

# National Asthma Council Webinar Series

Asthma & COPD- They Do Overlap

### **Acknowledgement of Country**

I begin by acknowledging the Traditional Custodians of the land on which we gather today and pay my respects to their Elders past and present.

I extend that respect to Aboriginal and Torres Strait Islander peoples here today.

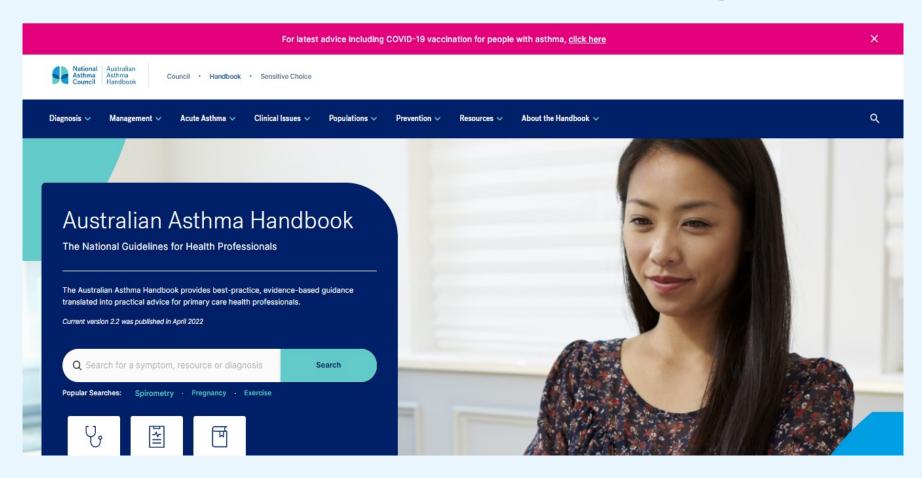


### **Learning Objectives**

- Describe how to access the COPD-X and asthma management guidelines
- Identify the differential clinical features between asthma and COPD
- Summarise the current guidelines for medication management
- Summarise the importance of written action plans

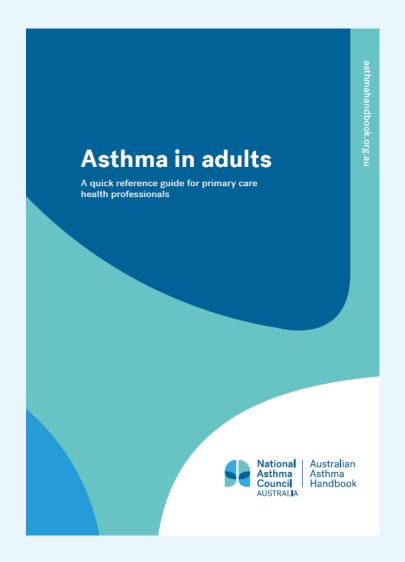


## Australian Asthma Handbook www.asthmahandbook.org.au





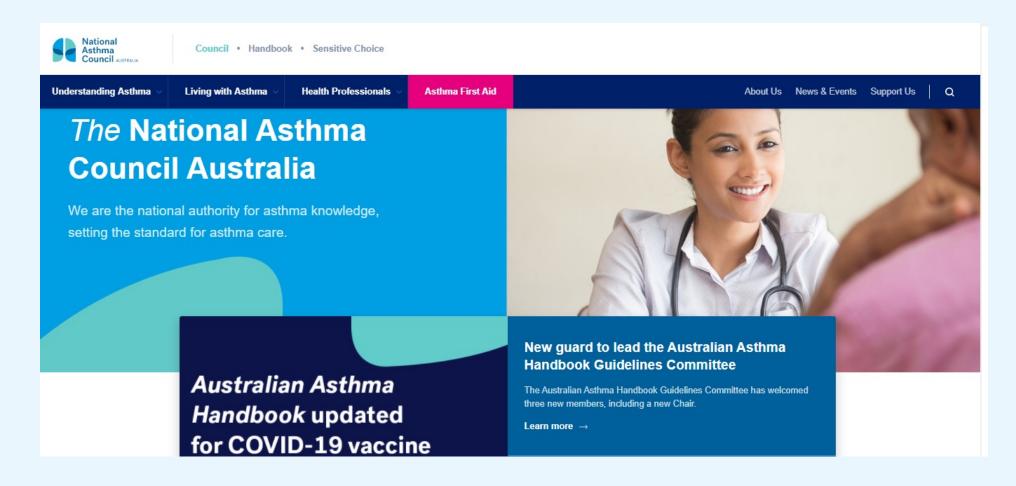
## Australian Asthma Handbook Quick Reference Guide



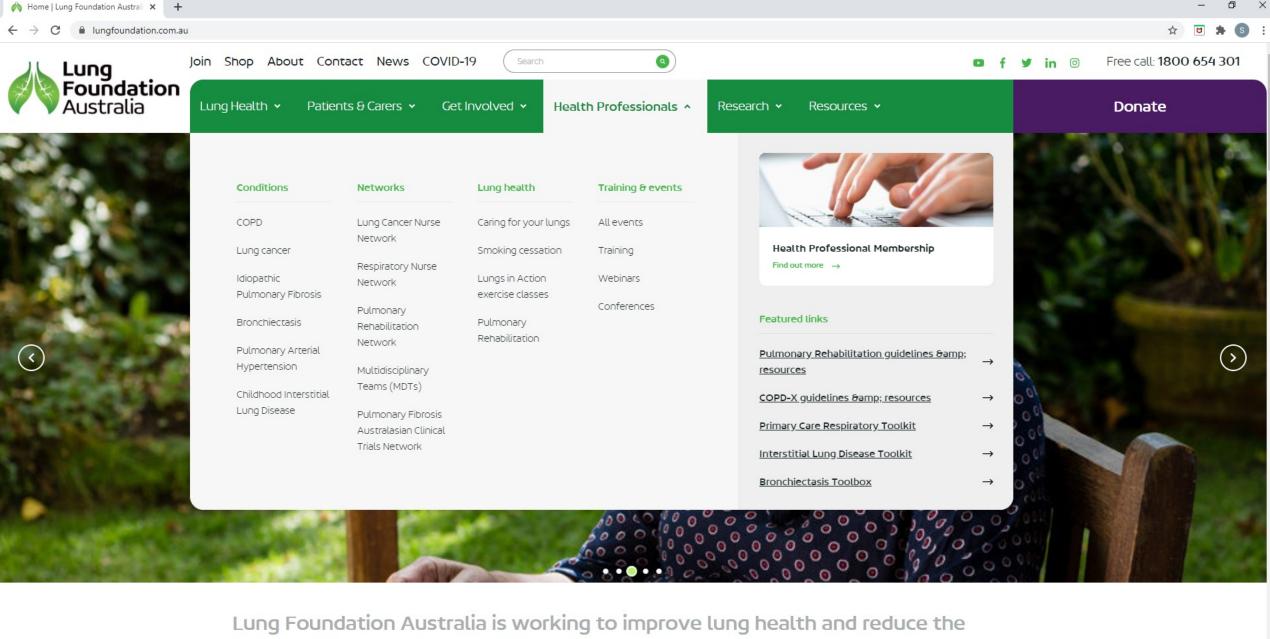




## National Asthma Council www.nationalasthma.org.au







impact of lung disease for all Australians.

















### **COPD-X** guidelines

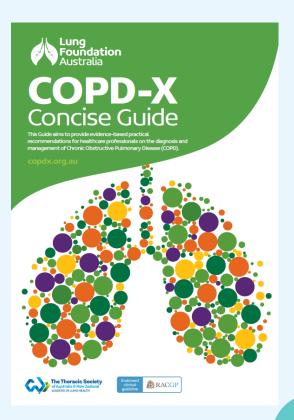
- C: case finding and confirm diagnosis
- O: optimise function
- **P**: prevent deterioration
- **D**: develop a plan of care
- X: manage eXacerbations

#### **COPD-X** resources:

copdx.org.au

**COPD-X Concise Guide** 

www.lungfoundation.com.au



### **Asthma in Australia**

- Just under 2.8 million (10.8%) Australians had asthma in 2022
- 1 in 9 Australians, high by international standards
- Females more likely than males (12.2% compared to 9.4%)
- Rate higher in boys than girls aged -14 years (10.1% 6.2%)
- In 2022, 467 asthma related deaths 30% increase from 2021 (335)
- One in three (32.1%) had a written asthma action plan
- One in three (33.9%) used asthma medication daily



### **COPD** in Australia

- 7.5 % of Australians aged 40 or over have symptomatic COPD,
   even though half of them are undiagnosed.
- Of those with COPD, 3 in 4 people aren't aware
  - symptoms mistaken for asthma, old age or lack of fitness
  - unaware of slow progressive disease
- 20-30% of patients given a clinical diagnosis of COPD, DO NOT meet the diagnostic criteria.
- In 2021 COPD was the leading underlying cause of death in Australia, representing 4.1 % of all deaths (7018 deaths).

### **Remember Asthma is:**

A chronic lung disease, which can be controlled but not cured

#### In clinical practice

- Asthma is defined by the presence of both:
  - excessive variation in lung function
  - variable respiratory symptoms
- Associated features of other allergic conditions such as rhinitis and eczema may be present as well as a family history, childhood asthma, rapidly relieved by a bronchodilator, eosinophilia or raised blood IgE



### Remember COPD is

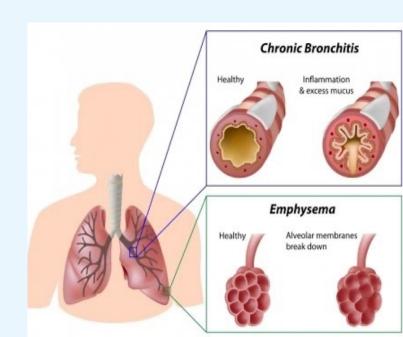
A common, preventable and treatable disease that is characterised by persistent respiratory symptoms and airflow limitation which is not fully reversible. The airflow limitation is usually progressive.

The irreversible component of airflow limitation is the end result of inflammation, fibrosis and remodeling of peripheral airways.

In clinical practice, diagnosis is usually based on:

- Symptoms of exertional breathlessness, cough and sputum
- A history of smoking, or exposure to other noxious agents
- FEV<sub>1</sub>/FVC<0.7 post-bronchodilator on spirometry
- Further investigations may be required eg: AAT deficiency





### Asthma vs COPD- patient centered care

Remember- ongoing education is important for disease outcome

Asthma: often present with acute symptoms

- Accept immediate treatment
- May be reluctant for ongoing management
- Treatment aim is to restore lung function and reduce future risk

COPD: present or are diagnosed at different stages of the disease process

- May be reluctant to accept diagnosis and treatment
- May feel a sense of guilt if smoking has caused the disease
- Treatment aim is to optimize lung function and manage exacerbaons

### **Asthma-COPD Overlap**

 Approximately 20% of patients with obstructive lung disease have features of both asthma and COPD

 Asthma-COPD overlap is not a single well-defined disease, but is likely to have many underlying causes

Asthma-COPD overlap is now recognised as an important clinical problem

To date there is no consensus on a precise definition of Asthma-COPD overlap



### Asthma-COPD Overlap (cont.)

 People with asthma-COPD overlap often have poorer disease outcomes than those with asthma or COPD alone e.g. more symptoms, more flareups, greater mortality

 Asthma-COPD overlap is characterised by persistent airflow limitation with several features usually associated with asthma and several features associated with COPD

 In clinical practice asthma-COPD overlap is identified by the features it shares with both



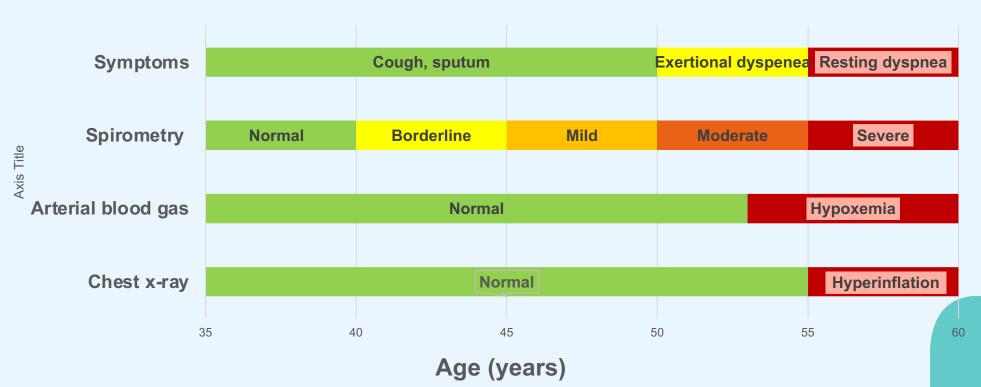
### Diagnosis of overlap

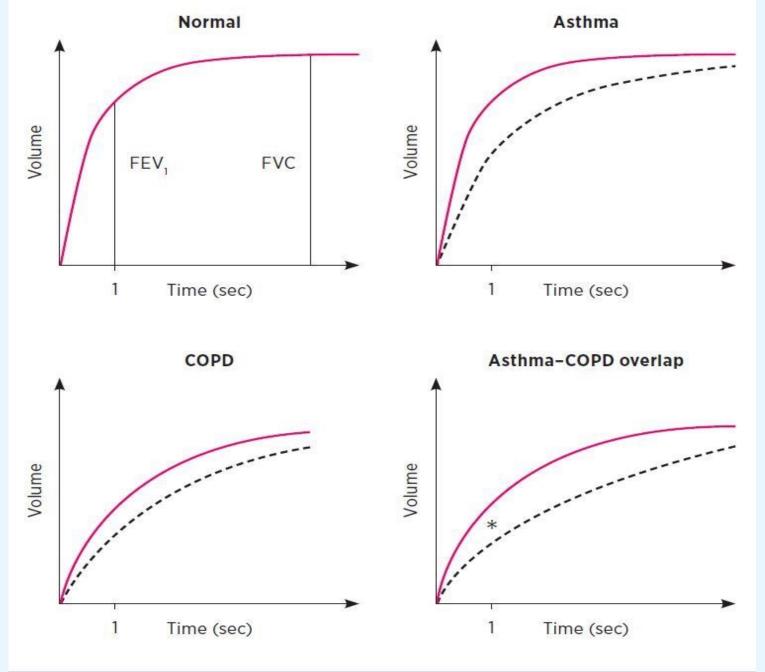
#### Based on:

- **Detailed medical history** chronic or recurrent cough, sputum production, dyspnoea, wheezing, recurring acute lower RTI, exposure to tobacco smoke or other airborne pollutants, previous Dr diagnosed asthma or COPD
- Physical examination may be normal, evidence of hyperinflation, abnormal auscultation
- **Spirometry -** The diagnosis of obstructive lung disease relies on spirometry. Pre and post-bronchodilator should be performed
- Radiology not routine for asthma, but Chest X-Ray, CT scans or MRI may identify an alternative diagnosis

### Benefit of spirometry in diagnosis

## Spirometry detects COPD before other tests





#### Characteristic features of asthma and COPD

**Asthma** 

**Feature** 

COPD

| Age of onset                   | Before age 20 years  | After age 40 years  |
|--------------------------------|--|---|
| Pattern of Symptoms            | <ul> <li>Variation over minutes, hours or days</li> <li>Worse during the night or early morning</li> <li>Triggered by exercise, laughter, dust, exposure to allergens</li> </ul> | <ul> <li>Persistent despite treatment</li> <li>Shortness of breath usually activity related and resolves with rest</li> <li>Chronic cough and sputum unrelated to triggers</li> </ul> |
| Lung function                  | <ul> <li>Variable airflow limitation</li> </ul>  | Persistent airflow limitation   |
| Lung function between symptoms | • Normal   | • Abnormal  |
| Past history/family history    | <ul> <li>Previous diagnosis of asthma</li> <li>Family history of asthma and/or other allergic conditions</li> <li>Smoking history nil or &lt;15pack-year</li> </ul>              | <ul> <li>Previous diagnosis COPD</li> <li>Heavy exposure to risk factor<br/>tobacco smoke (&gt;15 pack-year) or<br/>other noxious agent</li> </ul>                                    |
| Time course                    | <ul> <li>No worsening of symptoms over time, seasonal</li> <li>Rapid response to bronchodilator or to ICS over weeks</li> </ul>  | <ul> <li>Symptoms slowly worsen over time</li> <li>Rapid-acting bronchodilator provides<br/>only limited relief</li> </ul>  |

Pack year history = no of cigarettes per day x number of years smoked divided by 20

### Management of Asthma – COPD overlap

- Bronchodilators for symptom control
- Any features of asthma prescribe regular low/moderate dose of inhaled corticosteroid (ICS)
- Depending on symptoms consider adding to ICS:
  - Long-acting beta<sub>2</sub> agonists (LABAs) or Long acting muscarinic antagonists (LAMAs)
  - LABA/LAMA combination
- All patients should have an Action Plan updated regularly
- Monitor and treat respiratory tract infections
- Self management support and education



### **Management Principles**

Manage as a chronic disease - needs ongoing care

- Smoking cessation
- Eliminate passive exposure
- Identify triggers avoidance strategies
- Vaccinations
- Pulmonary rehabilitation
  - Self-management education
  - Healthy well balanced diet
  - Exercise regime/activity levels
  - Stress management

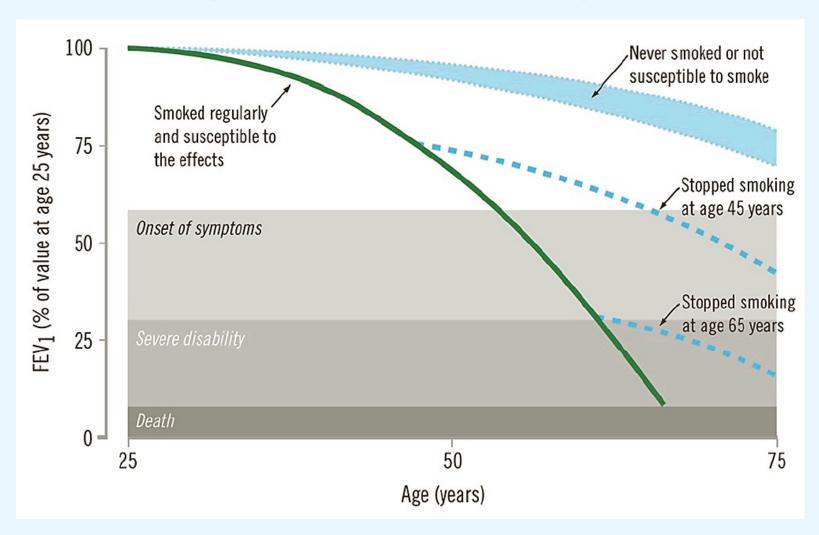


### Tobacco smoking...

- Largest single preventable cause of death and disease
- Passive smoking increased risk of:
  - Heart disease, asthma, COPD, SIDs and some cancers
- Smoking in pregnancy increases health risks to both mother and child
- Smoking worsens asthma and/or COPD
- Reduces effectiveness of inhaled medications
- >10 pack years smoking = effect on lungs



### Smoking: effects on lung function



Adapted from Fletcher C and Peto R.
The natural history of chronic airflow obstruction.
BMJ 1977;1:1645-1648
From COPD-X Checklist, The Australian Lung Foundation

### QUITTING – never give up

- Stopping smoking reduces the incidence and progression of lung disease including chronic bronchitis and emphysema
- Smokers who quit at age 50 halve their risk of death caused by smoking
- Quitting by age 30 avoids almost all of the excess risk associated with smoking

"It's far better to try and try again, than to fail to try again".





## **Any Questions?**



nationalasthma.org.au



### **ASTHMA & COPD MEDICATIONS**





Ventalin Inhaler † A



Bricanyl Turbuhaler a c terbutatine Stitlenog

#### RESOURCES

TREATMENT GUIDELINES

Australian Asthma aethmahandbook.org.su

COPO-X Plan: copdx.org.au

COPO Inhaler Device Chart Poster: lungfoundation.com.au/ resources/capd-inhalerdevice-chart-poster/

#### INHALER TECHNIQUE

How-to videos, patient and practitioner information nationalasthma.org.au

pMDIs should be used with a spacer (and face mask if needed)

#### **HOW-TO VIDEOS**



Asmol Inhaler † A



Airomir Autohaler ## calbutamol 100 mag



Zempreon Inhaler † ^ salbutawat 100mog

#### SAMA MEDICATION



Atrovent Metered Aerosol † A ipratropium 21mog

#### NON STEROIDAL PREVENTER



Amp? - Smg ? - 15mg Multiple generic brands



Mantide Junior A

#### ICS PREVENTERS



Flixotide Inhaler † Flisotide Accuhaler 1 flyticasone pregionate fly ticasone propienate Simog" + 125mag - 25 5mag 100mog\* - 258mag - 588mag "Fixetide Junior 8 "Filestide Junior



Fluticasone Cipla Inhaler † **Suricesone** propionate 125mag - 250mag



QVAR Inhaler† beclometaxon e



Alvesco inhaler † 80 mcg - 140 mcg



Shweg\* + 125meg - 25 8meg



Ultibro Breezhaler Axptide Accuhaler t fluticasone propienate indacaters//glycapyrranium 100mog\* - 256mog 118/Shreca

#### **LAMA MEDICATIONS**



Spiriva Respired # \$18 tiotropium 2.5mcg



tiotropium tilmog



Seebri Breezhaler # glycopyrronium Stracy

Spiolto Respimat

2.5/2.5mg



tiotropium tilmeg



Bretaria Genuair #



Incruse Ellipta # umedidinium 42.5mcg

Brimica Genualr

SHEPTERNEE

Anoro Ellipta

43.5125mog

umedid in um/vitament

actidinium/formateral.

LAMA/LABA COMBINATIONS

#### ICS/LABA COMBINATIONS



Serutida Inhalar 8 fluticasane propionate/salme \$9/25 - 125/25 - 250/25 4 Additional brands: Povtide, Fluticasone + Salmeterol Cinia. Salphoef, Serutio, Evacair



Seretide Accuhaler 106/58 - 350/50 - 500/50 \* Additional brands: Portide. Fluticacone + Satmeterol Cinia



Symbicort Rapihaler 59/3 - 189/3 - 200/6 5 Additional brand Ritary Resident



Symbicart Turbuhaler 8 100 M - 200 M - 400/12 K Additional brand Riter Turbulator



QuoResp Spiromas 388/4 - 408/13 C



fluticasione propionaterfor 58/5 - 125/5 - 350/10



Fostair Inhaler 180A - 200/6



fluticacone functo/vilanteral





Atectura Breezhaler mometasone/indacaterol. 45 CHOK - 107 CHOK - SUNYING all units in may



LABA MEDICATIONS







Maggide Janky 4

**Pulmicort Turbuhaler †** 

100mag - 200mag - 400mag

**QVAR Autohaler** ‡

Streeg - 100mcg

**budenonide** 







Energair Breezhaler ARTHAPTIS - TESTBAPTIS

COMBINATIONS

ICS/LAMA/LABA

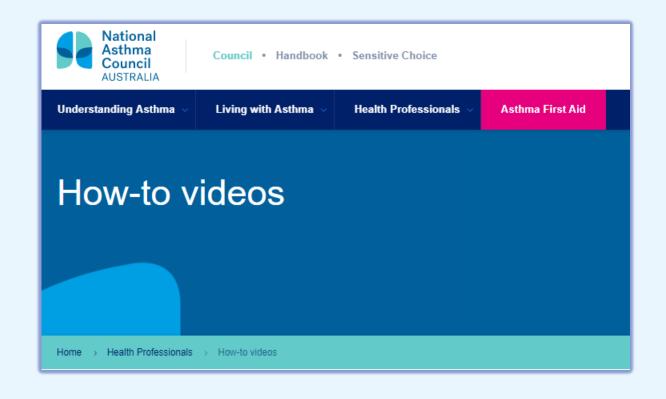
Trimbow Inhaler beclametassee/glycapyrranius 100/10/6 4 - 200/10/4 3

Breztri Aerosphere C 160/7.2/5 all units in mag-

This chart was developed independently by the National Asthma Council Australia with support from AntraComera Australia, Chiesi Australia, and Standard Mine (DSK Australia). 2023 © National Arthma Council Australia

PRESPRESCRIBERS | Authors unnectricted benefit | Actions restricted benefit | Actions authority required | COPD unnestricted benefit | COPD restricted benefit | COPD subority required Check TGA and PRS for current age and condition criteria

### Demonstrate and check technique regularly







https://www.nationalasthma.org.au/health-professionals/how-to-videos



## Medications for Asthma, COPD, Asthma-COPD overlap

### Relievers – short-acting beta<sub>2</sub> agonists (SABAs)

- Can be used for short-term symptom relief in asthma, COPD and asthma-COPD overlap
- Have a direct bronchodilator effect (up to 4 hrs)
  - Work within minutes
  - Provides acute relief of the symptoms due to airway narrowing
  - Should <u>not</u> be used in the absence of symptoms
- Check inhaler technique where possible use a spacer



### Long-acting beta2 agonists (LABAs)

- Produce prolonged bronchodilation (to to 12 hours)
- LABAs should not be used in people with asthma or asthma-COPD overlap unless they are also taking an ICS, in combination or separately

- Formoterol (Oxis) twice daily dosing
- Salmeterol (Serevent) twice daily dosing
- Indacaterol (Onbrez breezhaler) once daily dosing

### Long acting muscarinic antagonists (LAMAs)

- Tiotropium (Spiriva Handihaler or Respimat, Braltus Zonda) once daily maintenance
- Glycopyrronium (Seebri Breezhaler) once daily maintenance
- Umeclidinium (Incruse Ellipta) once daily maintenance
- Aclidinium (Bretaris Genuair) twice daily maintenance

LAMAs should not be used in people with asthma or asthma-COPD overlap unless they are also taking an ICS, in combination or separately



### Combination therapy- LABA/LAMA

### A single device consisting of:

- a long acting beta<sub>2</sub> agonist (LABA) and
- a long acting muscarinic antagonist (LAMA)
- Vilanterol + umeclidinium (Anoro Ellipta) once daily
- Indacaterol + glycopyrronium (*Ultibro Breezhaler*) once daily
- Olodaterol + tiotropium (Spiolto Respimat) once daily
- Formoterol + aclidinium (*Brimica Genuair*) twice daily



### **Combination therapy - ICS/LABA**

A single device consisting of a preventer (ICS) and a long acting beta2 agonist (LABA)

#### Common combinations:

- Fluticasone propionate/salmeterol (Seretide, Fluticasone & salmeterol Cipla, Salplus F, Pavtide)
- Fluticasone propionate/formoterol (Flutiform)
- Budesonide/formoterol (Symbicort, DuoResp Spiromax)
- Beclometasone/formoterol (Fostair)
- Fluticasone furoate/vilanterol (Breo Ellipta)
- Mometasone/indacaterol (Atectura)

Side effects: due to ICS - dysphonia, oral thrush



### **Triple combination – ICS/LAMA/LABA**

Fluticasone furoate, Umeclidinium, Vilanterol

#### Trelegy Ellipta

(100/62.5/25)

Once daily maintenance for those with **moderate to severe** COPD- FEV1 < 50% predicted and 2 or more exacerbations in the last 12 months

(200/62.5/25)

Once daily maintenance for those with severe Asthma





### **Triple combination - ICS/LAMA/LABA**

- Beclometasone dipropionate 100, Glycopyrronium 10, Formoterol 6 mcg
   (Trimbow)
  - Moderate to severe COPD
  - Twice daily maintenance dosing
  - 18 years and over



- Budesonide 160, Glycopyrronium 7.2, Formoterol 5 mcgs (*Breztri Aerosphere*)
  - Moderate to severe COPD
  - 2 puffs twice daily maintenance dosing
  - 18 years and over





### Written Asthma Action Plans (WAAP's)

WAAP's clearly explain the steps to take to manage a person's asthma day-to-day and what to do during an exacerbation or asthma emergency.

An individualised asthma action plan should be developed, so that a child or adolescent with asthma, or their parent, can recognise deterioration of symptoms and respond appropriately.

It is expected that ALL children & adolescents with asthma have a current written asthma action plan



### **WAAP's should include ALL of the following:**

- Usual asthma medications including treatment for related conditions
- Clear instructions on when to take extra doses or medication
- When to contact a doctor or go to the ED
- Name of the GP or other health professional preparing the plan
- The date the plan was issued
- Advice about epidemic thunderstorm asthma, where to access pollen counts and forecasts

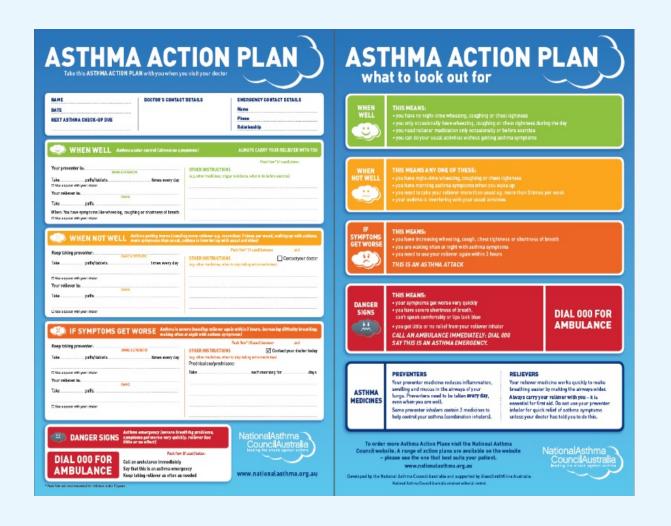
#### Improved health outcomes:

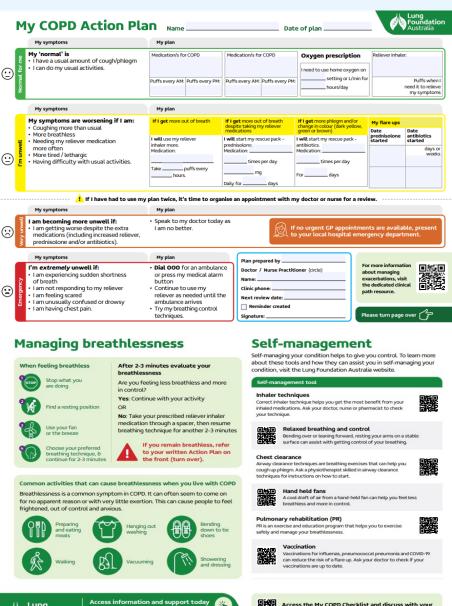
- Miss school or work less often
- Wake less at night and have improved symptom scores
- Significantly reduce ED and hospital presentations



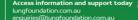
### **Asthma or COPD action plan?**

Choose the plan depending on the person's dominant clinical features











#### STEPWISE MANAGEMENT OF STABLE COPD

Increasing COPD severity MILD SEVERE MODERATE Typical symptoms Ofew symptoms ighthese breathless walking on level ground breathless on minimal exertion ① breathless on moderate ⊙increasing limitation of daily daily activities severely curtailed exertion activities exacerbations of increasing frequency and O little or no effect on daily @recurrent chest infections activities exacerbations requiring oral. corticosteroids and/or antibiotics @ cough and sputum production Typical lung function FEV, ~ 60-80% predicted FEV, ~ 40-59% predicted FEV. < 40% predicted OPTIMISE function. PREVENT deterioration. DEVELOP a plan of care. Non-pharmacological REDUCE RISK FACTORS Avoid exposure to risk factors including tobacco smoke and air pollution, support smoking OPTIMISE FUNCTION Encourage regular exercise and physical activity, review nutrition, provide education, develop GP OPTIMISE TREATMENT OF CO-MORBIDITIES especially cardiovascular disease, anxiety, depression, lung cancer and REFER symptomatic patients to pulmonary rehabilitation INITIATE advanced care planning MANAGE advanced lung disease with domiciliary oxygen therapy, long-term non-invasive ventilation, surgery and ronchoscopic interventions, if indicated Pharmacological interventions (inhaled medicines) "In patients with 21 severe outcarbet on requiring hospitualisation or 22 moderate exacerbations in the previous 12 months, AND significant symptoms despite LAMAILABA or ICSLABA therapy, OR in patients stabilised on a combination of LAMAILABA and ICSLABA and ICSLABA in ICSLABA and ICSLABA and

REFER PATIENTS TO LUNG FOUNDATION AUSTRALIA FOR INFORMATION AND SUPPORT - FREECALL 1800 654 301

Lung Foundation Australia has a range of resources to promote

Based on The COPD-X Plan: Australian and New Zealand Guidelines for the Management of COPD and COPD-X Concise Guide

"Refer to PBS criteria: www.pbs.gov.au

Register at copdx.org.au to receive an alert when the COPD-X Guidelines are updated



SABA SAMA LAMA LABA Green tick indicates therapies that can be used together salbutamol (Ventolin™, Airomir™, Asmol™) • terbutaline (Bricanyl™) ipratropium (Atrovent™) tiotropium (Spiriva™/Braltus™) aclidinium (Bretaris™) umeclidinium (Incruse™) glycopyrronium (Seebri™) salmeterol (Serevent™) indacaterol (Onbrez™) formoterol (Foradile™) indacaterol/glycopyrronium (Ultibro™) tiotropium/olodaterol (Spiolto™) umeclidinium/vilanterol (Anoro™) aclidinium/formoterol (Brimica™) fluticasone propionate/salmeterol fluticasone furoate/vilanterol (Seretide™/SalplusF™/Cipla™) (Breo™) ICS/LABA budesonide/formoterol (Symbicort™/DuoResp™) fluticasone furoate/umeclidinium/ beclometasone/formoterol/ vilanterol (Trelegy™) glycopyrronium (Trimbow™) budesonide/glycopyrronium/formoterol





Atrovent® MDI

#### Flare Up Medicines

Fluticasone + Salmeterol Cipla®/SalplusF® MDI fluticasone propionate/

salmeterol

. Antibiotics (Refer to Therapeutic Guidelines: Antibiotic: www.tq.orq.au)

Breo® Ellipta®

vilantero

2. Oral steroids (prednisone, prednisolone)

loaded into the device. All other devices are preloaded.

Breztri® Aerosphere®

budesonide/

Where possible, metered dose inhalers (MDI) should be used with a spacer
 ICS monotherapy is not indicated for COPD without co-existing asthma
 Grey shaded boxes and device images = PBS listed for Asthma only

Trimbow® MDI

Flutiform® MDI

asone propionat formoterol

Fostair™MDI

eclometasone/ formoterol

beclometasone

elegy® Ellipta®

furoate/

### **Key Points**

- Many adults have features of both asthma and COPD
- Asthma, COPD and asthma—COPD overlap are all heterogeneous disorders
- Patients with asthma-COPD overlap are at a higher risk for more serious disease, more symptoms, more flare-ups, greater need for health care utilisation and greater mortality
- Refer to a specialist for atypical symptoms, flare-ups despite treatment, or complex comorbidities
- Manage patients holistically



### Asthma, COPD and COVID-19

Refer to Australian Asthma Handbook and Lung Foundation Website for updates <a href="https://www.asthmahandbook.org.au/clinical-issues/covid-19">www.asthmahandbook.org.au/clinical-issues/covid-19</a>

- Check everyone has a current written action plan telehealth if need be
- If performing spirometry, follow latest TSANZ recommendations
- NAC has released recommendations for infection control for spirometry
- Advise to continue with current medications, including inhaled corticosteroids
- Only use oral steroids for severe flare ups as indicated
- Avoid using a nebuliser- a well fitting mask and spacer with puffer is preferred
- Advise not to share any medications or spacers even between family members
- Advise to have medications handy- reliever therapy as per action plan



### Resources:

- www.asthmahandbook.org.au
  - current Australian asthma guidelines- online resource
- www.nationalasthma.org.au
  - Videos, brochures, charts- free to order online
- https://lungfoundation.com.au
- Current COPD guidelines and other resources

Health Professional Network: nationalasthma.org.au

Twitter: <a href="mailto:ouncilau">ouncilau</a>

Facebook: National Asthma Council Australia





### Acknowledgements

This webinar is an initiative of the National Asthma Council Australia (NAC). The presentation forms part of the NAC's *Asthma Best Practice* Program, supported by the Australian Government Department of Health.

The content of this workshop was developed and reviewed by the following expert group.

#### **Expert Review Group**

- Dr Ian Almond, General Practitioner, Tasmania
- Dr Grant Connoley, General Practitioner, Victoria
- Ms Marg Gordon, RN Asthma & Respiratory Educator, Victoria
- Ms Suzanne Hull, RN Asthma & Respiratory Educator, NSW
- Ms Queenie Lo, Pharmacist, Victoria
- Ms Narelle Williamson, RN Asthma & Respiratory Educator, Victoria







### Other webinar topics:

Adult Asthma Management-What's New Little Lungs- A Paediatric Asthma Update Take a Breath- Asthma & COPD Medications & Devcies Asthma in Spring- Allergies & Thunderstorms





## **Any Questions?**



nationalasthma.org.au