



From the Clinical Director

The exact prevalence of Chronic Obstructive Pulmonary Disease around the world is not known, but estimates have varied from 7-19%. This is largely due to the fact that COPD is an underdiagnosed (and undertreated) disease, because many people do not present for medical care until the disease is in a late stage. Estimates suggest a pooled prevalence of about 11.8% for men and 8.5% for women.

The impact of lung disease is a significant and growing area of health concern in Australia. In 2011-12, about three in 10 Australians (29 %) suffered from one or more chronic respiratory conditions (6.3 million people). Chronic respiratory conditions affect the airways and are characterised by symptoms such as wheezing, shortness of breath, chest tightness and cough. Conditions include: asthma, COPD and a range of other conditions, such as allergic rhinitis, chronic sinusitis, cystic fibrosis, bronchiectasis, occupational lung disease and sleep apnoea. Among chronic diseases, the greatest burden of disease is listed as highest with coronary artery disease, followed by low back pain, COPD, depression and cerebrovascular disease in disability-adjusted life years (DALYs).

Past guidelines for COPD have been somewhat pessimistic in outlook, indicating that the disease process is irreversible and that therapy has little to offer. However, a more optimistic view has come to be widely accepted. The Global Initiative for Chronic Obstructive Lung Disease (GOLD) guidelines define COPD as a disease state characterized by airflow limitation that is not fully reversible, is usually progressive, and is associated with an abnormal inflammatory response of the lungs to inhaled noxious particles or gases.

COPD is associated with an abnormal inflammatory response of the lungs to noxious particles or gases, most commonly cigarette smoke, and is generally progressive. It is characterised by persistent airflow limitation due to varying combinations of emphysema and small airways diseases. The airflow limitation can be due to loss of supporting elastic recoil from the lung tissue and/or luminal narrowing because of airway wall thickening - hence, the term "limitation" is often used rather than "obstruction", as obstruction may not be always present although it is inherent in the descriptor. The primary cause of COPD is exposure to tobacco smoke. Overall, tobacco smoking accounts for as much as 90% of COPD risk. The normal inflammatory response is amplified in persons prone to COPD development.

Clinically significant COPD develops in 15-25% of cigarette smokers, although this number is believed to be an underestimate. Age of initiation of smoking, total pack-years, and current smoking status predict COPD mortality. People who smoke have an increased annual decline in FEV1: the physiologic normal decline in FEV1 is estimated to be 20-30 ml/y, but the rate of decline in COPD patients is generally 60 ml/y or greater. Other risk factors include maternal smoking, long-standing asthma, respiratory symptoms in childhood, exposure to second hand smoke, occupational exposures to dusts and fumes and inherited conditions such as alpha-1 antitrypsin deficiency.

The primary cause of COPD is exposure to tobacco smoke.

The main symptoms of COPD are breathlessness, cough and sputum production, and recurrent respiratory infections. Typically, breathlessness, which is the most significant symptom, initially occurs only on exertion but worsens insidiously over several years as the disease progresses. A persistent cough, typically worse in the morning with colourless mucoid sputum, is common in smokers. Other symptoms such as chest tightness, wheezing and airway irritability are common. People with chronic cough and sputum are at increased risk of developing exacerbation which is usually infective and may lead to sharp deterioration in coping ability. Fatigue, poor appetite and weight loss are more common in advanced disease. The diagnosis of COPD rests on the demonstration of airflow limitation which is not fully reversible. If airflow is fully or substantially reversible, the patient should be treated as for asthma. The formal diagnosis of COPD is made with spirometry; when the ratio of forced expiratory volume in 1 second over forced vital capacity (FEV1/FVC) is less than 70% of that predicted for a matched control, it is diagnostic for a significant obstructive defect.

As medication is a vital treatment modality for COPD, and many affected have complex multimorbidity, a medication review can be highly beneficial for those affected - this can be arranged by speaking to your Ward MM pharmacist.

Dr Chris Alderman, Director of Clinical Excellence, Ward MM.



Feature Article:

Management of COPD

The goal of COPD management is to improve a patient's functional status and quality of life by preserving optimal lung function, improving symptoms, and preventing the recurrence of exacerbations. Currently, no treatments aside from lung transplantation have been shown to significantly improve lung function or decrease mortality; however, oxygen therapy (when appropriate) and smoking cessation may reduce mortality. It is of note that bronchodilators are the backbone of any COPD treatment regimen. They work by dilating airways, thereby decreasing airflow resistance. This increases airflow and decreases dynamic hyperinflation.

For symptom control, there should be a stepwise approach to drug therapy, irrespective of disease severity, until adequate control has been achieved.

- Short-acting bronchodilators: Short-acting beta-agonist (SABA) & short-acting muscarinic antagonist (SAMA) are recommended for symptom relief, increase physical capacity and improve quality of life.
- Long-acting bronchodilators: Long-acting muscarinic antagonists (LAMA) & long-acting beta agonists (LABA) are indicated for patients who remain symptomatic despite treatment with short-acting bronchodilators and optimal adherence and use of devices. They provide more effective and convenient treatment than short-acting drugs with improved quality of life and reduced severity and frequency of exacerbations. LAMA/LABA can be used either as a monotherapy or in combination when patients experience persisting breathlessness. There is individual variability in response to long-acting bronchodilators, so benefit from either a LAMA or LABA should be determined based on the individual patient's response.
- Inhaled corticosteroid combined with a LABA: recommended in patients who experience frequent exacerbations. The aim of treatment is to reduce exacerbation rates and slow decline in health status. Reduction of osteoporosis should also be considered as doses of inhaled corticosteroids greater than 100 mcg per day are associated with biochemical markers of increased bone turnover.

General points to consider:

- Inhaled delivery of medications is preferred over the oral route to help minimize potential adverse effects. Some patients may have difficulty achieving effective delivery of the medication using a

metered-dose inhaler; use of a spacer or nebulizer may be beneficial in these patients. Also, older frail patients, especially those with cognitive deficits, may have difficulty with some devices.

- Oral corticosteroids are not recommended for routine maintenance therapy in COPD due to increased risk of adverse effects, including weight gain and the development of diabetes, cataracts and osteoporosis.
- Routine use of prophylactic antibiotics and antitussives is not recommended based on current evidence.
- There is no clear evidence supporting herbal medicines for treating COPD

One issue of common concern when managing residents with COPD is that these people are frequently affected by acute infective exacerbations. This characteristic is important to consider, as because architecture of the lungs have changed because of the structural damage associated with COPD, chest infections can be rapidly progressive and can evolve into bronchopneumonia that may be life threatening. The implications of this are several. It is vital that all people with COPD should receive a yearly influenza vaccination, in addition to pneumococcal vaccination as scheduled. People with COPD should be monitored closely for early signs of chest infection - these may include features such as increased breathlessness, fever, increased sputum production or changes in the colour and or viscosity of sputum. If possible it is best to obtain a sputum culture and sensitivity prior to commencing antibiotics, but at times it may be necessary to treat presumptively so as to circumvent rapid progression. The same time as treating with an antibiotic, it is often the case that oral corticosteroids are also commenced in the form of prednisolone. When making these modifications to medication regimen it is important to bear in mind that these changes can impact upon other drug treatment or the stability of other illnesses such as diabetes, thus emphasizing the importance of medication review under these circumstances.

Given that COPD imposes significant limitations on quality of life for patients as well as considerable issues that require the attention of caregivers, it is useful to develop a multidisciplinary care plan that includes all relevant health practitioners. Clinical pharmacists have a place amongst the team in providing a number of services, which can include checking inhaler techniques and recommending the most appropriate devices if there are concerns, educating about medications, and medication reviews where required.

Michael Morcos, Clinical Pharmacist, Ward MM.

Quick Tip

Corticosteroid Taper

- Steroid medications have potent anti-inflammatory and immunosuppressant properties. They are used to treat a wide range of conditions ranging from asthma, Chronic Obstructive Pulmonary Disease (COPD), eczema, and painful joints and muscles associated with auto-immune conditions such as rheumatoid arthritis. The dose varies with the condition it is prescribed for. Prednisolone is the most commonly used oral steroid and is available in 1mg, 5mg and 25 mg strength tablets.
- For acute flare -ups or exacerbations of a disease, relatively high doses may be prescribed for a few days or a week and then stopped. For example, in acute asthma in adults, a dose of 37.5 - 50 mg is given daily for 5-10 days. However, if taken for more than 3 weeks, the dose will need to be tapered off gradually. This is usually done by reducing the dose gradually every 1-2 days over a number of days.
- Steroid hormones are produced naturally by the body and when treatment with steroid medication is undertaken, the body's own production of the hormone is diminished. Tapering of the steroid dose if being treated for > 3 weeks is therefore necessary to allow the body to resume its natural production of this hormone and to avoid withdrawal effects.
- In some instances, tapering of the dose is seen even after short courses of treatment, especially if there has been significant clinical improvement in the condition being treated. This is done to prevent worsening of symptoms that can occur after abrupt cessation. For example, in exacerbations of COPD, a dose of 25-50 mg is usually given for 5-14 days. A taper would usually not be essential in this situation, however this approach may be considered, dependent on the response to treatment.

Csilla Burt, Clinical Pharmacist, Ward MM.

Latest News

Ward MM Medication Masterclass

The popular Ward MM Medication Masterclass is back! These high-quality, live educational events have proven to be enormously popular amongst people working in the aged care industry, attracting registrants such as clinical and quality managers, facility managers, clinical nurses, GPs and pharmacists working in the medication supply sector.

For the first time ever, the next Ward MM Masterclass will be held in Sydney, and is scheduled for 20th of November 2017. We are excited to announce that this next masterclass shall be conducted in collaboration with Leading Age Services Australia (LASA), and that the venue for this event will be at the LASA offices in Surry Hills, Sydney.

We once again have an excellent line-up of speakers, on this occasion addressing critical issues relating to pain management and mental illness in the residential aged care setting. Previous experience has shown that these events book out very quickly, and it is important to take action early to avoid the disappointment of missing out.

The event is conducted as a service to the aged care industry, and as such it is not exclusive to those working at the facilities currently serviced by Ward MM. As this is the first time that this event has been conducted in Sydney, demand is expected to be especially strong. To indicate interest and to reserve places for the masterclass, contact info@wardmm.com.au.

Notes from facilities serviced by Ward MM

It is quite common for us to receive similar enquiries from more than one facility in our network. In this section we summarise questions with a common basis – as a part of our “connect – network – share” ethos, we share the information with all of our facilities.

Q. “Spring is finally here – what do we need to know about antihistamines?”

A. In an allergic reaction, histamine is released as part of our body's immune response to the invading foreign substance or allergen. In springtime, we see an increase in the level of airborne pollens which is a common trigger for hay fever. Like the name implies, antihistamines block the effects of histamine and may be useful for treating many common allergic reactions including hay fever and skin allergies.

Most antihistamines are available over the counter, without a prescription and come in a variety of preparations including oral formulations, eye drops, nasal sprays and injections. They may be useful in relieving symptoms including sneezing, itchy and watery eyes and runny nose. Antihistamines may also help relieve inflammation and itch associated with common allergic skin reactions such as contact dermatitis and insect bites and some antihistamines can be used to treat and prevent motion sickness.

Oral antihistamines can be divided into two groups: the older, sedating antihistamines and the newer, less sedating antihistamines. Common sedating antihistamines include promethazine (Phenergan), doxylamine (Restavit), dexchlorpheniramine (Polaramine) and diphenhydramine which is found in many cold and flu preparations. These antihistamines are generally less suitable for the elderly as their sedating effects may increase the risk of falls and fractures. Many sedating antihistamines also produce anticholinergic effects which may cause constipation, blurred vision and dry mouth and may worsen cognitive impairment, particularly in those with dementia.

The newer, less sedating antihistamines include loratadine (Claratyne), fexofenadine (Telfast), cetirizine (Zyrtec) and desloratadine (Aerius). When selecting antihistamines for elderly residents, it is important to consider the risk of adverse effects from the older, more sedating agents. In most situations, less sedating antihistamines are likely to be a more appropriate choice to reduce the risk of injury or harm. Talk to your WardMM pharmacist if you have any questions or concerns relating to the use of antihistamines in your facility.

Duncan Yorkston, Clinical Pharmacist, Ward MM.



Meet your Ward MM Team Member

Lisa Austin is a mother of a 3.5year daughter and grew up in Malaysia. To her, joining Ward MM has been a good change from years of working in the hospital setting. She loves the flexibility and hope to make a difference in the aged care.

Most meaningful moments... being a mum for the first time, truly a blessing and gift.

My biggest challenge... spending my first year of marriage living in the slums of Brazil, learning a new language and eating beans every day. Yet it was a rewarding experience being able to work with children in the favelas, on the streets and kids that have been abused.

I'd be lost without... my family, the joy of my life.