Workshop W12M

COPD Resources and Training Online

Speaker: Daniela Wilson
COPD - a hidden disease

- In Australia, estimates indicate that up to 1 in 7 people over 40 are affected by COPD.
- Research also shows that at least half of those with moderate to severe COPD do not know they have COPD and are therefore not taking the important steps critical to slowing down disease progression.


COPD - a multi-component disease

- Myocardial infarction
- Angina
- Malnutrition
- Osteoporosis
- Respiratory infection
- Depressions
- Diabetes
- Lung Cancer

Attitudes to COPD management

1,224 randomly selected patients from Electoral Roll in Melbourne performed spirometry (Matheson, IMJ 2006)

- 6.8% had symptomatic COPD
- Of those with COPD:
  - 10% had a doctor’s diagnosis of COPD
  - 36% had a diagnosis of asthma
  - 5% had a diagnosis of asthma and COPD
  - Nearly 50% had no diagnosis
  - 33% had been given a spirometry test

Of those with COPD:

- 43.6% reported ever using inhaled steroids
- Slightly over 50% had been immunised in previous 12 months
- Approx 1% have access to pulmonary rehabilitation

Matheson, IMJ 2006

ALF, 2001
OBJECTIVES

- COPD brief overview
- Increase awareness of how to identify patients with COPD
- Know how to improve the diagnosis of COPD
- Outline evidence based practice in management of COPD
- Identify MBS item numbers to use in managing the COPD patient
- Learn about on-line tools and resources to support COPD management in primary care

CHRONIC OBSTRUCTIVE PULMONARY DISEASE - COPD

COPD is defined as a preventable and treatable disease associated with significant extra-pulmonary consequences that may contribute to severity or outcomes.

The pulmonary component of COPD is characterised by airflow limitation that is not fully reversible.

The airflow limitation is usually progressive with an abnormal inflammatory response of the lungs to noxious particles. In Australia this is mainly caused by cigarette smoking.

- an umbrella term for a group of obstructive airway disorders characterised by airflow limitation that is not fully reversible.
- chronic bronchitis
- emphysema
- small airways disease
- chronic asthma

Question

1. How often do you diagnose a patient with COPD?
   a) Every week
   b) Every month
   c) A couple of times a year
   d) Never

Identifying the patient

- Lung health checklist
- Symptom presentation
- Systematic or opportunistic
- COPD screening devices

Key symptoms of COPD

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic Cough</td>
<td>Present intermittently/everyday throughout the day</td>
</tr>
<tr>
<td>Recurrent chest infections</td>
<td></td>
</tr>
<tr>
<td>Chronic Sputum production</td>
<td>Any pattern</td>
</tr>
<tr>
<td>Dyspnoea that is</td>
<td>Progressive, persistent, 'an increased effort to breathe', 'heaviness', 'air hunger', 'gasping', worse on exercise, worse during respiratory infections</td>
</tr>
<tr>
<td>History of exposure to risk factors</td>
<td>Tobacco smoke, occupational dusts and chemicals, smoke from home cooking</td>
</tr>
</tbody>
</table>
COPD Screening

How often do you refer to guidelines for the diagnosis and management of patients with COPD?

1. Once a week
2. Once a month
3. Once every 6 months
4. Once a year
5. Never

Diagnosis

- Symptom-based diagnosis of COPD is unreliable
- Diagnostic spirometry is essential to avoid inappropriate management.
- Policy and practice change is needed to support the use of spirometry.

Spirometry

- Spirometry measure the speed at which the lungs can be emptied and filled with air, and helps:
  - diagnose suspected lung disease
  - planning treatments and decide whether treatments should be continued, changed, or are no longer needed

Spirometry

- Common lung conditions, such as asthma and emphysema, can have overlapping symptoms

- Spirometry measure the speed at which the lungs can be emptied and filled with air, and helps:
  - diagnose suspected lung disease
  - planning treatments and decide whether treatments should be continued, changed, or are no longer needed

- Australian practices 2004
  - 64% had spirometer
- Barriers to lung function measurement
  - Lack of access to a well maintained spirometer
  - Lack of skills
  - Increased cost of longer consultation for patients
  - No Medicare rebate (without reversibility testing)

- “It is obsolete, it gives you absolutely no interpretation at all” GP
- “There has to be some funding, and that is a real problem” GP
- “The finances involved are prohibitive” GP

Policy and practice change is needed to support the use of spirometry.
Question

2. How often do you use spirometry to diagnose a patient with COPD?
   a) Every week
   b) Every month
   c) A couple of times a year
   d) Never

Spirometry

- To assess reversibility of airflow obstruction, perform spirometry BEFORE and 15 minutes AFTER a bronchodilator
- An increase in FEV₁ that is both greater than 200ml and 12% above the pre-bronchodilator FEV₁ is considered to be a significant bronchodilator response.
- Greater than 200ml and 12% reversibility is indicative of asthma whereas less than this is considered to be an obstructive lung disease

Spirometry – COPD severity

<table>
<thead>
<tr>
<th>COPD severity</th>
<th>Spirometry findings postbronchodilator FEV₁</th>
<th>Functional assessment (activities of daily living)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild</td>
<td>60-80% predicted</td>
<td>Few symptoms. No effect on daily activities. Breathless on moderate exertion</td>
</tr>
<tr>
<td>Moderate</td>
<td>40-50% predicted</td>
<td>Increasing dyspnoea. Breathless on the flat. Increasing limitation of daily activities</td>
</tr>
<tr>
<td>Severe</td>
<td>&lt;40% predicted</td>
<td>Oxyopes on minimal exertion. Daily activities severely curtailed</td>
</tr>
</tbody>
</table>

Ratio FEV₁/FVC < 0.70
Severity by FEV₁ < 80% predicted

Smoking Cessation - Benefits

Question

3. Which statement do you agree with

a) Spirometry is essential for proper COPD diagnosis and management
b) Spirometry results leads to motivation to quit smoking

COPD-X Guidelines

- Australian and New Zealand evidence-based guidelines for the diagnosis and management of COPD
- Reviewed quarterly, updated online every 6 months, NHMRC levels of evidence: [http://www.copdx.org.au/](http://www.copdx.org.au/)
- Less than 1 in 10 GPs use the COPD-X Guidelines on a regular basis

Primary Care Respiratory Toolkit

- Spirometry calculator
- Lung age estimator
- COPD-X aid
- Stepwise management plan
- Resources

COPD-X Guidelines

<table>
<thead>
<tr>
<th>C</th>
<th>Confirm diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>O</td>
<td>Optimise function</td>
</tr>
<tr>
<td>P</td>
<td>Prevent deterioration</td>
</tr>
<tr>
<td>D</td>
<td>Develop support network and self-management plan</td>
</tr>
<tr>
<td>X</td>
<td>Manage exacerbations</td>
</tr>
</tbody>
</table>

C - Confirm Diagnosis

Spirometry curves

<table>
<thead>
<tr>
<th>COPD</th>
<th>Asthma</th>
<th>Mixed</th>
</tr>
</thead>
<tbody>
<tr>
<td>FEV₁</td>
<td>FEV₁</td>
<td>FEV₁</td>
</tr>
<tr>
<td>47% pred</td>
<td>94.7% pred</td>
<td>82% pred</td>
</tr>
<tr>
<td>FEV₁/FVC: 0.39</td>
<td>FEV₁/FVC: 0.87</td>
<td>FEV₁/FVC: 0.52</td>
</tr>
</tbody>
</table>
Optimise Function

Short-acting and long acting symptom relief
Inhaled bronchodilators provide symptom relief and increase exercise capacity.
- Short-acting beta₂ agonists (SABAs)
  - Terbutaline (Bricanyl®), Salbutamol (Asmol®), Airomir®, Ventolin®
- Long-acting beta₂ agonists (LABAs)
  - Eformoterol (Oxis®, Foradile®), Salmeterol (Serevent®), Indacaterol
- Short-acting anticholinergics
  - Ipratropium (Atrovent®)
- Long-acting anticholinergics (muscarinic antagonists or LAMAs)
  - Tiotropium (Spiriva®)

Exacerbation prevention
Inhaled corticosteroids work to reduce the inflammation which causes swelling and mucus production. They should be considered in patients with severe COPD and frequent exacerbations.
- Beclomethasone (QVAR®), Budesonide (Pulmocort®), Fluticasone (Flisolide®)
- Combination ICS/LABAs shown to improve quality of life, symptoms and exacerbations.
  - Budesonide and eformoterol (Symbicort®), Fluticasone and salmeterol (Seretide®)

Pulmonary Rehabilitation
- Level 1 evidence
- Evidence-based 8 weeks
- Education & exercise
- Reduces hospitalisations
- Improves symptoms
- Improves muscle function and exercise tolerance
- Improves Q of L

The Lung Foundation has national list of programs
Question

4. Do you know where to refer your COPD patient to pulmonary rehabilitation in your area?
   a) Yes
   b) No

Smoking Cessation – what works

<table>
<thead>
<tr>
<th>Smoking Cessation Interventions</th>
<th>Quit rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health professionals short advice</td>
<td>2</td>
</tr>
<tr>
<td>Intensive behavioural support</td>
<td>7</td>
</tr>
<tr>
<td>Self-help material</td>
<td>1</td>
</tr>
<tr>
<td>Proactive telephone counselling</td>
<td>2</td>
</tr>
<tr>
<td>Nicotine products (NRT)</td>
<td>5-15</td>
</tr>
<tr>
<td>Bupropion SR</td>
<td>9</td>
</tr>
<tr>
<td>Intensive support &amp; NRT/bupropion</td>
<td>13-19</td>
</tr>
<tr>
<td>Intensive support &amp; varenicline</td>
<td>22-23</td>
</tr>
</tbody>
</table>

P – Prevent deterioration

- Yearly Influenza vaccination reduces the risk of exacerbations, hospitalisation and death
- Pneumococcal vaccination is recommended in elderly or immunosuppressed patients – 5 yearly
- Regular review

D – Develop self-management

Lung Foundation Resources

- Patient resources
- 1 800 654 301
- Website
- Patient seminars
- Support groups
- Newsletters
- Lungs in Action


**Manage Exacerbations**

**Early treatment**

- Increase bronchodilator
- Systemic glucocorticoids
- Antibiotic
- Controlled oxygen therapy

**Indications for hospitalisation**

For patients with increased dyspnoea, cough or sputum production

- Inadequate response to outpatient treatment
- Inability to walk when previously mobile
- Unable to eat or drink because of dyspnoea
- Unable to manage at home
- High-risk comorbid condition
- Prolonged progressive symptoms
- Altered mental state (suggestive of hypercapnia)
- Worsening hypoxaemia

**Resources**

Health Professional Resources

The following lists resources that are useful for general practice:

- COPD-X
- The COPD-X Plan: Australian and New Zealand Guidelines for the management of Chronic Obstructive Pulmonary Disease
- Smoking cessation pharmacotherapy: an update for health professionals
- COPD On-Line: An interactive training program for primary care nurses
- MBS Item Flow Chart for COPD
- Stepwise management plan
- COPD Assessment Tool; MMRC Dyspnoea Tool
- Resource order form
- Pulse oxymetry

**Stepwise Management of Stable COPD**

**Chronic Disease Management for COPD in practice: MBS item numbers**

<table>
<thead>
<tr>
<th>MBS Item</th>
<th>Description</th>
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<tbody>
<tr>
<td>701</td>
<td>Health Assessment (701, 703, 705, 707)</td>
</tr>
<tr>
<td>703</td>
<td>Spirometry (11506)</td>
</tr>
<tr>
<td>705</td>
<td>GPMP (721)</td>
</tr>
<tr>
<td>707</td>
<td>TCA (723)</td>
</tr>
<tr>
<td>11506</td>
<td>Nurse Education (10997)</td>
</tr>
<tr>
<td>23</td>
<td>Consultation with GP (23)</td>
</tr>
<tr>
<td>732</td>
<td>Review (732)</td>
</tr>
<tr>
<td>10997</td>
<td>Review (10997)</td>
</tr>
<tr>
<td>701</td>
<td>Health Assessment (701, 703, 705, 707)</td>
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Question

5. Have you completed any training in COPD?
   a) Yes
   b) No

COPD Online: interactive training program for primary care nurses

- Developed by leading clinical experts in COPD.
- Ten learning modules – approx. 8 hours to complete
- 7 CNE points from RCNA, 8 CPD hours from APNA
- Interactive Features
  - Case studies and videos
  - Care plans and MBS item numbers
  - Quizzes to test knowledge
  - Downloadable clinical assessment tools and patient handouts


MORE INFORMATION

For more information, please visit
www.lungfoundation.com.au