Benefits The system has allowed improved communication between members of the team. The template has served as a management checklist ensuring that important components of COPD care are not forgotten. The system has been used to identify patients with very severe disease for discussion at a severe disease MDT and been associated with a 5% reduction in outpatient attendances.

P283 RELATIONSHIP BETWEEN THE RANKING OF COPD OUTCOME MEASURES (RE-ADMISSIONS AND EMERGENCY BED DAYS) AND RESPIRATORY SERVICE PROVISION ACROSS THE 13 PCTS IN THE EAST OF ENGLAND (EOE)

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The White Paper "Equity and Excellence. Liberating the NHS" stated that the health service must be focused on two key parameters i) outcomes and ii) the quality standards that deliver them. As there is little data examining their relationship in COPD we have examined this in the EoE.

Methods Two COPD outcome measures from INHALE (www.inhale.nhs.uk), emergency bed days for COPD admissions per 1000 PCT population for 2010–11, and % emergency re-admissions within 28 days for 2010–11, have been ranked from 1–13 for all PCTs in the EoE. A questionnaire has been developed by the EoE Respiratory Team to assess respiratory service provision. This was completed by all the respiratory networks in the 13 PCTs in April 2012. The presence of 4 services in the PCTs ranked in the top 6 have been compared to their presence in the bottom 7 PCTs. 11 PCTs have one local hospital.

Results All COPD admissions were under the care of the respiratory team in 50% of hospital ranked in the top 6, compared with 43% of those ranked in the bottom 7. A discharge bundle was in place in 33% of hospitals in the top 6, compared with 57% in the bottom 7. An early discharge scheme was in place in 66% of those in the top 6, compared with 57% in the bottom 7. An integrated care pathway existed in 33% of those in the top 6, compared with 100% in the bottom 7.

Conclusion We had expected to find a relationship but these results suggest that the existence of various services cannot be used as a surrogate for outcome measures. It would be expected that the existence of these services would improve the outcomes. The services were present in April 2012 but may have been introduced after or during 2010–11 when outcomes were measured. Auditing is also necessary to show that services are effective. Outcomes may also have improved in some areas after the introduction of services but those PCTs may still be ranked below others. In future trend analysis will be more useful than simple ranking.

P284 QUALITY IMPROVEMENTS AND COST SAVINGS ASSOCIATED WITH THE INTEGRATION OF COPD CARE IN COVENTRY

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Introduction Coventry had high admissions rates for COPD, and poor co-ordination between primary and secondary care. There was generally low interest in COPD and poor attendance at educational

meetings. An audit revealed that 74% of individuals with COPD admitted to hospital made contact with their practice in the month before admissions and 58% had received 3 or more courses of antibiotics in the year prior to admission, indicating the potential to improve care quality and reduce costs.

Methods We reviewed current provision against NICE standards and the emerging National COPD Strategy, identified gaps and agreed priorities. In parallel a patient and carer consultation was undertaken using focus groups, interviews and questionnaires. This information was used to formulate a model that integrated primary and secondary care and shared clinical pathways. Key was the establishment of a consultant led community based COPD team.

To allow individual practices to benchmark themselves against NICE standards and then support them to develop their own improvement plans, a COPD management tool (POINTS) was introduced into most practices.

Financial incentives (QP 8 and QP 11) were used to drive key elements, in particular improved recording of exacerbations, the use of rescue packs and self-management plans. Education for Primary Care Nurses was made "user-friendly" and delivered as monthly 'bite size' education sessions, with GP reimbursement for nurse time.

Results There has been a high level of support and engagement from primary and secondary care. COPD is now the top local LTC priority. During the first year admissions and re-admissions have reduced by approximately 15%. More than 90% of COPD outpatient activity is now in the community (including post discharge follow up).

Patient surveys have shown very high levels of satisfaction.

The project has been cost neutral in its first year (including savings from Oxygen Register cleansing but excluding savings from moving outpatient care to the community team) and the CCGs project savings of approximately £300,000 and £600,000 at 24 and 36 months.

Discussion This demonstrates that service redesign can deliver rapid improvements in the quality of care with significant cost savings potential.

P285 BEYOND CARE BUNDLES: THE DEVELOPMENT OF A STRUCTURED ADMISSION MODEL

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Hospital admission for acute respiratory disease accounts for 40% of the cost of managing respiratory disease in the UK. Data from national and European respiratory audits suggest the quality of care received is highly variable, and in the UK only 50% of people admitted for exacerbation of COPD will be managed by respiratory physicians. Admission to hospital is a significant event for someone with respiratory disease and represents an opportunity for the patient to receive a comprehensive and high quality respiratory review and interventions. Through project work with five project sites a structured admission model was developed and implemented through service improvement and process redesign. The components of the model include:

- Appropriate and timely (within 3 hours of admission) access to non-invasive ventilation (NIV)
- Access to respiratory specialist within 24 hours
- Proactive identification and management of high impact service users
- Ensuring every patient receives the key aspects of care during their admission (e.g. smoking cessation, inhaler technique cheque, self management plan)

- 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

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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	• 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	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	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	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	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

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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.