Commissioning for Better Outcomes in COPD

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What are the Commissioning Packs?

- Commissioning pack is a web based tool to help commissioners.
- Integral to each pack is an evidence-based service specification.
- The packs have been designed to follow a three stage process:
  1. Planning
  2. Agreeing
  3. Monitoring

Tailor the service to reflect local circumstances.
Objectives of the packs

• To make commissioning easier

• Improve quality of service for patients through clearly defined outcomes and best practice service specification;

• Drive efficiency by reducing unwarranted variation in services;

• Reduce bureaucracy for commissioners by providing tailored documents and templates and bringing together the different aspects of commissioning:
  • Clinical
  • Financial
  • Commercial
  • Contractual
  • Procurement
Challenge: To Improve Care & Outcomes Across Whole Pathway

- Smoking cessation
- Awareness raising
  - Lung health
  - Lung symptoms
  - Lung age testing
- Case finding
- Early diagnosis
- Accurate diagnosis
  - Quality spirometry
- Proactive chronic disease management and self-management
- Evidence based treatment/medicines management
- Physical activity
- Pulmonary rehab
- Social Care/Re-ablement
- Prompt therapy & follow-up in exacerbations
  - Structured hospital admission with specialist care

Unaware of lung health
Aware of lung health
No symptoms
Symptoms but no diagnosis
MILD stage
MODERATE stage
SEVERE stage
VERY SEVERE stage

Well
At-risk
With COPD diagnosis
The Commissioning Pack is being issued as part of the National Strategy and is designed to assist Commissioners when procuring COPD services and consists of four elements:

1) COPD Spirometry and Assessment Service
2) Service to manage COPD exacerbations
3) Pulmonary Rehabilitation
4) Oxygen assessment and review
COPD Spirometry and Assessment Service
Most people with COPD do not know they have it.

3.2 million people have COPD but 2.2 million are undiagnosed.
Prevalence of COPD (QOF); Percent, all ages: FY 2007/8

Two-fold difference in COPD prevalence between PCTs serving similar populations

National Programme Budget Project Interactive Atlas

Indicator: Prevalence of COPD (QOF); Percent, all ages, FY 2007/8
PCOs (2006) Filtered by ONS Area Group: Prospering Smaller Towns

Northumberland Care Trust: 2.22

Source: Compendium of Clinical and Health Indicators / Clinical and Health Outcomes Knowledge Base
How late is late diagnosis?

- 21% of those with undiagnosed COPD severe or very severe
- In NCROP audit 2008 - 10% of emergency COPD admissions were undiagnosed
- London study 2011 - 34% admissions were undiagnosed and one fifth of the undiagnosed patients were in respiratory failure
Does late diagnosis matter?

- Exacerbations are common even in moderate disease
- Lung function declines progressively
- Quality of life and physical/social function are significantly reduced in all stages of disease from mild to severe
- 44% of people with COPD in the UK are of working age: over half are prevented from working at all and a quarter limited in their ability to work
Misdiagnosis is also common

- Survey evidence – 27% patients on COPD registers do not have diagnostic criteria for COPD
- Misdiagnosed patients receive inadequate or inappropriate and often expensive treatment
Objectives of Spirometry and Assessment Service

To **diagnose COPD earlier** in the course of the disease
To provide **accurate diagnosis** of COPD
To provide **comprehensive assessment** of impact and severity
To ensure **effective communication** with patients
To ensure effective communication between health professionals
1. Patients who present to clinician with clinical features that suggest the possibility of COPD:
   - Smoker or ex-smoker over 35
   - Such features might include exertional breathlessness, chronic cough, regular sputum production, frequent winter “bronchitis” and wheeze

2. Systematic case finding by audit of primary care register
   - Symptomatic patients with airflow obstruction
   - Eg smokers or ex-smokers not known to have COPD or asthma with history of recurrent respiratory symptoms or infections or treatment with inhalers
Step 2: Assessment and Diagnosis

1. History and examination
2. Quality assured diagnostic spirometry
3. Assessment of disease severity and impact
4. Assessment of co-morbidities
5. Other investigations as indicated
Assessment of disease severity and impact

- Airflow obstruction
- Breathlessness
- Exacerbation frequency
- Health status eg CAT score
- BMI
- SaO2
Step 3: Partnership and communication

- Communicate diagnosis to patient
- Communicate with other healthcare professionals and ensure follow up
- Complete disease register
- Initiate care plan
Record keeping: disease register

- FEV1 and severity grading
- Diagnostic symptoms
- Functional impairment
- Exacerbation frequency
- Co-morbidities
- BMI
- Smoking status and interventions
- SaO2 and blood gas assessment if indicated
- Education and self management support
Service to Manage Exacerbations
Variation in management of acute exacerbations
NCROP: National COPD Audit 2008

- Royal College of Physicians, British Thoracic Society and British Lung Foundation

- Funded by The Health Foundation
NCROP evidence of variation

- Mortality
- Specialist care
- Non invasive ventilation
- Length of stay
- Early discharge schemes
- End of Life provision
- Quality standards – self scores
Two fold variation in in-patient expenditure between PCTs

Inpatient expenditure rate weighted for age, sex and need for all PCTs in 2008-09.

PCT inpatient expenditure and volume changes attainable by meeting benchmark.

<table>
<thead>
<tr>
<th>Select PCT</th>
<th>Knowsley PCT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select disease/ARG</td>
<td>RESPIRATORY</td>
</tr>
<tr>
<td>Select benchmark (figures indicate percentiles)</td>
<td>National Average</td>
</tr>
</tbody>
</table>

- PCT expenditure +/- benchmark: £ 1,880,767
- Volume of activity for selected PCT: 4,928
- Volume of activity at selected benchmark: 3,644
- PCT volume of activity +/- benchmark: 1,284
- PCT unit cost: £ 1,465
- National average unit cost: £ 1,530
Mortality from bronchitis, emphysema and other COPD: Directly age-standardised rate per 10,000 population, all ages, all persons 2005-2007

Two fold difference in mortality rate from bronchitis, emphysema and other COPD when comparing similar PCTs
COPD mortality varies substantially between PCTs providing healthcare to similar populations

- Indirectly standardised mortality rates from bronchitis, emphysema and other COPD (ICD10 J40-J44) 2006-2008
- Compared PCTs in same deprivation decile before aggregating nationally

<table>
<thead>
<tr>
<th>Level of Improvement</th>
<th>Reduction in Mortality</th>
<th>Deaths Prevented</th>
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<tbody>
<tr>
<td>To top quartile</td>
<td>11.6%</td>
<td>7,800</td>
</tr>
<tr>
<td>To median</td>
<td>5.2%</td>
<td>3,500</td>
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Objectives of Service to Manage Acute Exacerbations

- Prompt assessment and management during COPD exacerbations
- Expert care in the community when appropriate
- Structured admission to hospital when required
- Effective management of co-morbidities, optimisation of therapy and smoking cessation support as appropriate
- Structured and assisted discharge
- Effective communication with patient and support for self management
- Effective communication between healthcare professionals
Stage 0 - Reducing avoidable hospital admissions

- Expert care in the community when appropriate
  - eg Hospital@Home
- Specialist led multidisciplinary COPD Support Team
- Key worker to support patient and coordinate care
- Virtual ward rounds
- Telephone support
- Liaison with primary care team
Specialist-led community care

- Clarification of diagnosis where needed
- Prompt assessment and treatment
- Appropriate prescribing – guidance based and cost effective
- Self management support
- Stop smoking support
- Pulmonary rehabilitation
Stage 1 - Organisation of care in hospital

- Specialist led multidisciplinary team
- Prompt assessment and structured admission plan
- Daily senior decision-making by respiratory clinician
- Communication and integration with primary care
- Structured and assisted discharge
- Out of hospital services and support
Stage 2: In-patient treatment

- Prompt management of exacerbation
- Prompt assessment for and provision of NIV
- Appropriate prescribing – guidance based and cost effective
- Optimising management of COPD
- Optimising management of co-morbidities
- Support for smoking cessation
- Support for self management
- Assessment for early discharge
Stage 3: Structured and assisted discharge

- Referral to smoking cessation service
- Assessment for and enrolment into a PR programme
- Provision of appropriate education, written information, self management plan and rescue pack for future exacerbations
- Ensure that patient understands their medications and has demonstrated good inhaler technique
- Ensure that patient has appropriate support and follow up
Pulmonary Rehabilitation Service
Variation in Availability and Quality of Pulmonary Rehabilitation
Pulmonary Rehabilitation improves outcomes

- Pulmonary rehab effective at preventing functional decline, improving physical capacity, increasing capacity for self-management, possible reduction in admissions.
- Should be offered to all MRC3 or greater and all admitted with acute exacerbation
- But provision variable: many are not offered or fail to take up or fail to complete
- And quality variable - clear guidelines available but not always followed
<table>
<thead>
<tr>
<th><strong>Programme Variation</strong></th>
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<tr>
<td><strong>Structure</strong></td>
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<tr>
<td><strong>Duration</strong></td>
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<tr>
<td><strong>Frequency</strong></td>
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<td><strong>Definition of completion</strong></td>
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<td><strong>Completion rate</strong></td>
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<td><strong>Waiting time</strong></td>
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<td><strong>Assessment</strong></td>
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<tr>
<td><strong>Spirometry</strong></td>
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<td><strong>Questionnaires</strong></td>
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<td><strong>Exercise capacity testing</strong></td>
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Programme Variation

- Staffing ratio
- Exercise prescription method
- Education content and delivery
- Outcomes measured
- Follow up
Objectives of Pulmonary Rehabilitation Service

- To make pulmonary rehabilitation accessible to
  - individuals functionally disabled by chronic lung conditions.
  - patients who have had a recent hospitalisation for an acute exacerbation
- To provide quality assured, multi-component (exercise and education) and multidisciplinary pulmonary rehabilitation programmes tailored to meet the patient’s individual needs
- To agree practical and achievable goals with the patient and facilitate attainment of them
Stage 1: Identify and Refer

- Promotion of PR as core component of COPD management
- Active engagement of clinicians in promoting uptake
- Routine referral where PR indicated:
  - Patients with COPD and other chronic progressive lung conditions
  - Functionally disabled by breathlessness (MRC ≥ 3)
  - MRC 2 patients who are disabled by their condition
  - Recent hospitalisation for exacerbation or significant functional deterioration
Stage 2: Initial assessment

1. Comprehensive review
   • General health, respiratory condition and current management
   • Therapy optimisation, further investigation or referral where appropriate

2. PR assessment in line with standards
   • Quality of life
   • Mood
   • Functional status
   • Exercise capacity
Stage 3: Deliver comprehensive PR programme

1. Programme style
   • Rolling / Cohort / Combination
   • 2 supervised sessions per week with additional home training
   • Minimum 6 weeks

2. Programme content
   • Exercise (prescription, training and progression)
   • Education

3. Goal evaluation throughout

4. Staffed by team experienced in:
   • chronic respiratory disease
   • exercise prescription and training
Stage 4: Final assessment and discharge

- Exercise capacity, QOL, functional status, mental health
- Achievement against baseline, patient goals and programme goals
- Advice on exercise and health maintenance
- Appropriate signposting
Oxygen Assessment and Review Service
Variation in Provision and Value of Home Oxygen
LTOT – Substantial scope for savings

- Evidence based use of LTOT improves survival and QOL
- LTOT is often prescribed when not indicated
- One third people on LTOT derive no benefit or do not use oxygen
- Payment is based on provision not usage
3-fold Variation in Oxygen Spend per 1000 people with COPD
Objectives of Home Oxygen Service

- Ensure that people prescribed oxygen and clinicians are well informed about the nature, scope and capability of the home oxygen service
- Have quality at its core and be accessible, safe, effective and responsive to patients
- Be evidence-based, clinically led and continually strive to improve outcomes for patients
- Be affordable and represent good value for money
- Provide easy access to an assessment procedure carried out by appropriately qualified healthcare professionals, using appropriate diagnostic equipment
Stage 0
Identify and refer patient for home oxygen assessment

- Oxygen should only be prescribed after assessment by HOS-AR service
- Pulse oximetry should be routinely available in general practice
- Patients with SaO2 at or below 92% and whose condition is stable, should be referred to the HOS-AR service for full assessment
- Where diagnosis unclear or significant co-morbidity e.g. heart failure refer to an appropriate specialist physician
- Borderline hypoxaemia (92-95%) may need assessment if breathless on exertion or when sleep disordered breathing is a possibility
Stage 1  
Home oxygen assessment

- Assessment by suitably trained personnel
- Spirometry and arterial blood gases
- Safety, flow rate and duration of oxygen therapy determined for each patient
- Identify equipment and delivery system best suited to patient’s lifestyle
- Assessment for ambulatory oxygen
- Risk assessment
- Home visit within 4 weeks
Stage 2
Follow up home visits

Within 4 weeks of initiation of home oxygen
Every 6 months – review of clinical status
Every 12 months – arterial blood gases

Within 6 weeks of acute admission in patient on home oxygen
Within 6 weeks of acute exacerbation in patient on home oxygen
Stage 3
Withdrawal of Oxygen therapy

- Patients on home oxygen shown not to be hypoxaemic should be advised to discontinue and assessed for other appropriate therapies for breathlessness.
- Patients who are significantly hypoxaemic but not using the prescribed oxygen therapy should be counselled on its benefits and encouraged to increase usage to the recommended level.
COPD commissioning pack cost benefit model
## Overview of the COPD model

### General approach

- **Model looks at two elements of COPD pathway**
  - Diagnosis and Assessment Service
  - Pulmonary Rehabilitation Service
- **For each element, the model estimates:**
  - Cost of providing the service itself
  - Costs and benefits resulting from the effects of the service on patient health and treatment
- **Local level data is used if possible, national level data if not**
- **Estimates from the literature have been used as key inputs of model**
- **Clinical advisors and DH expertise helped to identify appropriate literature**
- **Where national data or estimates from the literature were not available, we have used assumptions based on clinical advice**
- **Model allows commissioners to enter some local level data and flex certain assumptions**
Structure: Spirometry and Assessment Service model

- Number of patients referred
  - Case-finding diagnoses patients earlier than they would otherwise have been diagnosed
    - Increase in cost of ongoing treatment in primary care
    - Reduction in cost of treatment for exacerbations
      - Net cost
      - QALY gains
Structure: Pulmonary Rehabilitation model

Number of patients referred

- Impact of PR on health of COPD patients
  - Cost of service
  - Reduction in length of stay in hospital
  - Reduction in number of GP home visits
  - Increase in number of GP surgery visits

- Net cost
- QALY gains
Summary sheet provides commissioner with all key information

Commissioners select their PCT from drop-down

Then select which COPD services to commission

Total cost of each service over 20 years

Commissioner enters local data and assumptions

Costs and benefits year-by-year

<table>
<thead>
<tr>
<th>Spirometry and Assessment Service</th>
<th>Costs and benefits over 20 years</th>
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<tbody>
<tr>
<td>% of GP practices which agree to participate</td>
<td>100%</td>
</tr>
<tr>
<td>% of those invited likely to turn up</td>
<td>30%</td>
</tr>
<tr>
<td>Proportion of population over 35 who smoke</td>
<td>19.7%</td>
</tr>
<tr>
<td>Proportion of population over 35 who are ex-smokers</td>
<td>29.9%</td>
</tr>
<tr>
<td>% of current smokers who quit on diagnosis</td>
<td>10%</td>
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Commissioning services for people with COPD: in development

NICE commissioning guides provide support for the local implementation of NICE guidance through commissioning, and are a resource for people involved in commissioning health and social care services and public health programmes within the NHS and partner organisations in England.

A NICE commissioning guide on services for people with COPD is currently under development and will be published in October 2011. We are working with colleagues at the Department of Health to ensure that this NICE commissioning guide is consistent with an outcomes strategy for people with chronic obstructive disease (COPD) and asthma.

This will update and replace the existing NICE commissioning guides on assisted-discharge service for patients with COPD and pulmonary rehabilitation service for patients with COPD.

In the meantime commissioners may wish to refer to the following sources of information:

- NICE quality standard for COPD
- NICE support for commissioners and others using the quality standard for COPD
- NICE Public health guidance PH10. Smoking cessation services in primary care, pharmacies, local authorities and workplaces, particularly for manual working groups, pregnant women and hard to reach communities
- NICE Public health guidance PH11. Brief interventions and referral for smoking cessation in primary care and other settings
- An outcomes strategy for people with chronic obstructive pulmonary disease (COPD) and asthma in England
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