National Chronic Obstructive Pulmonary Disease (COPD) Audit Programme

Moving to continuous data collection and developing Quality Improvement (QI) initiatives

Event report and abstracts

27 July 2016, Royal College of Physicians

Commissioned by:
HQIP
Healthcare Quality Improvement Partnership

We would like to thank all those who have supported the National Chronic Obstructive Pulmonary Disease (COPD) Audit Programme in its work, and in the organisation and completion of this, the first of our quality improvement (QI) focused events. We would also like to thank all those who submitted abstracts and who presented.

If you would like information about the National COPD Audit Programme, please contact the audit programme at:

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Agenda

09.30 - 10.00	**Registration and refreshments**
10.00 - 10.20	**Welcome** *Professor Jane Dacre, President of the Royal College of Physicians*
10.20 - 11.00	**Background and overview of the audit programme and welcome** *Professor Mike Roberts, Clinical Lead for the National COPD Audit Programme*
11.00 - 11.30	**Overview of the respiratory medicine landscape** *Professor Mike Morgan, National Clinical Director for Respiratory Medicine* **Questions**
11.30 - 11.45	**Break**
11.45 - 12.15	**The secondary care audit so far, and the next two years** *This will include outcome data from the last round of snapshot audit; the move to continuous data collection; presentation of the new dataset; and a preview of the web-tool.* *Dr Robert Stone, Clinical Lead for the Secondary Care workstream* *Tim Bunning and Jonathan Roberts, Crown Informatics* **Questions and group discussion**
12.15 - 13.00	**How to implement continuous data collection locally: *Galvanising your local team for continuous data collection*** *Guest speakers:* *The Falls and Fragility Fracture Audit Programme (FFFAP), Royal College of Physicians – Naomi Vasilakis, Project Manager, and Vivienne Burgon, Programme Coordinator* *The Stroke Programme, Royal College of Physicians – Mark Kavanagh, SSNAP Programme Manager* **Questions and group discussion**
13.00 - 13.45	**Lunch**
13.45 - 14.00	**Welcome to the afternoon QI sessions** *Dr Ian Bullock, Chief Executive Officer of the Royal College of Physicians*

14.00 - 14.45	**Local Quality Improvement initiatives** *Presentations from participants in the last round of the National COPD Audit Programme's secondary care workstream.* *Speakers to be selected from the abstract process.* • *Dr Sarah Forster - Academic Clinical Fellow and Registrar in Respiratory Medicine at the University of Nottingham* • *Dr Alice Turner- Clinical academic jointly appointed between Heart of England NHS Foundation Trust (HEFT) and the University of Birmingham* • *Dr Jo Congleton - Respiratory Programme Clinical Lead KSS AHSN and Consultant Respiratory Physician Brighton and Sussex University Hospitals NHS Trust* **Questions and group discussion**
14.45 - 15.15	**Practical tips on implementing QI** *Dr Emma Vaux, Programme Director of Quality Improvement at Royal Berkshire Hospital NHS Foundation Trust; and Clinical Lead for the Learning To Make A Difference Project at the RCP* **Questions and group discussion**
15.15 - 16.00	**Facilitated session on implementing QI** *Action planning using templates.*

Copies of all presentation slides are available to download from the National COPD Audit Programme's quality improvement website:
www.rcplondon.ac.uk/projects/national-copd-audit-programme-quality-improvement

Event summary

The event took place on Wednesday 27 July 2016, and was held for the benefit of participants in the National COPD Audit Programme's secondary care audit. This audit ran in snapshot form in 2014, and published two reports on the organisation (*COPD: Who cares?*) and the delivery of clinical care (*COPD: Who cares matters*). In February 2017 the secondary care moved to continuous data collection. This event was held to update participants, and give them an opportunity to see the draft of the dataset before it was piloted in August and September 2016. The event also provided an opportunity for delegates to learn from each other's quality improvement (QI) initiatives, and to learn about QI methodology.

Attendees

The event was very well attended, with nearly 100 delegates coming from all over Great Britain to participate in the discussions. A map which plots the delegates' places of work is displayed below.

Local Quality Improvement Initiatives: abstracts

Attendees were invited to submit abstracts of their own local QI initiatives. The delegates were provided with a form to complete containing the following brief:

> *Please complete if you would like to present at the National COPD Audit Programme's summer event on 27 July 2016 about a quality improvement scheme you have implemented at your site following the 2014 round of acute audit.*
>
> *Please write no more than 300 words about the implementation of a quality improvement scheme at your site following the last round of the National COPD Audit Programme's acute audit. Please include details of who was involved (departments, job roles etc), what was implemented, and what was the result and success of the scheme.*

The audit programme team and clinical leads judged the submissions, and selected three to present. All submitted abstracts are contained below.

Presentation or submission	**Presenter's place of work**	**Presenter and job title**	**Presentation's area of focus**	**Page**
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Presentation	*Heartlands hospital,* ***Heart of England NHS Foundation Trust***	**Dr Alice Turner** *Consultant*	Pulmonary rehabilitation; Smoking cessation	11
Presentation	***Kent, Surrey and Sussex Academic Health Science Network*** *(KSS AHSN) Respiratory Programme*	**Dr Jo Congleton** *Clinical lead*	Discharge bundles	12
Submitted abstracts	*Centre for Self-Management Support,* ***Cambridge University Hospitals NHS Foundation Trust***	**Dr Frances Early** *Research & Evaluation Lead*	Pulmonary rehabilitation; Integrated care	15
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	Central Manchester NHS Foundation Trust *(CMFT), University Hospital South Manchester (UHSM) and*	**Dr Binita Kane** *Consultant in Respiratory Medicine, Clinical Lead for*	Future Hospital Programme; Integrated care	17

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	Respiratory Unit ***Colchester Hospital University Foundation Trust/ NHS North East Essex***	**Linda Leech** *COPD Clinical Nurse Specialist*	Discharge bundle	18
	East Lancashire and Blackburn with Darwen CCGs, *East Lancashire Hospitals NHS Trust*	**Elizabeth Fleming** *Head of Urgent Care*	COPD bundle; Integrated care; Pulmonary rehabilitation	19
	East Midlands Respiratory Programme	**Dr Charlotte Bolton** *Clinical lead* **Mrs Jane Scullion** *Clinical lead* **Mr Martin Cassidy** *Project manager*	Diagnosis; Pulmonary rehabilitation; Smoking cessation	20
	St Helier hospital, ***Epsom & St Helier University Hospitals NHS Trust***	**Helen Parnell** *Lead Respiratory Nurse* **Dr Thomas Medveczky,** *Respiratory Consultant*	Discharge; Integrated care	21
	Homerton University Hospital NHS Trust	**Laura Graham and team** *Specialist Respiratory physiotherapist, Interim Team Lead ACERs Service*	Oxygen; Respiratory specialist review	22
	Scunthorpe General Hospital, ***Northern Lincolnshire and Goole NHS Foundation Trust***	**Dr BMR Yasso** *Consultant Respiratory Physician*	Multi-disciplinary team	23
	Northumbria Healthcare NHS Foundation Trust	**Dr Stephen C Bourke and team** *Consultant Physician in Respiratory and General Medicine*	DECAF score; Hospital at Home	24
	Sandwell and West Birmingham NHS Hospitals Trust	**Dr Arvind Rajasekaran FRCP** *Consultant Respiratory Physician*	Future Hospital Programme; Integrated care	25
	Stockport NHS Foundation Trust	**Dr Devapriya Dev** *Consultant Respiratory Physician and COPD Lead, Chair of SIReN*	Integrated care; Multi-disciplinary team	26

Presentation

Dr Sarah Forster presented on behalf of Dr Gillian Lowrey

East Midlands Respiratory Programme: Royal Derby Teaching Hospitals, City Hospital Nottingham University Hospitals, Glenfield Hospital University Hospitals Leicester, King Mill Hospital Mansfield

In the 2014 COPD audit, it was found that only 55% of patients admitted with an acute exacerbation of COPD were prescribed oxygen. In 2013 a novel method of improving oxygen prescription using colour coded wristbands had been developed at the Royal Derby Hospital. In 2015 the approach was trialled in a further three hospital Trusts. The project ran for three months and covered over 2000 emergency admissions to hospital. Data was collected for oxygen prescription and titration rates for 270 patients.

The project involved a team of champions at each site. This included respiratory physicians, nurses and specialist registrars. Training was provided to all staff before the project commenced in the form of a centrally designed presentation. As a result, all patients admitted within the areas participating in this project had oxygen prescribed according to target saturations, and were given the appropriate coloured wristband. The doctor was responsible for prescribing oxygen and target saturations on admission; the nurse then applied the appropriate wristband at the first drug round or during triage. There was an improvement in the percentage of patients with an oxygen prescription at 2 out of 3 sites: Glenfield (98% at the end of the project versus 64% prior to the project), Kings Mill (94% at the end of the project versus 76% prior to the project), and Nottingham (69% at the end of the project versus 74% prior to the project). There was an improvement in the proportion of patients within the target range at 2 out of 3 sites: Glenfield (98% at the end of the project versus 61% prior to the project), King Mill (94% at the end of the project versus 52% prior to the project), and Nottingham (22% at the end of the project versus 41% prior to the project).

The project shows that, coupled with training and active oxygen champions, oxygen saturation wristbands can improve prescription and titration of oxygen. However, it was also noted that there are site specific considerations that need to be considered to make this approach successful.

Presentation

Dr Alice Turner

Consultant at Heartlands hospital, Heart of England NHS Foundation Trust

The problem:
Audit records showed that our referral rates for smoking cessation and pulmonary rehabilitation were below the local standard.

The solution:
The implementation of COPD care bundles, plus a range of digital learning modules and support strategies to enable ward based nurses to deliver aspects of the bundle.

The team:
Consultant (Alice Turner); respiratory clinical nurse specialists (Pam Sweeney, Tracie Stuart, Karen Ebbon, Kirsty Russell); physiotherapists (Stuart Lightfoot, Helen Beadle, Jan McGowan); pharmacist (Baljit Ahitan); and faculty educator (Simon Potter).

We implemented a discharge care bundle, incorporated first into an SDIP and then a CQUIN. Discharge bundles are not unique to our Trust, but the way we have enabled learning through our digital education team has been novel. In brief we set up modules on aspects of the bundle, such as inhaler technique and smoking cessation, and made referral to pulmonary rehabilitation easier. In parallel we had a programme of education for junior doctors and ward nurses, in groups and ad hoc on the wards. The inhaler technique work in particular has been innovative as we have developed videos located on the Trust's private YouTube channel which can be accessed by scanning a QR code. These have been issued as packs to relevant wards after training, and to community pharmacists, as well as being part of our online training package. We are now conducting a pilot project using the QR codes on inhalers, such that they go direct to patients too.

Since 2014 we have moved from our audit findings of just 42% of eligible patients referred for smoking cessation and 17% of patients assessed for pulmonary rehabilitation to 83% and 100% respectively, achieving 80% compliance with the care bundle overall at our site. All band six nurses and pharmacists on relevant wards have completed training, and we are now starting to train other staff groups.

Presentation

Dr Jo Congleton

Clinical lead for Kent, Surrey and Sussex Academic Health Science Network (KSS AHSN) Respiratory Programme

Jo Congleton (Clinical lead for KSS AHSN), Julia Bott (Clinical lead for KSS AHSN), JP Crofton-Biwer (Improvement Practitioner KSS AHSN), Tom D'Auvergne (Senior Information analyst KSS AHSN).

COPD Discharge Bundles have been associated with reduction in 30 day re-admission rates.

The Kent, Surrey, Sussex Respiratory Programme has been running since 2010 and aims to improve respiratory care by spreading good practice and reducing variation. We monitor outcomes via our quarterly regional COPD Dashboard. In 2014 we decided to start a programme to support all acute hospital trusts in the region to deliver a COPD discharge bundle based on Enhancing Quality principles. Prior to this seven out of 11 of our acute trusts shared their BTS COPD audit data which showed that 45% of patients saw a RNS on that admission.

We held twice yearly collaborative meetings with respiratory clinicians and made the case for teams to adopt COPD discharge bundle delivery. The teams agreed wording for a KSS bundle based on the BTS bundle and developed a data dictionary and a data collection tool. Results are fed back to teams quarterly via a bespoke reporting tool. Educational sessions are part of the collaborative meetings for example 'Train the trainers in inhaler technique'.

Results: Prior to the project only one out of 11 acute trusts in the region was delivering the COPD discharge bundle; 10 now systematically deliver the bundle, of which eight submit data to the regional reporting tool. At the start of the project in October 2014, 45% of COPD admissions per month were receiving at least some elements of the bundle and by November 2015 this had risen to 81%.

The % of patients documented as receiving each element of the bundle is shown below:

Bundle element	October 2014	November 2015
Inhaler technique	24%	58%
Written Info	9%	54%
Rescue Pack	27%	40%
Smoking cessation	59%	71%
Refer to PR	27%	55%

Follow up	27%	55%

(Denominator is total records submitted by trusts)

Conclusion: Establishing regional consensus and benchmarking can help foster adoption of a COPD Discharge bundle. The project continues and we aim to show further improvement and evaluate impact on patient outcomes.

Submitted abstract

Dr Frances Early, Research & Evaluation Lead, Centre for Self-Management Support

Cambridge University Hospitals NHS Foundation Trust

Research proposal:
The development of an intervention to increase utilisation of Pulmonary Rehabilitation (PR) in primary care.

Aim:
To develop an intervention to increase referral and uptake of pulmonary rehabilitation from primary care.

Background:
NICE recommends Pulmonary Rehabilitation (PR) for patients who experience disabling breathlessness.

Despite clear guidelines, national audit data showed that PR has been significantly under-utilised with under-referral (15% of normative need) and with limited uptake (less than 70% of those referred attend initial assessment). Primary care is the major source of PR referrals (51%).

Proposed research:
There is a lack of readily adoptable solutions to support referral and uptake with no clear evidence of what works. We are applying to Research for Patient Benefit (RfPB) to conduct research to develop an evidence-based, affordable toolkit to increase PR utilisation in primary care.

Objectives:
1. Use mixed methods research to identify from patients and healthcare professionals (practice nurses, GPs, PR providers) factors that facilitate PR access and overcome barriers to utilisation.
2. Draw on that research and on peer-reviewed evidence of factors affecting PR utilisation to develop the toolkit specification.
3. From the specification develop an affordable, usable, acceptable toolkit and conduct exploratory efficacy testing.

The toolkit will support healthcare professionals (HCPs) to refer eligible patients and support patient decision-making following a PR offer. Designed to be incorporated into the primary care PR pathway, we expect it will be underpinned by an online platform to allow flexibility, links to practice systems and printable/online content. Research participants will inform the content but it could include, e.g., patient-friendly information, electronic reminders on patients' records, simplified referral processes and online education. The research will be underpinned by Normalisation Process Theory (a methodological approach focusing on understanding/implementing interventions as normal practice). Feedback on this research proposal from HCPs and patients indicates that such an intervention would be impactful. This study is part of a planned research programme to increase PR utilisation along the pathway, including attendance and completion.

Submitted abstract

Jo Wright, Respiratory Nurse Specialist

Cambridge Universities Hospital NHS Foundation Trust

As a COPD team which includes respiratory nurse specialists, respiratory physiotherapists and respiratory physicians, we have implemented a number of new initiatives in order to improve the quality of care our patients receive. This has included the enhanced COPD Bundle, as well as the successful intervention introduction of a 'Virtual Clinic'.

The Virtual clinic is facilitated by a respiratory consultant, is held twice weekly and is a forum for the hospital-based COPD team to have extra- organisational discussions with the community respiratory team, breathlessness intervention team, and (on occasion) GPs, to discuss complex COPD patients, patients with recurrent exacerbations, complex case managed patients, new referrals, difficult oxygen and type II respiratory failure patients.

These virtual clinics allow us to have open discussions about patients with all of the multi-disciplinary team members present, and it allows us to look at the most appropriate interventions, the best place of care, what follow up is required and by who. We have the ability to review patient's notes, x-rays, CT scans, ECHOs etc.

It also enables us to identify potentially appropriate patients for the lung volume reduction service, research studies, devices and treatments.

The virtual clinic allows us to ensure the patients receive the appropriate level of monitoring and specialist assessment, it allows health and social care plans to be formulated and ensures the patients have personalised self-management plans.

Not only is the virtual clinic a forum to discuss patients it also provides an excellent opportunity to learn and develop, as we can discuss ideas and new interventions.

The efficacy and appropriateness of the virtual clinic is reviewed at our quarterly COPD business meetings where we look at outcomes such as admission / readmission rates and the effectiveness of the enhanced COPD bundle as demonstrated in a recent internal audit we performed.

Submitted abstract

Dr Binita Kane, Consultant in Respiratory Medicine, Clinical Lead for Integrated Care and Manchester RCP Future Hospital

Central Manchester Foundation Trust (CMFT), University Hospital South Manchester (UHSM) and Central and South Manchester CCGs

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As a Future Hospital Pilot (FHP) site we are working to develop respiratory services across Central and South Manchester that will allow health care professionals across primary, secondary and community care to work together with patients and carers, to understand their needs and bring services together to achieve outcomes that are important to patients.

We are creating a single collaborative respiratory integrated care service across Central Manchester Foundation Trust (CMFT), University Hospital South Manchester (UHSM) and Central and South Manchester CCGs, in order to; break down geographical and organisational boundaries for patients, provide high quality standardised respiratory services, enhance patient experience by reducing fragmentation in care and gain greater efficiency and value from current resources.

Objectives for the first year of the project include:

- Co-designing a shared acute pathway for those with a known diagnosis of COPD across Central and South Manchester.
- Co-designing a shared model for Community Respiratory clinics across Central and South Manchester; to educate and empower people in the self-management of their condition, ensure accurate diagnosis and encourage shared decision-making and development of care plans for every patient.
- Developing a shared model for community oxygen services across Central and South Manchester. Development of meaningful patient-centred metrics to measure the impact of the project.
- FHP Team development with a focus on leadership skills.

The work commenced in March 2016 and early results are anticipated in 2017.

Submitted abstract

Linda Leech, COPD Clinical Nurse Specialist, Respiratory Unit

Colchester Hospital University Foundation Trust/ NHS North East Essex

Following the report of the National COPD Audit Programme's secondary care audit 2014, our results identified that COPD patients were not always receiving the correct care pathway or discharge. Working closely with respiratory, acute medical and emergency consultants, a new admission/discharge care bundle was implemented.

Previous discharge bundles had been unsuccessful. In order to make this one work, it was introduced as a CQUIN (Commissioning for Quality and Innovation). The aim was to provide the best management, ensuring that education and information was provided to enable safe discharge. Admission data were collated, triangulated with the COPD clinical nurse specialist (CNS) database. Early figures collected identified most care bundles were completed by the COPD CNS. Regular teaching sessions and presentations to clinical audit showed improvement by the fourth quarter of 2015.

Out of a total of 873 patients coded with a COPD admission or secondary cause, 44% had a care bundle present by the fourth quarter of 2015.

The year 2015-2016 showed a 35% increase in admissions, of which 49% were referred, and had a bundle in place. 10% were identified as smokers and offered smoking cessation. As the stop smoking champion for the hospital, The COPD CNS has been providing teaching to GP Practices to address the problems at frontline.

Patients' satisfaction questionnaires showed 97% improvement in their experience.

Findings led to a pilot by the community COPD team supporting early discharges over the weekend, 13% of which readmitted. Without support this has now increased to 22%. Still we see a significant 19% increase of admissions on Mondays. This identifies a need for a seven day service to aid prevention of admissions/readmissions.

Adherence to the care bundle has now improved, although the admission bundle still has need for advancement. This has created better access to specialist respiratory care. Further work to develop mandatory training for end of life care and the need for oxygen therapy are ongoing.

Submitted abstract

Elizabeth Fleming, Head of Urgent Care, East Lancashire and Blackburn with Darwen CCGs

East Lancashire Hospitals NHS Trust

The Pennine Lancashire footprint includes two CCGs, one integrated acute and community provider, an additional community provider and 90 general practices. Pennine Lancashire has some of the highest COPD admission rates in the country and results of the national COPD audit highlighted a significant opportunity to improve outcomes for people living with COPD. In December 2015 a Pennine Lancashire COPD Task and Finish Group was formed, bringing together clinicians and managers from across the economy. A phased approach has been taken to develop integrated services, beginning with a review of the sub-acute pathway and pulmonary rehabilitation (PR) capacity, uptake and outcomes.

The sub-acute work is being implemented and includes:

- An ambulatory care pathway.
- A hospital marker which ensures people admitted with COPD are identified for support.
- Redesigning Intensive home support services in one CCG to ensure there is a 7 day 8am-8pm service across all of Pennine Lancashire.
- Roll out of ambulance community care pathways for COPD.
- Implementation of a care bundle in the sub-acute pathway.

An integrated working agreement was introduced, outlining how the specialist respiratory and intensive home support teams will work together, to best meet individual patient needs.

Having identified inequalities in the provision of PR, a redesign programme commenced and is ongoing, aiming to implement a single service model for Pennine Lancashire, which provides improved access for patients and more effective use of clinical resources.

Self-management is a key enabler, and the care bundle focuses on ensuring that patients and carers are supported to understand their COPD, knowing when and how to ask for support, if required. Development of a suite of self-management tools has commenced and an expert patient group is being established to inform this work.

Future phases of work will include inpatient pathway, spirometry and end of life care.

Submitted abstract

Dr Charlotte Bolton (clinical lead), Mrs Jane Scullion (clinical lead), Mr Martin Cassidy (project manager)

East Midlands Respiratory Programme

East Midlands Infographics - the National Secondary Care COPD Audit (Bolton CE, Cassidy M, Hartshorn, P, Scullion J, McKeever T, Lowrey G)

The East Midlands Respiratory Programme is committed to improving outcomes and quality of life for patients with respiratory disease by upskilling clinical teams, reducing unwarranted variation in care, sharing innovation and this is achieved through partnerships. To proceed with these objectives the programme requires up to date knowledge of the region in order to have an understanding of where there is variation. This is a focus for working to improve practice where it is an identified need, but also to promote what works well in the dissemination of good practice. One of the ways in which we do this is by the dissemination of data relevant to the organisation presented in an infographic using analytics to drive care and value.

The National COPD Audit Programme's secondary care audit report provides information for each site compared to the national information. However, we sought East Midlands data to focus on some region-wide actions.

The East Midlands Respiratory Programme sought approval from the British Thoracic Society (BTS), the Royal College of Physicians (RCP) and Healthcare Quality Improvement Partnership (HQIP) approval for site level information for the acute trusts in the East Midlands in 4 areas:

1. Diagnostics and Patient Specific areas.
2. Smoking Cessation.
3. Post Exacerbation Pulmonary rehabilitation.
4. Access to specialist Services.

During spring 2016, this was developed into an A3 single sided infographic (to be shown and discussed at the QI event) and subsequently approved. Although it is too early to report on evidence of change following the promotion of the infographics, the team feels they are a solid basis for discussion of variation and allow ownership of the data in a readily understandable format in order to engage in meaningful dialogue to facilitate improvements for patient care and in advance of the 2017 secondary care audit.

Submitted abstract

Helen Parnell, Lead Respiratory Nurse; Dr Thomas Medveczky, Respiratory Consultant; St Helier hospital

Epsom & St Helier University Hospitals NHS Trust

Winter resilience project

A recommendation of the 2014 COPD audit was to review the availability of early/supported discharge for COPD patients, extending this service to cover weekends. During winter 2015/16 our respiratory team was tasked with contributing to seven day respiratory care support with further goals of reducing hospital admissions and length of stay.

Our hospitals had also been reported by Dr Foster as having a COPD mortality rate above the national average, a possible indicator of inferior care. This was an opportunity to examine our service.

Respiratory nursing hours were extended to cover 8am-8pm, Saturday and Sunday morning with medical staff grade and consultant support.

Patients seen in A&E, ambulatory care or on the ward on day of or day after discharge (if admitted in the evening) were screened, care optimised and a potential discharge date agreed. A COPD discharge bundle, already in place for several years, was applied. Data was collected on each patient.

Results
Of 301 patients seen, 13% were recurrent attenders, 70% were admitted during weekday daytime, 1% in the evening, and 29% at weekends. There were 31% discharged within 48 hours, and only 3% had discharge delayed by social requirements. There was, however, a 23% error rate in coding patients as a COPD exacerbation. Our mortality data analysis identified that inappropriate coding was an issue. When corrected, it was superior to surrounding Trusts.

Conclusions
A need for better coordination of care with community services was identified. The majority of COPD related admissions were within working hours and was contrary to the common perception of everyday/weekend admissions. These findings allowed us to tailor our service to clinical need, demonstrating that a focused use of a clinical workforce on COPD admissions can have an impact on patient flow. Project data allowed us to address coding related problems and improved engagement with our local CCG.

Submitted abstract

Laura Graham, Specialist Respiratory physiotherapist, Interim Team Lead ACERs Service

Homerton University Hospital NHS Trust

A 2015 re-audit of key areas of the National COPD Audit Programme secondary care 2014 clinical audit of COPD exacerbations admitted to Homerton University Hospital

Jennifer Smith Respiratory Physiotherapist, Matthew Hodson Respiratory Nurse Consultant, Laura Graham Lead Respiratory Physiotherapist; ACERS Team, Homerton University Hospital, London, UK.

Aim:
Re-audit and benchmark data obtained from the National COPD Audit Programme's secondary care clinical audit (2014) of COPD exacerbations since the implementation of the COPD discharge bundle. Four areas of improvement were identified, following the results of the 2014 audit:

- Ensuring patients receive a respiratory specialist review.
- Improve the number of patients receiving specialist review.
- Improve oxygen prescribing.
- Increase the number of patients under the care of the respiratory team.

Method:
All data related to an admission for an acute exacerbation of COPD (AECOPD) between 1st February and 30th April 2015 was obtained from the information management department and audited.

Results:
A total of 416 patients were admitted with COPD as a coded diagnosis. Of these 56 had an AECOPD, 39 were excluded (re-admissions (n=14) incorrect coding (n=9) patient notes unavailable (n=13)), therefore in total 17 records were audited.

There had been change in all indicators; most noticeably 88% of patients were seen by the integrated COPD team (ACERS) compared to 62% in 2014. Oxygen prescription required further improvement, with 65% of patients not having oxygen prescribed on their medication chart.

Although when oxygen was prescribed, target oxygen saturations of 88-92% were stipulated in 100% of cases compared to 81% in 2014.

Conclusions:
Since the implementation of the COPD discharge bundle at Homerton Hospital, the number of specialist reviews by an integrated COPD team for patients admitted with AECOPD has increased (88%). Other findings were that all patients admitted with suspected AECOPD and no previous COPD diagnosis were reviewed by the integrated COPD team rather than a respiratory consultant. This ensured all patients living in City and Hackney admitted with an AECOPD were followed up by the integrated COPD team on discharge.

Although the results for oxygen prescription were not as positive, a new electronic system is now in place for oxygen prescribing and further auditing is currently underway.

Submitted abstract

Dr BMR Yasso, Consultant Respiratory Physician, Scunthorpe General Hospital

Northern Lincolnshire and Goole NHS Foundation Trust

In June 2015 a COPD multidisciplinary team (MDT) based at Scunthorpe General Hospital was established to improve quality of care of in-patients admitted for COPD. This initiative was in response to the national audit, to ensure consistency of care and timely referrals. The team consisting of a consultant respiratory physician, four respiratory specialist nurses, a physiotherapist, a dietician and a range of trainees, meets once a week on a respiratory ward to discuss the management of in-patients (an average of eight patients). The team is supported by a coordinator to ensure capturing of data and to include any outliers. The team has access to community based smoking cessation service, acute ward based NIV, pulmonary rehabilitation, community matron, palliative specialist team and cardiothoracic surgeon for any potential candidates. As well the COPD MDT benefits from direct referrals to the hospital at home team to facilitate early discharge.

Outcomes:
Though the implementation process was slow at the start our data showed that rate of referrals to the team has increased consistently. For example, the team has reviewed more than 120 in-patients over the last five months. We believe the structure of the team will help to support the forthcoming national audit project of continuous data collection.

Submitted abstract

Dr Stephen C Bourke, Consultant Physician in Respiratory and General Medicine

Northumbria Healthcare NHS Foundation Trust

Stephen C Bourke, Elizabeth Norman, Carlos Echevarria, John Steer.

Acute exacerbation of COPD (AECOPD) is the second commonest reason for emergency hospital admission. In patients with a low mortality risk, NICE recommend hospital at home (HAH) and early discharge services, whilst acknowledging the (previous) lack of a prognostic tool to guide selection. We developed the DECAF score, which accurately predicts in-hospital mortality risk in AECOPD and is easy to apply. Routine use was endorsed by the National COPD Audit Programme's secondary care audit 2014. 45-53% of hospitalised patients are at low risk of death (DECAF= 0-1), therefore potentially suitable for HAH. Compared to earlier trials of HAH lacking a robust prognostic score to guide selection, the proportion of patients included and level of medical dependency are substantially higher.

Methods:
We established a clinical HAH service, initially within a randomised control trial (RCT), in collaboration with multiple disciplines and organisations. The clinical pathway was refined following review of 492 patients scoring DECAF 0-1. The service includes optimisation of acute and chronic disease management, temporary controlled oxygen and nebulised bronchodilator therapy, intravenous therapy, daily+ specialist respiratory nurse home visits with 24/7 on call (consultant backup), physiotherapy, pharmacy, ambulance and same day social support. Clinical outcomes were assessed, and patients (including those declining participation), carers, clinicians and hospital managers interviewed.

Results:
HAH is preferred to in-patient care by 90% of patients. Safety data (no acute deaths) and patient, carer and clinician feedback from introduction of the service in 2014 to 2016 are excellent. Full results of the RCT will be presented at the BTS Winter Meeting. Existing data systems cannot capture this model; we successfully applied to NHS England to change the national provider spell definition, and create virtual wards.

Conclusions:
HAH in AECOPD selected by low-risk DECAF score is safe and preferred to inpatient care by most patients. The potential clinical and financial implications for the NHS are large.

Submitted abstract

Dr Arvind Rajasekaran FRCP, Consultant Respiratory Physician

Sandwell and West Birmingham NHS Hospitals Trust

As one of the Future Hospital development sites, we are working to develop integrated respiratory care pathways for long-term respiratory conditions with specialists working alongside generalists in primary care in order to deliver integrated care pathways and remove boundaries.

We have identified that there is poor/incorrect identification of COPD /asthma in the area, inappropriate and excess use of inhalers with poor value for money, late presentations of respiratory conditions leading to higher morbidity and mortality rates, high levels of avoidable emergency admissions and readmissions for respiratory patients and limited use of the existing 'advice and guidance' option by GPs (there has been an average of two per month over the last 12 months).

Our work to integrate services and improve care for patients will consist of providing easy and swift access to care, services and specialist advice at each point in pathway for patients, carers and health professionals; establishing 'joined up' care records to enable quicker, correct diagnosis and treatment; empowering patients to manage their conditions - understanding where and how to access support and education; providing access to pulmonary rehabilitation for all respiratory long term conditions. This will enable us to achieve the following objectives:

- Reduction in the numbers of emergency department (ED) attendances and emergency admissions (COPD, asthma and lung cancer related complications).
- Reduction in mortality rates (COPD, asthma, pneumonia).
- Reduction of emergency readmissions from 13% to the national average of 8% by 2017.
- Reduced numbers of admissions in the identified group of 'frequent attenders' (20 patients).
- % of respiratory patients reviewed within 24 hours to increase from 55% to 100%.

We are including all patients with chronic respiratory problems aged 16 years and over across secondary and primary care in the Sandwell and Birmingham area.

Submitted abstract

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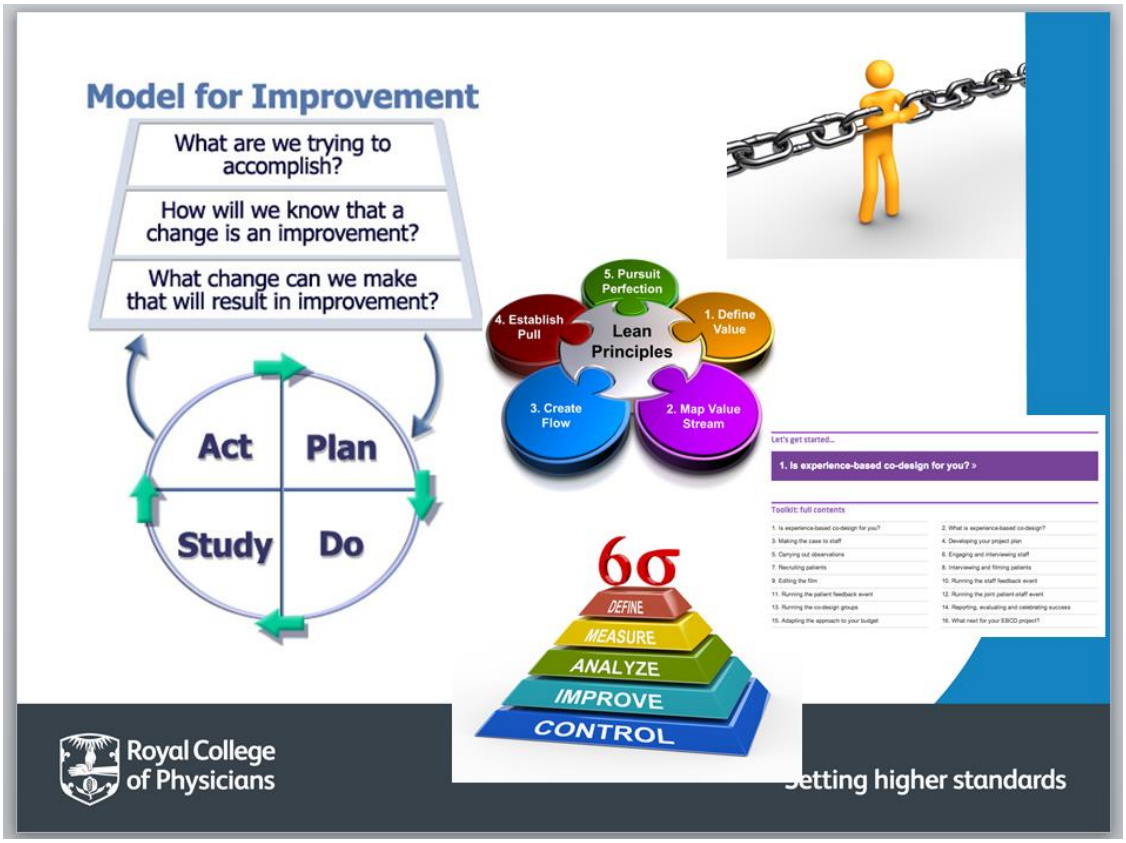
Following the last National COPD Audit Programme's secondary care audit, there has been substantial system changes and developments in the process of managing COPD patients in Stockport, both in the primary and secondary care setting. There has been collaboration between the Clinical Commissioning Group (CCG), Foundation Trust (FT) and community COPD team with leadership from the Stockport Integrated Respiratory Network (SIReN). The SIReN meeting is attended by the GP with special interest in COPD, secondary care COPD lead, CCG commissioners, FT business manager and the COPD nurse lead. This has resulted in better outcomes in management and overall care of COPD patients. We have increased the cohort of COPD nurses to 8 (4 Whole Time Equivalent (WTE) and part-time) and two physiotherapists for pulmonary rehabilitation at two sites. There are dedicated COPD nurses who look at frequent admitters to the hospital and find out how to address their problems and also to liaise with the Stockport Ambulance Service about management plans. There are COPD nurses dedicated to following up end-stage disease patients who need referral to palliative care and be enlisted to the Gold Standard Framework register. Our scheme has been successful in the following outcomes:

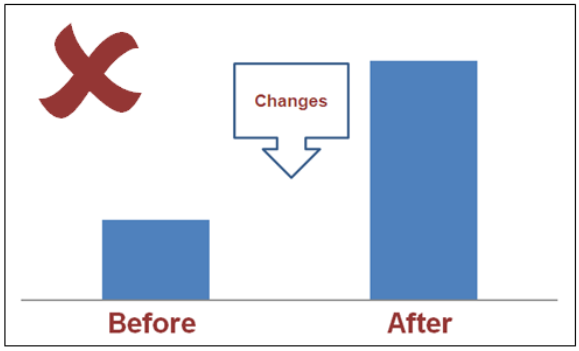
1. Reducing hospital admissions for the first time in 10 years.
2. Advanced Quality Alliance (AQUA) participation, where we managed to all fulfil 11 criteria and performed the best among 16 trusts across the north west of England, with a score of 80.4%.
3. Improved our pulmonary rehabilitation services (of which there are two centres), and reduced the waiting times.
4. Started regular COPD multidisciplinary team (MDT) meetings between secondary care consultant and COPD nurses. These have improved our approach to manage and follow-up complex cases and frequent admitters.
5. Following the last COPD audit, the trust has managed to improve patient care in several areas, including the prescribing of controlled oxygen (35%), the recording of body mass index (BMI) (30%), Medical Research Council (MRC) dyspnoea score (55%), NIV delivery in less than 3 hrs (85%).
6. Developed and modified our discharge bundle, to be followed along with prescribing self-management packs.
7. Implementing the NICE quality standards and making appropriate follow-up arrangements in the community, following discharge.

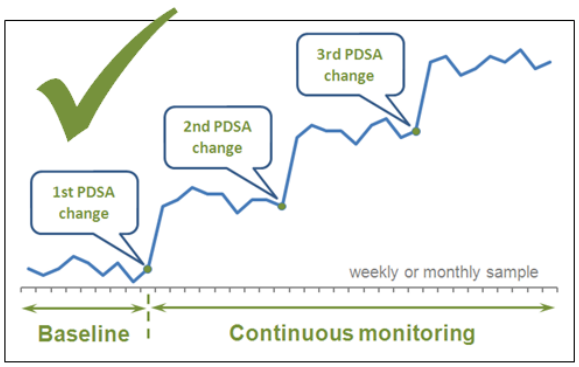
QI methodologies

Dr Emma Vaux's presentation touched upon several different QI methodologies (including lean principles; plan, study, do, act; six sigma), and encouraged the delegates to find the one that worked for them locally.



Dr Vaux endorsed continuous performance measurement, using monitoring along with implementing the QI changes in stages, in order to appropriately manage change and make the most of the initiatives. More details can be found in the action plan available to download from the website, and from Dr Vaux's presentation.





Action plan template

During the final session of the day, the delegates were given an action plan template to complete. This is available to download on the audit programme website. It was adapted from two existing action plan templates. The first was a template provided by Dr Emma Vaux, Programme Director of Quality Improvement for Royal Berkshire NHS Foundation Trust; and clinical lead for the Royal College of Physicians' Learning to Make a Difference project. This was combined with a template provided by the Royal College of Physicians' Inflammatory Bowel Disease Audit Programme.

Completion of the template was conducted in groups, with a healthy amount of debate and discussion. Improvement topics that were discussed included:

- access to specialist review
- oxygen prescription
- timing and application of NIV
- documentation of spirometry
- diagnosis of exacerbation
- smoking cessation service and pharmacotherapies
- discharge process
- the admission process.

Action plan template – examples

Some examples of the populated action plan templates are provided below.

Template question	Action plan template 1	Action plan template 2
Project title		
	Improving implementation of discharge bundle	Improvement of admissions process
What is the Issue/Opportunity for improvement you have identified?		
	National audit participation, poor.	National COPD audit shows that only a relatively small population of the COPD patients have access to respiratory specialist.
Why is it important?		
	1. Reducing readmission rates, improving quality of care e.g. 2. Increasing early PC uptake, set management plans	Access to respiratory specialist improves the outcomes of all elements of the discharge bundle.
Specific: What are we going to do about it?		
	1. Education - single phone number to leave details - training package ward physios/HCAs/NS - communicated strategy. I promise ESD + CBS 2. Increasing early PC uptake, set management plans	1. Identify shareholders: Resp-consultant, MAU consultant, A+E consultant, resident SPR in respiratory acute medicine and A+E, respiratory nurse specialist, bed manager, patient, GP, business manager. 2. Develop an action plan: - Early identification of patient - Access to respiratory specialist for all identified patients - Record of the application of discharge bundle
Measurable: How will we measure any improvement?		
	1. Regular spot checks on E-notes for accessibility 2. Participation in national COPD audit + PR audit	1. Higher proportion of patients with all elements of discharge bundle covered 2. LOS 3. Readmission rate 4. Proportion of patients on supported discharge
What specific factors/results do you aim to improve (increase or decrease)?		
Improvement in ((increase or decrease):		
	n/a	1. Discharge bundle criteria 2. LOS 3. Readmission within 30 days 4. Discharge on supported discharge
Target change (amount of increase or decrease):		
	n/a	Improvement from baseline
What is the measure (outcome & process): **What is the sample size:** **How will data be gathered:** **How frequently:** **Over what time frame:**		
	n/a	1. Continuous audit of discharge bundle 2. Trust data

		3. Trust data 4. Supported discharge team rewards
	Target date:	
	n/a	12 months
Are there any balancing measures?		
	Possible effect:	
	n/a	1. Increased referrals for supported discharge. 2. Increased referrals for pulmonary rehabilitation.
	What is the measure: **What is the sample size:** **How will data be gathered:** **How frequently:** **Over what time frame:**	
	n/a	1. Proportion of patients referred for supported discharge. 2. Proportion of patients referred for pulmonary rehabilitation
	What is the mitigating action should the result be undesirable?	
	n/a	Increase capacity and modify referred criteria
Achievable: Is this plan achievable?		
	Issues include motivation other staff - out of hours process - time and resources - staff turnover (if managed appropriately)	Assess feasibility with a pilot case study.
Responsible: Who will be responsible for carrying out this work? And who are the relevant stakeholders to communicate your project with/to?		
	1. COPD Team (in-reach staff) 2. Chief nurse 3. Respiratory consultant	Clinical lead for COPD
Timely: When will we have this completed?		
	18 months. Time required to bring about changes to entrenched anti-change colleagues. Appropriate time frame for PDSA + action plans	12 months
Sustainability: How will you ensure your change remains 'business as usual' in the future?		
	1. Regular reviews - monthly 2. Lead staff member to complete spot checks	Incorporate change in the local guidelines and standard operating procedures. Regular audit.
Date(s) due for review		
	1. Commence April 2017 2. 1/4 updates 3. Final sign off April 2018	12 months

Evaluation and next steps

The event was very well received by the delegates with everyone who completed the evaluation form agreeing or strongly agreeing that the event was 'interesting and relevant to me as a professional'. Individual items of feedback were about requests for more information on quality improvement, and this has been incorporated into the planning for the future activities of the audit programme.

The audit programme team have used this event as a launch event for its programme of QI activities. The next event is planned to be much more focused on the local implementation of QI, following the launch of the audit into continuous data collection in February 2017. This will be followed by a series of regional events. The audit programme will be publicising these in due course.