This report has been produced by the Yorkshire & Humber Respiratory Team. It highlights opportunities that will help you improve quality and productivity and improve outcomes for people with COPD in your CCG locality.

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COPD Value Pyramid (1) (2)

This pyramid illustrates cost effectiveness of treatment options in COPD, it is not a treatment algorithm. For guidance on management of COPD visit: www.nice.org.uk/cg101

A quality adjusted life-year (QALY) is the arithmetic product of life expectancy and a measure of the quality of the remaining life-years.

NICE defines an intervention to be cost effective if it costs less than £20,000-£30,000 per QALY.

The pyramid shows that the most cost effective interventions for COPD are influenza vaccination, stopping smoking and pulmonary rehabilitation and should underpin pharmacological treatment.

*Costing calculations based on Tiotropium*
COPD Pathway

COPD 8 Flu vaccination
Barnsley CCG 93.9%
(Range 87.5%-100%)

COPD 9 Stratify population according to COPD disease severity

PREVENTION

Smoking cessation rates

Find Undiagnosed COPD population and increase early diagnosis of mild disease
Social marketing to raise awareness of COPD
Targeted case finding to increase early diagnosis rates

DIAGNOSIS

COPD 10 Review with FEV1
Barnsley CCG 87.5%
(Range 20%-98.4%)

COPD 11 COPD 15 Diagnostic Spirometry
Barnsley CCG 90.1%
(Range 0%-100%)

COPD 12 Identify Pulmonary Rehabilitation referral rate MRC >=3

MANAGEMENT OF STABLE COPD

Inhaler technique & adherence with treatment
Self management education and care planning
Identify groups at high risk of admission and optimise treatment of COPD and co-morbidities

MANAGEMENT OF UNSTABLE COPD

Identify frequent fliers & optimise management
Self management education, written action plans and rescue packs
Early pulmonary rehabilitation post admission
Find Undiagnosed COPD population and increase early diagnosis of mild disease

END OF LIFE CARE

Use of trigger tools to identify patients approaching end of life
Involve palliative care team

Figures for COPD pathway: see references for Table 1
COPD Mortality

- Barnsley’s patients lose around 14.17 years of life due to mortality from Bronchitis, Emphysema and other COPD. England 11.67 Yorkshire and the Humber 14.1 Range 8.7-23.
- Nationally, 70% of COPD patients die in the hospital (1)

Rate of admissions vs the prevalence of COPD in CCG General Practices

- It is predicted that Barnsley CCG has 7298 COPD patients. QOF 2011/12 reports 7397 have been diagnosed by GPs (4).
- In 2011-12, there were 994 admissions for AE COPD in Barnsley CCG patients.
- A total of 7221 bed days were associated with acute exacerbations (AE) COPD admissions.
- Average cost of each COPD admission for Barnsley is £2304.
- Nationally 10% of emergency COPD admissions are in people whose COPD has not previously been diagnosed. (5)
- Average rate of admission for patients/100 on COPD register in Wakefield CCG was 13.57 (YH Range 9.92-23.12).
- 6.3% of all admissions in Barnsley patients were for 0 bed days (YH Range 2.6%-12.2%).

Smoking attributable hospital admissions per 100,000 population aged 35 years and over

- Smoking is the biggest risk factor for development of COPD. Smokers over 35 with one or more symptoms will be the majority of unidentified population.
- Stopping smoking is the most cost effective treatment for COPD, stop smoking support with pharmacotherapy costs £2000 per QALY.
- Stopping smoking is the only intervention shown to slow disease progression. It costs more to treat people with severe disease than mild or moderate disease (5).
- Supporting practices with high smoking prevalence in your CCG will significantly improve quit rates across the patch.

Spend on Inhalers for COPD and Asthma Patients in Barnsley PCT

- Barnsley PCT 2011/12 total spend on inhalers is £5,416,626.07.
- 50% of patients cannot use their inhalers correctly (6).
- 45% of patients forget to take doses as prescribed.
- 30% of patients stop treatment due to lack of perceived benefits (7).
- Patients with poor inhaler technique are 50% more likely to be admitted (6).
- Patients with poor inhaler technique are 60% more likely to have an exacerbation (8).
**Optimising best value COPD care in Barnsley (QIPPS)**

This page outlines specific areas that need to be examined and considered locally in order to:

- Reduce premature mortality
- Reduce admissions
- Increase smoking cessation / quit rates
- Reduce prescribing costs (this is currently headed in the table as ‘smoking cessation/quit rates’)

### Areas for consideration

<table>
<thead>
<tr>
<th>Current provision in Barnsley</th>
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</thead>
<tbody>
<tr>
<td><strong>Reduce Admissions</strong></td>
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<tr>
<td>- Target COPD patients for flu and pneumonia vaccinations as COPD death is a potential vaccine preventable event</td>
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<tr>
<td>- Regularly offer stop smoking advice</td>
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<tr>
<td>- Commission pulmonary rehabilitation for patients with MRC score of more than 3 or with MRC score of 2 and who have had an exacerbation OR post admission. The numbers needed to treat (NNT) with Pulmonary Rehabilitation is 4 to avoid 1 admission</td>
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<tr>
<td>- Record exacerbations and optimise pharmacotherapy</td>
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<td>- Provide self-management education, action plans and rescue medication packs</td>
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<tr>
<td>- Provide “Hospital at Home” services</td>
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<tr>
<td>- Commission CQUIN core bundles on discharge</td>
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<tr>
<td><strong>Reduce Admissions and Readmissions</strong></td>
</tr>
<tr>
<td>- Community COPD service is commissioned locally.</td>
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<tr>
<td>- COPD patients are annually offered flu vaccination and are a primary care target group for pneumonia vaccination.</td>
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<tr>
<td>- COPD patients are targeted for Stop smoking – direct referral to commissioned Smoking Cessation service, which additionally is delivered in collaboration with Community Pharmacies across the locality.</td>
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<tr>
<td>- GP practices record exacerbations for COPD patients and primary care reviews are being undertaken across ALL patients with a respiratory diagnosis; which includes training on inhaler technique and optimisation of pharmacotherapy, (programme started in 2011).</td>
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<tr>
<td>- Regional work is on-going with Ambulance service regarding targeted oxygen prescription</td>
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</tbody>
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**Inappropriate admissions of End of Life Care COPD Patients**

- Community care led “care home” review pilot, undertakes multidisciplinary review and identifies patients approaching “end of life” using national and local tools and puts in place PPD and DNA agreements. This pilot scheme is to be expanded across primary care 2013/14 onwards.
- Community COPD Service, Hospice Macmillan Nurses and Community Matrons provide additional support and advice at end of life across the Barnsley health locality.
### Areas for consideration

#### Smoking cessation
- Make every contact count. “Ask, Advise, Act” at every opportunity in primary or secondary setting
- Increase access to smoking cessation advice – in general practice or specialist services
- Ensure GP teams delivering smoking cessation advice have adequate skills and training to increase quit rates using motivation techniques and behavioural support
- Prescribe adjunct pharmacotherapy as this increases success;

<table>
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<tr>
<th>Numbers Needed to Treat (NNT) to Obtain 1 Long-Term Quitter (7) (8)</th>
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<tr>
<td><strong>Brief advice (45 minutes)</strong></td>
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<tr>
<td><strong>Medication Plus behavioural support</strong></td>
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<tr>
<td><strong>NRT</strong></td>
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<tr>
<td><strong>Bupropion</strong></td>
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<tr>
<td><strong>Varenicline</strong></td>
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</tbody>
</table>

Reduce inappropriate prescribing and waste (1) (10)
- Make every contact count, check inhaler technique and adherence with therapy at every opportunity in primary and secondary settings.
- Use structured review to ensure right patient, right treatment, right time
- Work with community pharmacists using structured MURs.

#### Current provision in Barnsley

**Smoking Cessation**
- Patients attending local hospital services receive intervention referral to stop smoking services.
- Smoking Cessation service, which additionally is delivered in collaboration with Community Pharmacies across the locality is commissioned supporting patient choice.

**Reduce inappropriate prescribing and waste (1) (10)**
- GP practices are encouraged to refer patients to Community Pharmacy project is on going to optimise respiratory Medicines Use Reviews through tMURs.
- Primary care reviews are being undertaken across ALL patients with a respiratory diagnosis; which includes training on inhaler technique and optimisation of pharmacotherapy, (programme started in 2011).
- Hospital medicines discharge review includes referral to Community Pharmacy for tMUR for any patient with hospital change in inhaler therapy.

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References

All information displayed at CCG level unless only available by PCT

Data sources:

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2. NICE COPD guidelines ; www.nice.org.uk/cg101
4. Eastern Region Public Health Observatory COPD prevalence estimates December 2011 –
5. An outcome strategy for chronic pulmonary disease (COPD) and Asthma in England – July 2011- Department of Health.
6. Restepo et al, Int of of Chron Pulmon Dis 2008; 3 (3); 3712384
9. GSF toolkit http://www.goldstandardsframework.org.uk/theGSFToolkit
10. PCRS opinion sheet on COPD review; http://www.pcrs-uk.org/opinions/copd_review_final.pdf
Data sources for Tables

Table 1  (a) Foster/IMS Regional Healthcare Analysis data, COPD Non – Elective Admissions (J40-44 & J47), Yorks & Humber SHA CCG GP practices, April 2011 – March 2012, accessed 28 November 2012
(b) QOF 2011-12; Yorks & Humber SHA CCG GP practices COPD prevalence data; Filename: http://www.ic.nhs.uk/webfiles/publications/002_Audits/QOF_2011-12/Practice_Tables/QOF1112_Pracs_Prevalence.xls; accessed 2 Nov 2012
(c) GP Practice to Clinical Commissioning Group Mappings - created 26/10/12; Filename: http://www.connectingforhealth.nhs.uk/systemsandservices/data/ods/ccginterim/interimpemem_v3.zip; accessed 5 Nov 2012

Table 2  http://www.lho.org.uk/viewResource.aspx?id=17431

Table 3  Spend on inhalers national ePACT system (electronic Prescribing and Cost Trend) Analysis tool via ePACT.net

Funnel plots extracted from GlaxoSmithKline Ltd. presentation to Lisa Chandler given on 20 December 2012; Title: An introduction to Statistical Process Control (SPC) and associated analysis with data for: Yorkshire & Humber SHA CCG practices
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