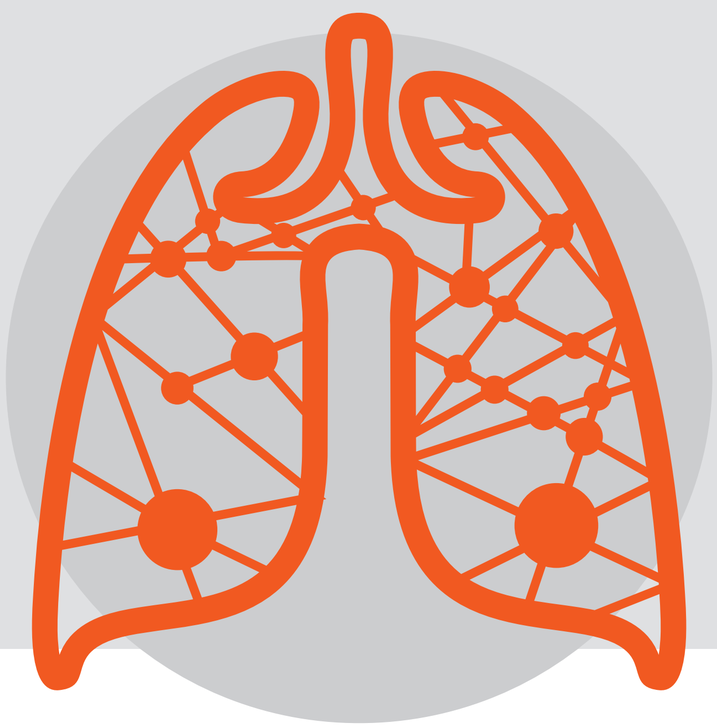
Kent Surrey Sussex Academic Health Science Network



COPD Discharge Bundle: Improving Process and Outcomes

The Kent Surrey Sussex Academic Health Science Network Respiratory Network was formed in 2010 to improve the quality, availability and accessibility of respiratory services, and reducing unwarranted variation in the management of pathways, such as CAP (community acquired pneumonia) and COPD.

The issue

Kent Surrey Sussex (KSS) has a population of 4.2 million served by 11 acute hospital trusts. Kent Surrey Sussex Academic Health Science Network (KSS AHSN) runs a multi-disciplinary Respiratory Network involving community teams, primary care, secondary care and commissioners.

Chronic obstructive pulmonary disease (COPD) admissions account for around 45,000 bed days per year in KSS hospitals.

A study in West London showed that improving adherence to a 'bundle' of standard interventions in Acute Exacerbations of COPD (AECOPD) was associated with reduced re-admission rate and reduced length of stay. (N Hopkinson. Designing and implementing a COPD care bundle. Thorax doi:10.1136/thoraxjnl-2011-200233)

In 2014 the KSS AHSN Respiratory Network recognised that there was room for improvement in care of hospitalised COPD patients, and agreed to work on a programme aiming to increase the number of AECOPD patients receiving a discharge care bundle based on the BTS COPD Discharge Bundle.

Assessment of problem and analysis of its causes:

KSS AHSN developed a 'respiratory dashboard' of COPD outcome measures providing baseline data. Respiratory Collaborative events were held six-monthly. These events were based on the Institute of Healthcare Improvement (IHI) 'Breakthrough Series: Collaborative Model for Improvement' methodology, reporting results and sharing good practice. Data from the respiratory dashboard was presented and discussed at these events, and a snapshot of data with commentary from the clinical lead was circulated widely every four months.

Project aims

The main change to practice is for acute respiratory teams to find ways to identify patients admitted with AECOPD and pro-actively deliver the elements of the discharge bundle:

1. Inhaler technique checked and corrected if necessary
2. Patient provided with written information and action plan
3. Prescribed 'Rescue Pack' on discharge
4. Referred to smoking cessation if appropriate
5. Assessed for, and referred for, pulmonary rehabilitation
6. Appropriate follow up arranged.

Strategy for change:

Respiratory Teams agreed the elements and wording of the COPD Discharge Bundle at 'Respiratory Collaborative' events, these were further refined over the first six months. Teams in acute trusts started recording delivery of the six elements, The Respiratory Dashboard was edited to show these process measures, enabling progress to be tracked.

Measurement of improvement:

Change is tracked by the Respiratory Dashboard. By June 2018 65% of patients were receiving all elements of the COPD DB (P<0.005 for trend).

	Oct 2014	Oct 2015	Oct 2016	Oct 2017	June 2018
Inhaler technique	24%	97%	54%	65%	80%
Written Information	8%	44%	50%	67%	85%
Rescue Pack	25%	42%	34%	46%	61%
Referred for smoking cessation	59%	73%	65%	81%	91%
Assessed for PR	22%	44%	34%	63%	83%
Follow up arranged	54%	70%	64%	69%	89%
All elements	4%	29%	30%	40%	65%

Lessons learnt

Healthy competition can be a stimulus for quality improvement work, enabling Trusts to compare their performance with other organisations in the region is motivating and also helps to identify successes and areas which may need improvement. There are many vibrant discussions at our Respiratory Collaborative events about the COPD Discharge Bundle.

Having a dedicated Programme Manager enables more capacity for engagement work and regular contact with acute sites, thereby facilitating more rapid change.

Messages for others:

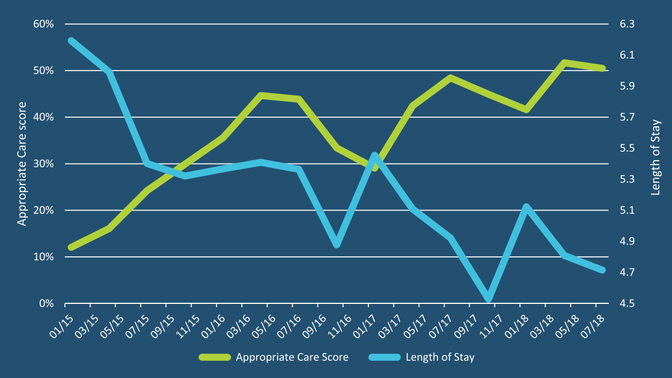
Our main anticipated challenge is around data collection. The National COPD audit involves teams collecting an overlapping data set. There are a significant number of patients for whom we do not have any process data.

Lessons learned at KSS AHSN show that strong networks and collaborative working together as a region means it is possible to achieve large scale change. The work programme has been associated with both reduced length of stay and inpatient mortality for AECOPD. In addition more patients have been seen by specialist respiratory clinicians in their hospital stay. Involvement of patients on our Respiratory Expert Advisory Group was instrumental in influencing the direction of the work so that it positively met patient needs.

Effects of changes

There has been a significant downward trend in both length of stay (6.2 to 5.5 days, P=0.003 for trend) and in-hospital mortality (4.7% to 3.4% P=0.0001 for trend), January 2014 to January 2018. More patients are receiving appropriate basic interventions in their hospital stay.

In 2017 3,626 patients in KSS region received at least one element of the COPD Discharge Bundle. In contrast to previous work we have not shown a reduction in all cause 30-day re-admission rate (26.2% in January 2014, 26.7% in January 2018).



We have sustained these results by holding regular collaborative events which included educational sessions and training in quality improvement methods.

We also produce a quarterly ePublication, Breathing Matters, which is circulated to more than 700 network members, keeping them up to date on various aspects of COPD care.

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