICE FOR COPD ON CURRENT AND PROJECTED RATES OF DIAGNOSIS

doi:10.1136/thoraxjnl-2012-202678.381

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Background Chronic obstructive pulmonary disease (COPD) is a common and important condition but there is a considerable gap between the modelled and diagnosed prevalence of the disease.(1) In 2008 a locally enhanced service (LES) for COPD was introduced in our Primary Care Trust (PCT) which included a small financial incentive for GP's to perform spirometry but a larger one where COPD patients were identified and received additional quality items of care including; spirometry and pulse oximetry; smoking cessation; recording of BMI and MRC dyspnoea score; review of inhaler technique; medication review; provision of a COPD rescue pack if appropriate; issuing a self-management plan; influenza and pneumococcal vaccination. In the first year this encouraged GP's to focus case-finding efforts on those most likely to have COPD and led to a significant step up in the diagnosed prevalence.(2)

Methods To evaluate longer term effects we used annual QOF reporting-year data on prevalence of COPD at PCT level from 2005