Delivering Healthy Ambitions Better for Less

NHS
Yorkshire and the Humber

Overview.

COPD causes 1,700 deaths in our region and costs PCTs an average of £5m per year. It is the second highest cause of emergency admissions. Readmission rates are high and length of stay is a day longer in Yorkshire and the Humber than the national average (6 days against 5 for England).

Introducing a 'hospital at home' approach can help patients manage their condition better, improving their experience and outcomes whilst significantly reducing activity and costs.

Why COPD?

Chronic Obstructive Pulmonary Disease (COPD) describes a group of conditions that may be better known as emphysema or chronic bronchitis. There are also many similarities with the symptoms and impact on patients of asthma.

100,000 people in Yorkshire and the Humber, or 1.9% of the population, are diagnosed with COPD in Yorkshire and the Humber. However, there are an estimated 177,000 people with COPD, suggesting that 43% of people with the disease are not currently diagnosed.

Latest figures for age standardised mortality for COPD in Yorkshire and the Humber are 31 deaths per 100,000, a total of 1700 per year. This is significantly higher than the England rate of 26 per 100,000.

COPD is the fifth largest killer disease in England. In Yorkshire and the Humber more people die from COPD (31.2 per 100,000) than from acute myocardial infarction (25.2 per 100,000) or chronic liver disease (10.7 per 100,000).

A progressive illness, COPD is disabling and the number of people dying as a result of COPD increases with age.

What is the challenge?

Current and ex-smokers are most at risk of developing COPD, due to the dominant role that smoking plays in causing the disease. Yorkshire and the Humber has the highest smoking prevalence of all regions (25% vs 21% of adults in England). Other people at risk are those who have been exposed to inhaled dusts and gases in the workplace. With the heritage of the mining industry in many communities in our region, as well as manufacturing, these are factors for the NHS in our region. Some people will have inherited a genetic predisposition that leads to early onset of emphysema.

The direct cost of COPD to the health system in Yorkshire and the Humber is £77m: or an average of £5m a year for every PCT. The broader economic cost of COPD has been put at £3.8 billion for lost productivity in the UK economy as a whole. 25% of people with COPD are prevented from working due to the disease with at least 20 million lost working days a year among men and 3.5 million lost days among women every year.

After ischaemic heart disease, COPD is the second highest cause of hospital admissions in the NHS. A recent national audit showed that readmission rates in Yorkshire were 32% and that the average length of stay a day longer than the national average. (Yorkshire 6 days, England 5 days).

How could we provide better for less?

The three areas to focus on in improving the COPD pathway are:

- stopping people developing COPD through reduced levels of smoking
- ensuring that those people who have already been diagnosed with COPD are managed through cost effective and evidence based interventions
- identifying people with the milder stage of COPD to stop them progressing to severe illness

Smoking is by far the most important cause of COPD and stopping smoking plays an important part in reducing risk. But simply encouraging more people to avoid tobacco or quit smoking will not be enough to address COPD. Lung damage due to the disease is gradual in onset and progressive in limiting airflow. Even if everyone diagnosed with COPD who smokes gave up immediately their lungs could not be repaired and in some lung damage would continue with the progression of the disease.

The three key elements of COPD service offering better care for less are:

- early supported discharge / hospital at home services
- access to pulmonary rehabilitation services
- access to oxygen services

Implementation

The National Clinical Strategy for COPD identifies areas for service improvement, the following examples demonstrate where service quality can be improved and system-wide costs to the NHS can be significantly reduced, these recommendations are backed by NHS Evidence analysis.

Early supported discharge schemes (ESD)

A team (often nurse and physio led) focussing the early discharge of patients admitted to acute care can lead to rapid turnaround of COPD patients, dramatically reducing LOS. This can develop to admission avoidance and effective management at home for many patients as the team's confidence and skills develop reaping better patient outcomes, improved patient satisfaction, system-wide savings and freeing up acute capacity.

Pulmonary rehabilitation services

Multi-disciplinary community based teams offering exercise and education for COPD patients have been demonstrated to help people manage their conditions, improve clinical outcomes and reduce hospital admissions and readmissions, this is particularly true when incorporated into a 'Hospital at Home' approach managing patients in the community (see above). The support provided by these teams includes physical rehabilitation, prevention and management of exacerbations, patient education and the promotion of self management. Patients also benefit from peer-support.

Management of COPD in the community rather than the acute setting is often described as a Hospital at Home, community based respiratory teams supporting patients to manage their conditions is endorsed by NHS Evidence (see references). A recent national audit found 70% of COPD patients did not have a written plan for what to do if their chest felt bad and that 31% had visited their GP practice more than 3 times in the month preceding a hospital admission due to COPD.

A 2004 BMJ paper found that "Hospital at home schemes are safe, effective, and cheaper than inpatient care in hospitals for treating many patients with acute exacerbation of chronic obstructive pulmonary disease (COPD), and free up hospital beds" (see references).

Access to oxygen services

There are also opportunities for improved efficiency to eliminate the redundant re-ordering for those who no longer need oxygen. PCTs should formalise the assessment process for the provision of oxygen using established criteria before an order is made.

Patient benefits

Better care for COPD patients can significantly improve their quality of life. Better management of the disease means less impact on daily living, fewer exacerbations as a result of the disease and fewer trips to the doctors or hospital.

COPD can lead to problems with restricted mobility which in turn may result in social isolation and psychological problems. A recent survey by the British Lung Foundation found 66% of COPD patients were unable to take a holiday and 33% were disabled by their breathlessness. These interventions would lead to patients having more confidence in managing their condition and more control over their lives.

Financial benefits

Better care can yield fewer attendances at A&E departments, fewer emergency admissions and evidence suggests that average length of stay can be reduced by 25%.

An average saving of £3.1m per PCT can be achieved from reducing emergency admissions, based on evidence from the COPD pilot in Hull. Potential savings per PCT are identified in the table below.

Early supportive discharge schemes (ESD) can reduce length of stay from an average of 6 days to 2 days. Following a hospital admission, 30% of people with COPD are likely to be admitted again within three months, improving the review of patients following discharge can help reduce these levels of readmissions.

It is estimated that for every patient enrolled in a pulmonary rehabilitation programme there is a saving of £210 per patient in reduced health resource utilization and a £1,500 improvement per patient in Quality Adjusted Life Years (QALYs).

Table 1 - Potential savings from reduced COPD emergency admissions by PCT

PCT	Total Emergency Admissions	COPD emergency admissions (12.5% of total)	Cost of COPD admissions (£1,752 each)	Savings (38% fewer admissions)
NE Lincs CTP	13,917	1,740	2,435,475	925,481
Calderdale PCT	20,325	2,541	3,556,875	1,351,613
Kirklees PCT	38,218	4,777	6,688,150	2,541,497
North Lincs PCT	15,754	1,969	2,756,950	1,047,641
Barnsley PCT	26,544	3,318	4,645,200	1,765,176
Sheffield PCT	56,442	7,055	9,877,350	3,753,393
Wakefield District PCT	37,252	4,657	6,519,100	2,477,258
Hull Teaching PCT	31,745	3,968	5,555,375	2,111,043
North Yorks & York PCT	66,151	8,269	11,576,425	4,399,042
Doncaster PCT	31,961	3,995	5,593,175	2,125,407
East Riding PCT	29,106	3,638	5,093,550	1,935,549
Bradford & Airedale PCT	55,474	6,934	9,707,950	3,689,021
Leeds PCT	84,652	10,582	14,814,100	5,629,358
Rotherham PCT	29,805	3,726	5,215,875	1,982,033
Y&H SHA	537,346	67,168	94,035,550	35,733,509
Source:	HES Online 2008/ 09	CQC Clearing the air 2006	Dr Foster Intelligence	Hull case study evidence

Case Studies

Wakefield and Hull have delivered better COPD care for less.

In Wakefield a health needs assessment identified a significant gap between predicted prevalence in the district (3.8% of the population) against actual data from GPs disease registers (2.5% of the population). Wakefield has also seen a historically high level of COPD admissions to hospital and has a mortality rate 35% above expected for the population size.

The PCT set two targets for COPD:

- To hold recorded COPD mortality at 35 per 100,000 annually to 2013, against a trend of increasing diagnosis;
- Reduce bed days following emergency COPD admissions from a baseline of 8,500 in 07/08 to 7,100 a year by 12/13

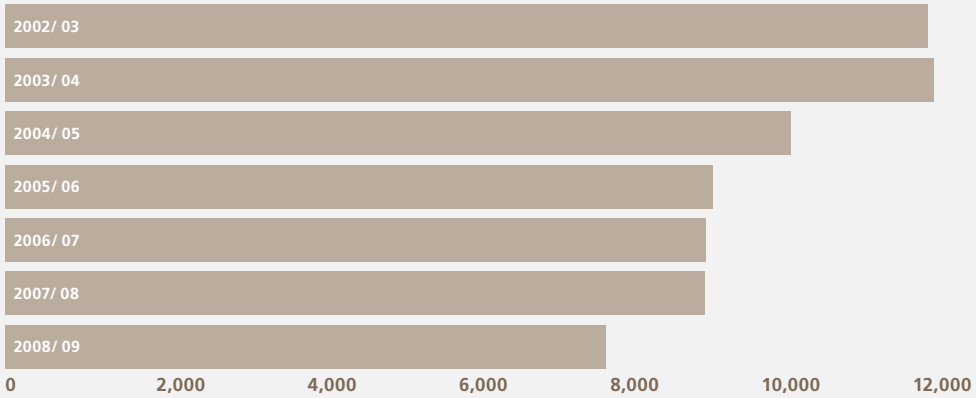
Wakefield has had an early supported discharge scheme since 2000 building on the pulmonary rehabilitation team established in 1994. A programme was established that included: raising awareness with the public, developing training for PCT staff and working with general practices on services in the community.

Redesign of services including a hospital at home project linked to early supported discharge. Elements included admissions avoidance work, specialist case management, improvements to the oxygen service and home investigations. The community element of the pulmonary rehabilitation service was enhanced supported by transport for patients. Pilots were also carried out into health forecasting, case finding and palliative care.

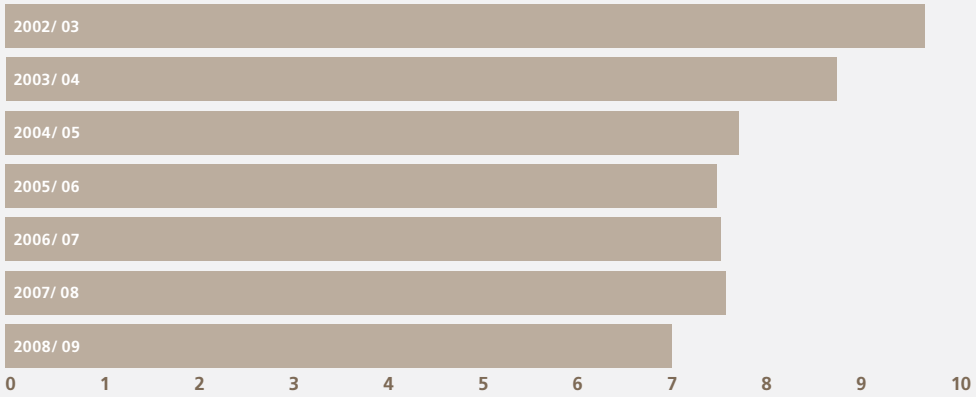
Outcomes include:

- Public awareness - 52% of local residents have heard of COPD
- All general practices have staff trained to provide spirometry
- 95% of practices now have a nurse with a COPD qualification
- An active multi disciplinary team and a respiratory partnership group
- All PMS services have agreed a COPD target
- A Locally Enhanced Service (LES) for COPD is in place
- A network of GPs and practice nurses has been established.

COPD Emergency Bed Days – Total Emergency Bed Days



COPD Emergency Bed Days – Average Length of Stay (days)



The results that have been achieved are shown in the tables opposite with both the total number of hospital bed days and the average length of stay decreasing and staying on a downward trajectory.

In Hull one of the Practice Based Commissioning consortia in the city has run a COPD pilot. Working together, the practices in the consortia and secondary care staff identified all COPD patients who had at least one admission in the previous 12 months. For these patients practices introduced a bi-weekly contact designed to identify early signs of exacerbation. A system was put in place to "flag" the patients whose symptoms needed more proactive clinical management. Patients with stable symptoms were offered education and self management support. Practices were surveyed to identify their training and service needs to support activity to reduce referrals and admissions to hospital care. A thriving nurse practitioner forum has also been set up across the collaborative to share best practice and peer supervision.

The results from the pilot are (comparing 09/10 with 08/09 data):

- Patients on COPD registers up 8% (from 1084 to 1176)
- hospital admissions down 38% (from 325 to 199)
- Re-admission rates down 37% (from 51 to 32)
- Average length of stay for admitted patients down from 8.5 days to 7.5 days
- Hospital bed days down 44% from 2,766 to 1,531

References

Hospital at Home

http://www.bmj.com/cgi/content/full/bmj;329/7461/315

BMJ 2004;329:315 (7 August),
doi:10.1136/bmj.38159.650347.55 (8 July 2004)

NHS Evidence hospital at home

http://www.library.nhs.uk/qipp/ViewResource.aspx?resID=330704&tabID=289&catID=15069

NHS Evidence COPD community teams

http://www.library.nhs.uk/qipp/ViewResource.aspx?resID=330699&tabID=289&catID=15069

National Strategy for COPD

http://www.nhs.uk/NHSEngland/NSF/Pages/ChronicObstructivePulmonaryDisease.aspx

IMPRESS – Commissioning guidance from a national network formed by the two leading clinical societies for respiratory care in the UK

www.impressresp.com

Contacts

Clinical Lead

John White
Yorkshire and the Humber COPD Clinical Lead

John.White@york.nhs.uk

Regional Lead Manager

Colin McIlwain
Associate Director, NHS Yorkshire and the Humber

colin.mcilwain@yorksandhumber.nhs.uk

Strategy

Tim Barton
Strategy Lead, NHS Yorkshire and the Humber

Tim.barton@yorksandhumber.nhs.uk

Wakefield case study

Lisa Chandler
Respiratory Programme Manager, NHS Wakefield

Lisa.Chandler@wdpct.nhs.uk

Hull - case study

Toni Yel
Commissioning Development Manager, NHS Hull

Toni.Yel@hullpct.nhs.uk