National Asthma Council AUSTRALIA

National Asthma Council Webinar Series

Asthma update in 2020

Session 1

Asthma Best Practice For Health Professionals

Supported by the Australian Government Department of Health

Acknowledgment to Country

I acknowledge the traditional owners of the country on which we work and live and recognise their continuing connection to land, water and culture.

I pay my respects to Elders past, present and emerging.

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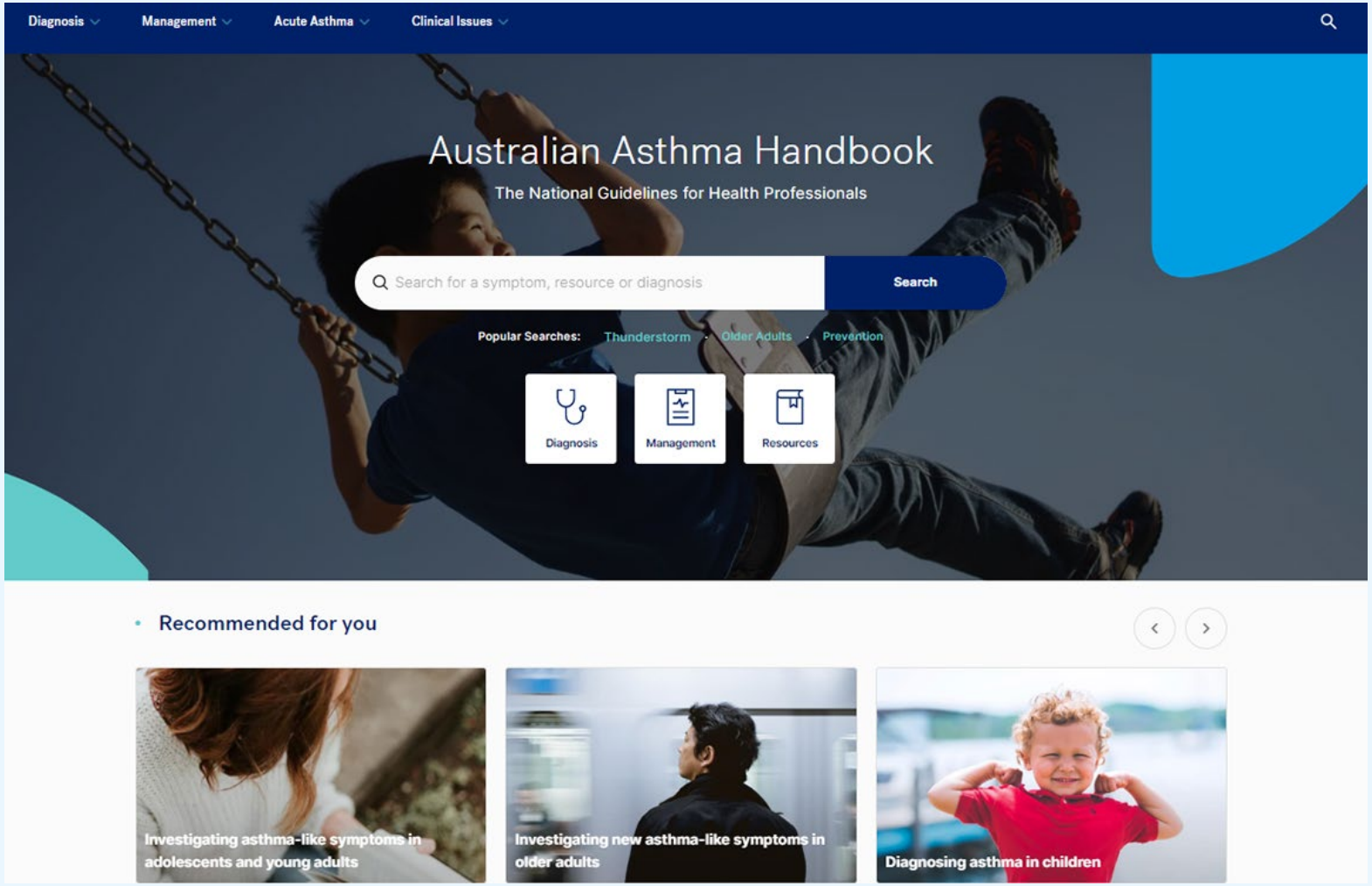
Welcome

- Topics Covered Today
  - Australian Asthma Handbook
  - Asthma pathophysiology
  - Triggers
  - Diagnostic principles
  - Management principles
  - Written Asthma Action Plans
  - Asthma and telehealth
  - Asthma and COVID 19 guidelines

Learning Objectives

- Define the pathophysiology of asthma
- Identify the steps involved in the diagnosis of asthma - referring to the Australian Asthma Handbook
- Summarise the important information to be included in a Written Asthma Action Plan

Australian Asthma Handbook
www.asthmahandbook.org.au



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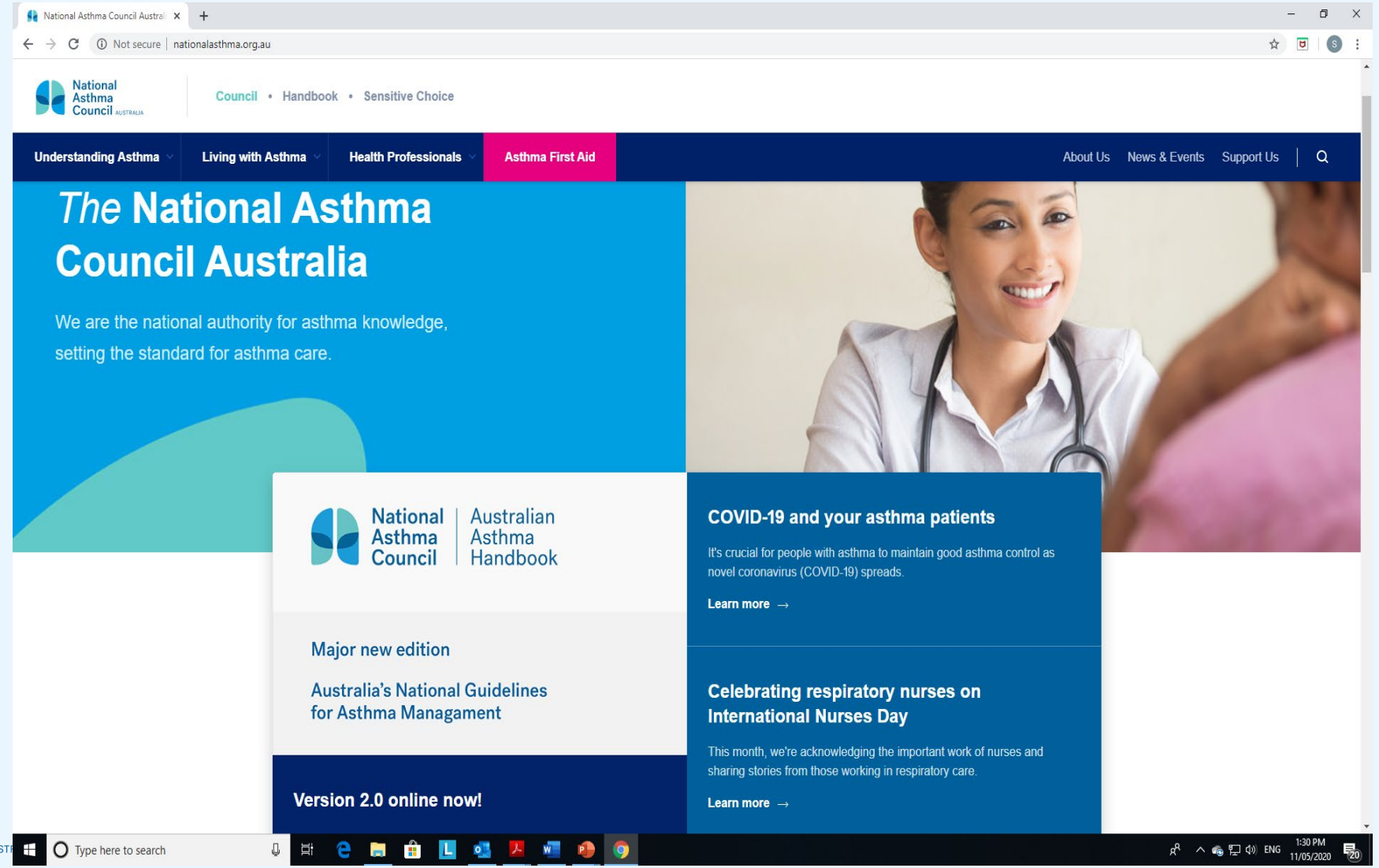

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Asthma in Australia

- Over 2.7 million Australians have asthma
- 11% total population, high by international standards
- Since 2001
  - Decline in children and young adults; stable in adults >35years
- More common in boys than girls; after adolescence more common in women
- In 2018, 389 people died from asthma
- 50% of people with asthma over 75yrs have not been diagnosed by a doctor
- Reports from around the world show that 25–35% of people with a diagnosis of asthma in primary care may not actually have asthma

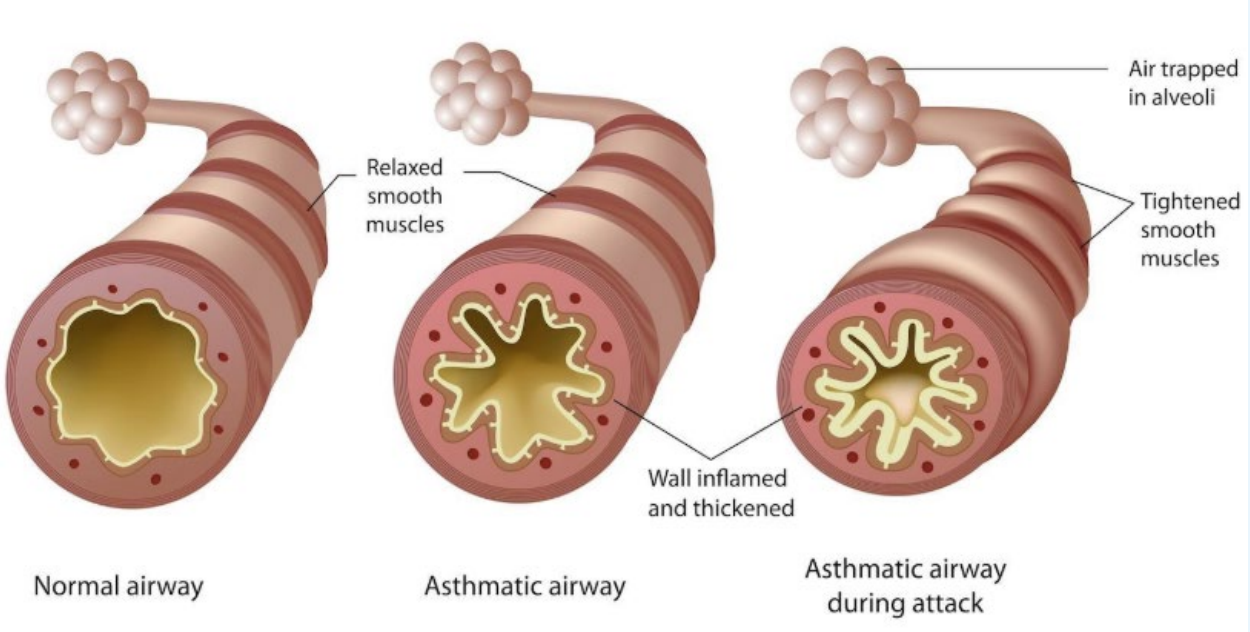
What is Asthma?

- Asthma is a chronic lung disease, which can be controlled but not cured

- In clinical practice, asthma is defined by the presence of **both** the following:
  - excessive variation in lung function
  - variable respiratory symptoms

Small Airway Obstruction

- Narrowing of the airway is due to:
  - Inflammation of the lining of the airway
  - Constriction of the smooth muscles in the walls of the airway
  - Increased mucus production



Characteristics of Asthma

- Chronic inflammation in the lining of the small airways of the lungs
- Symptoms are usually associated with **airflow obstruction**
  - May be widespread but can be variable
  - Often reversible either spontaneously or with treatment
- The inflammation causes recurrent episodes of common symptoms:
  - Wheezing
  - Breathlessness
  - Cough
  - Chest Tightness

Triggers for Asthma

- Vary with each person
- Important to identify trigger(s)
- Once identified avoidance and management strategies can be discussed which may improve asthma control

Unavoidable Triggers

- Do not avoid
  - Exercise or laughter

- Manage
  - Respiratory tract infections
  - Certain medicines e.g. aspirin, anticholinesterases and cholinergic agents
  - Comorbid medical conditions e.g. allergic rhinitis, nasal polyps, obesity, upper airway dysfunction, gastric reflux
  - Physiological/psychological changes e.g. extreme emotions, hormonal changes, pregnancy

Avoidable Triggers

- <u>Always avoid</u>
  - Cigarette smoke

- <u>Avoid or reduce exposure where possible</u>
  - Allergens e.g. animals, cockroaches, house dust mite, pollens, moulds
  - Irritants e.g. cold/dry air, perfumes/sprays, smoke of any kind, environmental pollution, some thunderstorms in spring and early summer
  - Certain medicines e.g. aspirins, NSAIDs, beta blockers, bee products (e.g. royal jelly), echinacea
  - Dietary triggers e.g. food chemicals/additives, thermal effects (cold drinks/ice cream)

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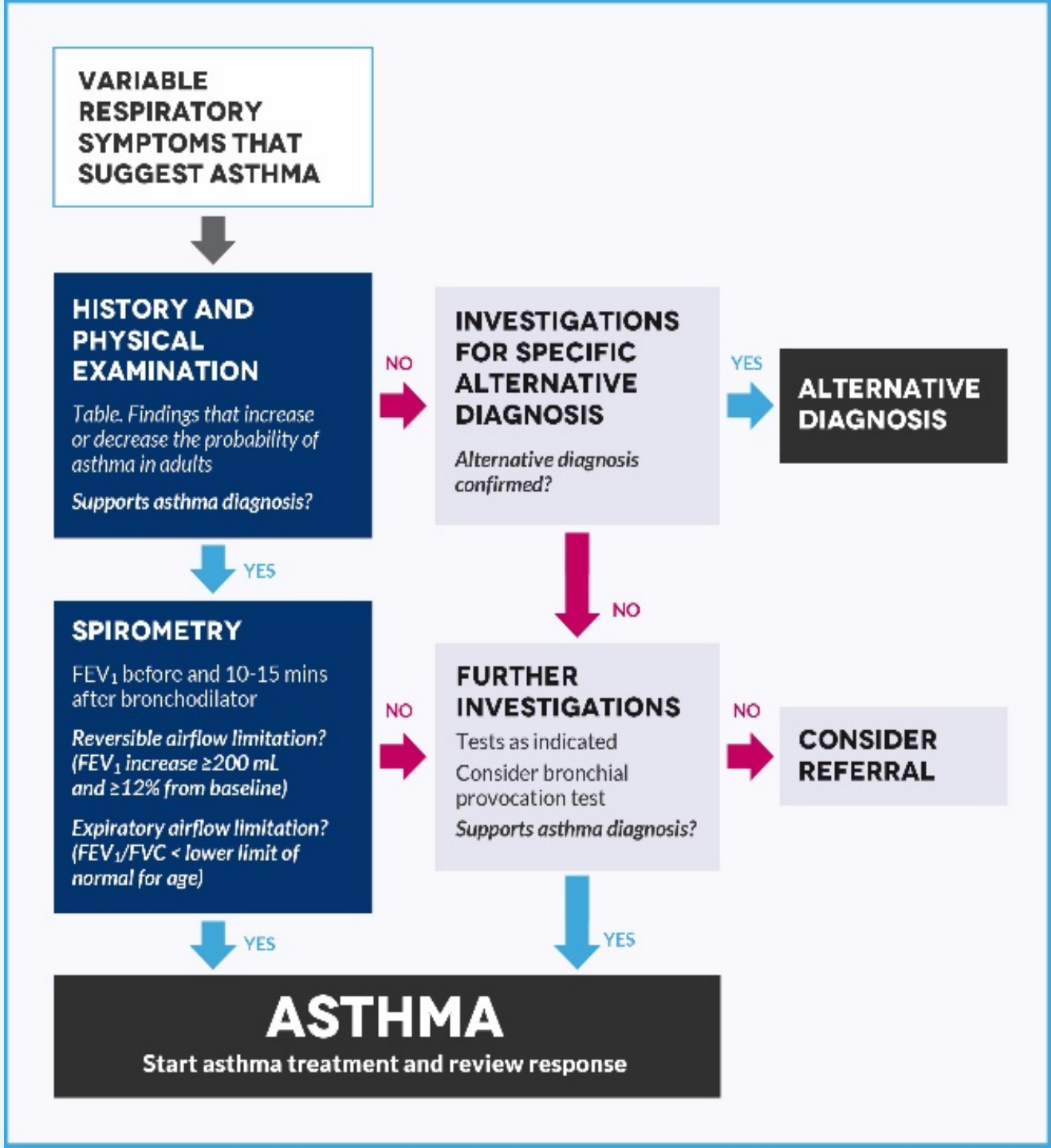
Diagnosis

- Based on:
  - History
  - Physical examination
  - Diagnostic testing (e.g. spirometry)
  - May include treatment trial (e.g. assess response to an inhaled bronchodilator)
  - Diary card may be helpful



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History

- Wheeze, chest tightness, shortness of breath and/or cough
- History of allergies e.g. allergic rhinitis, atopy, dermatitis/eczema
  - Allergic rhinitis often precedes asthma
  - Family history of asthma or allergies
    - First degree relative – parents, siblings or children
- Identified trigger for symptoms
- Ever tried relievers – any response?
- Smoking history – all forms (e-cigarettes, water pipes, bongs)
- Exposure to cigarette smoke, maternal smoking during pregnancy

Physical Examination

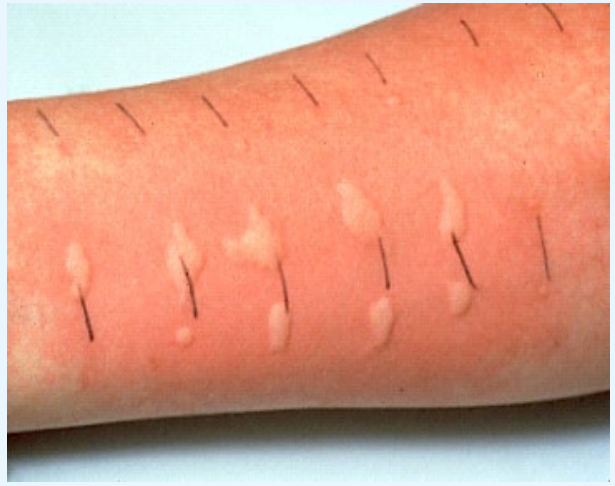
- Observe breathing
- Auscultation for wheeze – wheeze is suggestive, but not diagnostic
- Look at the shape of the chest
- Observe for signs of rhinitis

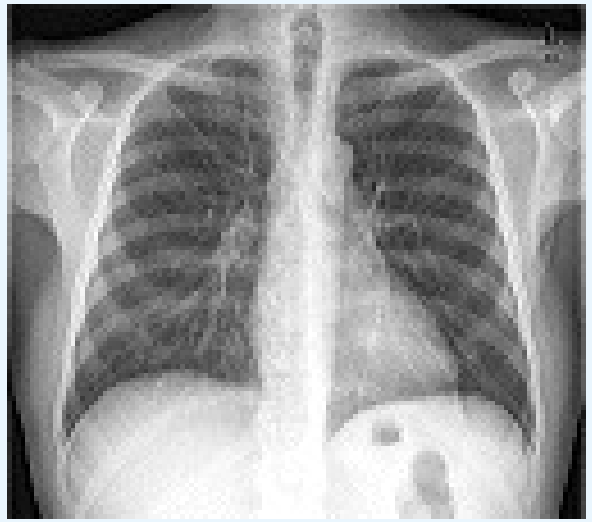
Diagnostic Testing

- Spirometry
  - To assess airway function
  - Pre and post bronchodilator testing to assess reversibility
  - Can be used in older children and adults
  - May be normal if asthma well controlled at time of testing
  - Peak flow is no substitute

Further Investigations

- Allergy testing
  - Skin prick testing
  - Blood test for allergen specific IgE
- Challenge/provocation testing
  - performed in lung function laboratories
- Other tests
  - Chest X-ray - only useful for differential diagnosis





Asthma is more likely if:

- Symptoms are:
  - Recurrent or seasonal
  - Worse at night or in the early morning
  - Triggered by exercise, irritants, allergies or viral infections
  - Rapidly relieved by an inhaled bronchodilator (SABA)
- Symptoms began in childhood
- FEV_1 or PEF lower than predicted, without other explanation
- Eosinophilia or raised blood IgE level, without other explanation

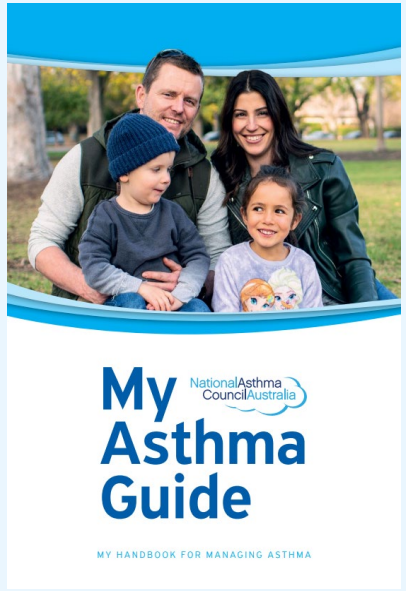
Alternative Diagnosis

- Exclude non-asthma causes of wheeze or cough
  - Cough can be predominant, but very rare to be only asthma symptom
- Consider:
  - Recurrent non-specific cough especially in children
  - Structural airway problems in children e.g. tracheomalacia
  - Other respiratory conditions e.g. uncontrolled allergic rhinitis, bronchiectasis, COPD, hyperventilation/dysfunctional breathing, inhaled foreign body, vocal cord dysfunction
  - Cardiovascular disease e.g. chronic heart failure, pulmonary hypertension
  - Comorbid conditions e.g. obesity, GORD
  - Other causes of cough e.g. postnasal drip, enlarged thyroid, side-effects of medications
  - Exercise-induced respiratory symptoms – is it ‘normal huff and puff’?

Management Principles

- Asthma is a chronic disease
  - Needs ongoing care
  - Not just about treating asthma attack
  - Ongoing self-management education
  - Asthma Action Plans

- Need to consider
  - Lifestyle issues
  - Medical management
  - Comorbidities



Lifestyle Issues

- Smoking cessation – all forms!
- Eliminate passive exposure
- Identify triggers
  - Avoidance strategies
- Healthy well balanced diet
  - Ideal body weight
- Exercise regime/activity levels
- Stress management
  - Anxiety/stress may trigger and/or increase asthma symptoms

Medical Management

- Goal is to achieve and maintain:
  - Engaging the person in managing their asthma
  - Optimise asthma symptom control with the lowest dose of medication necessary
  - Minimise adverse effects of treatment
  - Minimise risk of flare-ups and loss of lung function
  - Minimise impact of asthma on quality of life

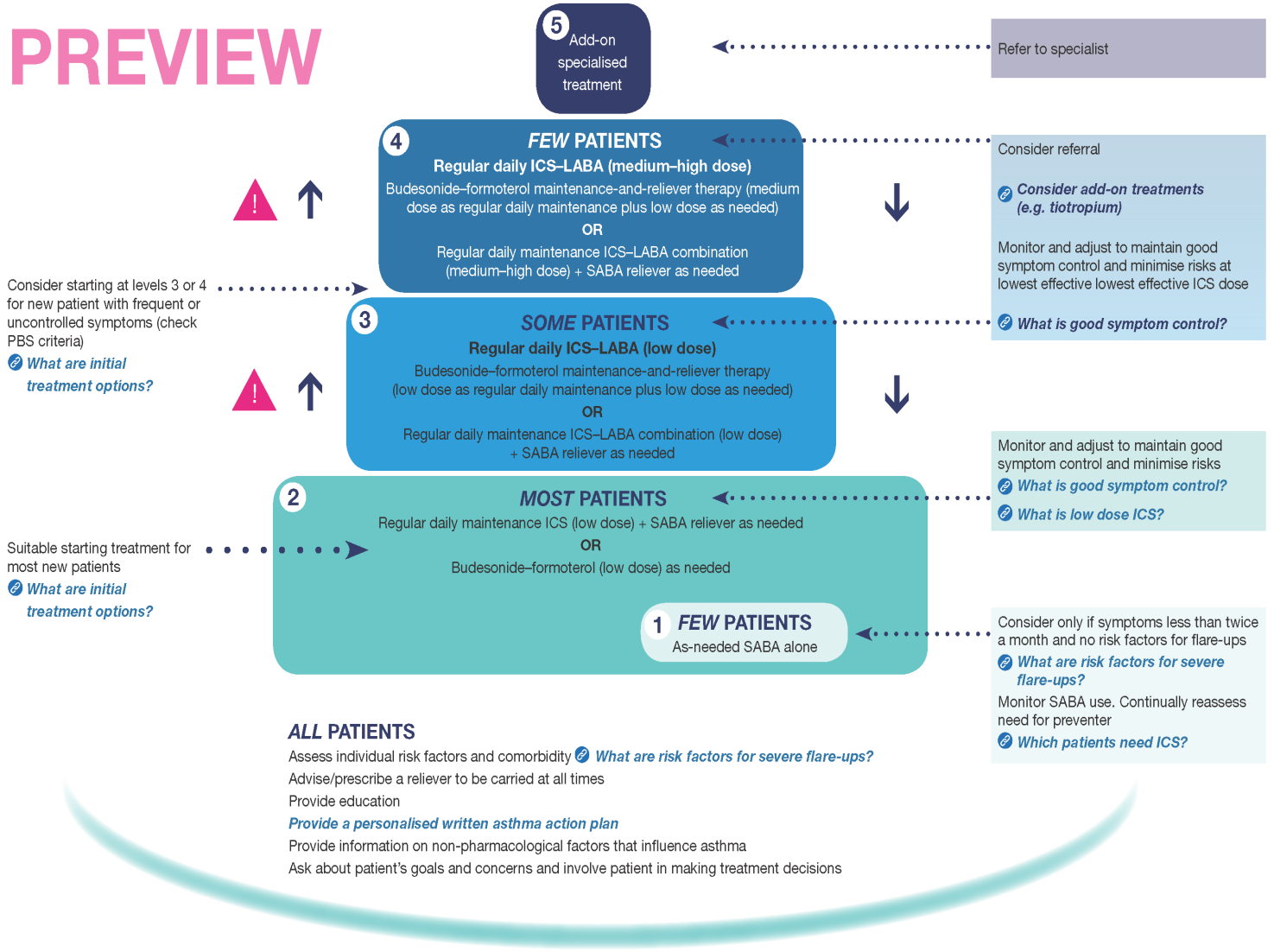
- Most appropriate regimen determined by:
  - Pattern of symptoms
  - Severity of symptoms
  - Asthma control

Adult & adolescent medication options

- PREVIEW of the updated recommendations to the AAH guidelines due to be released in mid July
- Addresses the use of low dose Budesonide/formoterol combination on an as needed basis for those with mild asthma
- Can be used on an as needed basis for mild asthma as alternative to regular low dose ICS
- Encourages the use of preventer medication in those who may otherwise have only used a reliever
- Worldwide there is over reliance on reliever medications, which do not address airway inflammation

FIGURE Selecting and adjusting medication for adults and adolescents

National Asthma Council | Australian Asthma Handbook



What is good asthma control?

- Asthma control involves:
  - Assessment of symptom pattern and severity over the previous 4 weeks
  - Assessment of risk factors for future adverse events

- Daytime symptoms ≤2 days per week
- Reliever use ≤2 days per week
  - Excluding before exercise
- No limitation of activities
- No symptoms during the night or on waking

Reasons for Poor Asthma Control

- Medication related issues
  - Incorrect device technique, poor adherence to preventer therapy, preventer dose too low, medication interaction
- Uncontrolled trigger exposure
  - Rhinitis/allergen exposure, workplace/hobby exposure to chemicals, continued smoking
- Limited knowledge of asthma and self management
- No asthma action plan or regular asthma review
- Diagnostic issues:
  - It’s not asthma

Consider a Medication Management Review if patient is on multiple medications

Exploring patient perceptions and guiding self-management

- Patients with asthma should be offered self-management education:
  - focused on individual needs
  - reinforced with a personalised written action plan

Self-management + regular review

= improved asthma outcomes

- Every asthma consultation is an opportunity to
  - Review, Reinforce, Extend knowledge, Extend skills
- Education is a process not a single visit

Perception VS Reality

It's about asking the right questions:

- **78%** of Australian asthma patients believe they are well controlled[1]
- **13%** of Australian asthma patients are well controlled[1]
- **58%** of patients use their reliever at least twice a day[2]

Don't just ask: How's your asthma?

Ask: How many times have you used your reliever puffer?
How many times has your asthma woken at night?
How many times have you been short of breath

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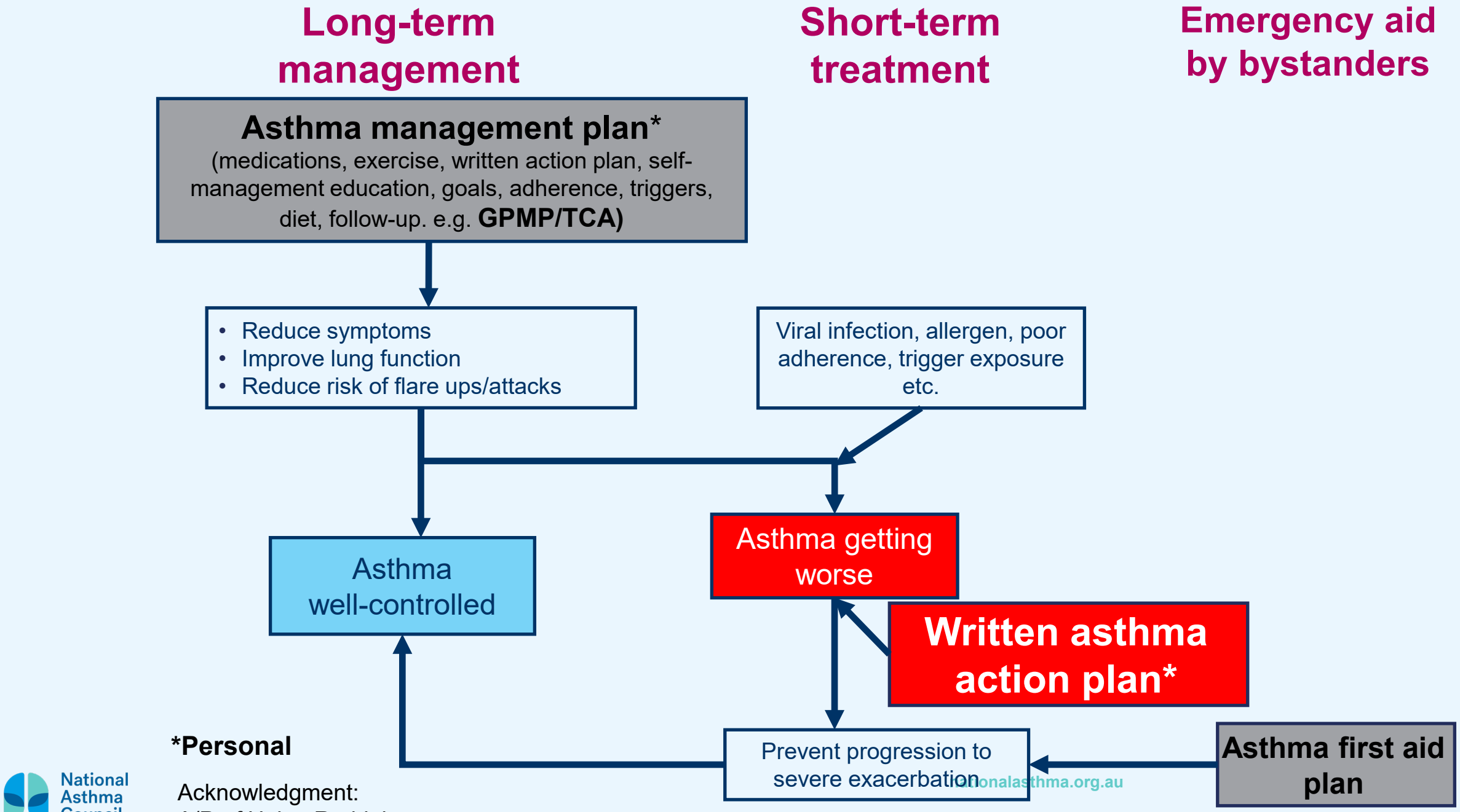
1. Thompson PJ et al. Respiratory 2013;18 (6):957-967
2. Australia National Asthma Council and the Pharmacy Guild of Australia



Acknowledgment:
A/Prof Helen Reddel

Asthma action plans help the patient/carer

- To recognise worsening asthma
  - Increased symptoms, especially waking from sleep
  - Increased use of reliever medications
  - Falling or variable peak flow readings

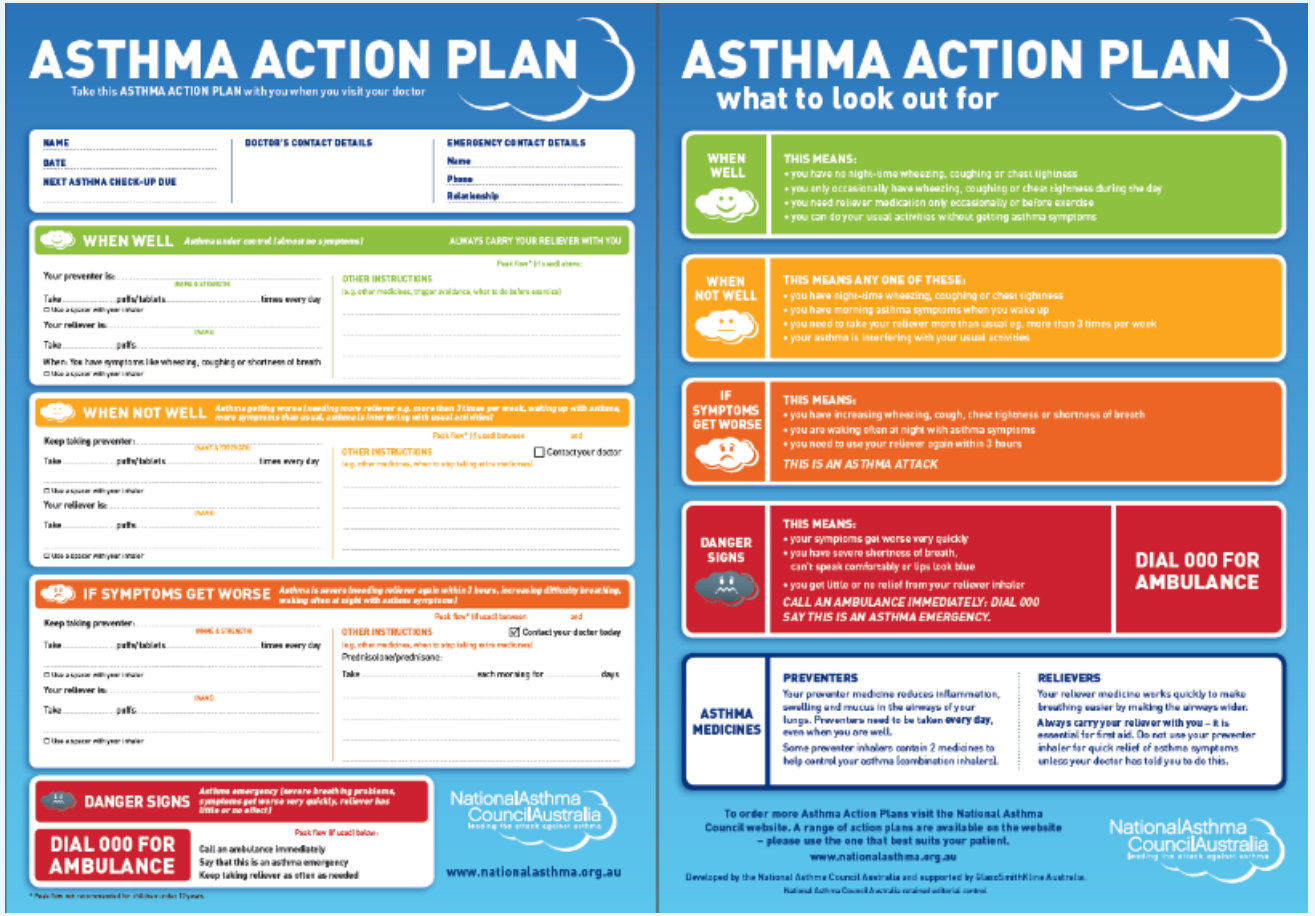
- How to respond appropriately
  - Adjust medication
  - When to see your Doctor
  - When to call an ambulance

Written Asthma Action Plans (WAAP)

Must:

- Be personalised
- Be in language the patient understands
- Provide advice about modification of treatment according to symptoms
- Contain emergency steps
- Include useful contact numbers
- A useful resource for guidance is: www.asthmahandbook.org.au

Written Asthma Action Plans



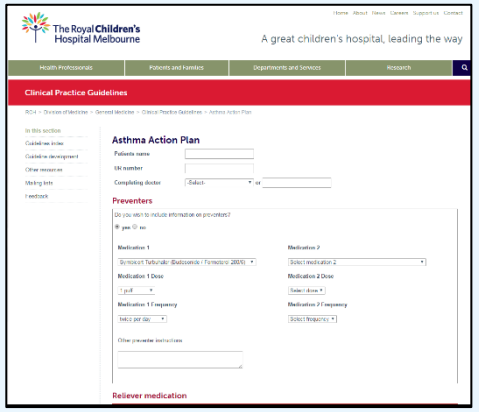
www.nationalasthma.org.au/health-professionals/asthma-action-plans/asthma-action-plan-library

Best Practice
An evolution in GP software

Zedmed
MEDICAL SOFTWARE SOLUTIONS

MD
MEDICAL DIRECTOR

GP Computer software



Royal Children's Hospital
http://www.rch.org.au/clinicalguide/forms/Asthma_Action_Plan/

Targeted Written Asthma Action Plans

Culturally appropriate for Indigenous Australians

Medically appropriate for SMART regimen

ASTHMA ACTION PLAN

Name:

Doctor:

Green: Feel Good
Orange: Short Wind
Red: Bad Short Wind

Feel Good

- no short wind
- no cough
- no whistle breathing

Short Wind

- tight chest
- whistle breathing (wheeze)
- short wind when walking or playing

Bad Short Wind

- short wind all the time
- fast breathing
- whistle breathing a lot
- cannot talk

My medication:

Always use a spacer with your puffer if you have one

My medication:

4 puffs when needed

Always carry your blue puffer with you and use it when you have short wind

Short Wind Danger Plan

- sit up
- have 4 puffs of blue puffer and wait a short time
- send someone to health clinic for help
- if you still have bad short wind, take 4 more puffs
- keep using the blue puffer until you feel better or the health worker comes

Dr Comments:

My Symbicort (budesonide/formoterol) Turbuhaler 200/6 Asthma Action Plan

Anti-inflammatory Reliever
With or without Maintenance

Name: _____

Date: _____

Plan discussed with: (name of health care professional) _____

My usual best peak flow (if used): _____ l/min

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Usual Medical Contact: Name and telephone number _____

NORMAL MODE

MY SYMBICORT ASTHMA TREATMENT IS:

☐ Symbicort Turbuhaler 200/6 mcg

RELIEVER

I should take 1 inhalation of my Symbicort whenever needed for relief of my asthma symptoms

I should always carry my Symbicort with me to use as a reliever when needed

MY REGULAR MAINTENANCE TREATMENT EVERY DAY IS : *(enter number of inhalations or 0 if no regular daily treatment prescribed)*

_____ Inhalation(s) in the morning (0, 1, 2)

_____ Inhalation(s) in the evening (0, 1, 2)

MY ASTHMA IS STABLE IF:

- I do not wake up at night or in the morning because of asthma
- My asthma has not interfered with my usual activities (e.g housework, school, exercise)

OTHER INSTRUCTIONS
(e.g. what to do before exercise, when to see my doctor)

ASTHMA FLARE UP

IF OVER A PERIOD OF 2–3 DAYS:

- My asthma symptoms are getting worse or not improving

  OR
- I am using more than 6 Symbicort reliever inhalations a day

  OR
- Peak flow below: _____ (delete if not used)

I SHOULD:

☑ **Continue to use my Symbicort to relieve my symptoms and my regular daily Symbicort if prescribed (up to a maximum total of 12 inhalations in a day)**

☐ Contact my doctor

☐ Start a course of prednisolone

COURSE OF PREDNISOLONE TABLETS:

Take _____ mg prednisolone tablets each morning for _____ days; OR

IF I NEED MORE THAN 12 SYMBICORT INHALATIONS (TOTAL) IN ANY DAY,

- I must see my doctor or go to hospital the same day

ASTHMA EMERGENCY

SIGNS OF AN ASTHMA EMERGENCY

- My asthma symptoms are getting worse quickly
- I am finding it very hard to breathe or speak
- My Symbicort is not helping

IF I HAVE ANY OF THE ABOVE DANGER SIGNS, I SHOULD DIAL 000 FOR AN AMBULANCE AND SAY I AM HAVING A SEVERE ASTHMA ATTACK.

WHILE I AM WAITING FOR THE AMBULANCE:

- Sit upright and keep calm
- I should keep taking my Symbicort as needed
- If only Ventolin® is available, take 4 puffs as often as needed until help arrives
- Even if my symptoms appear to settle quickly I should seek medical advice right away
- ☐ Use my adrenaline autoinjector

OTHER INSTRUCTIONS

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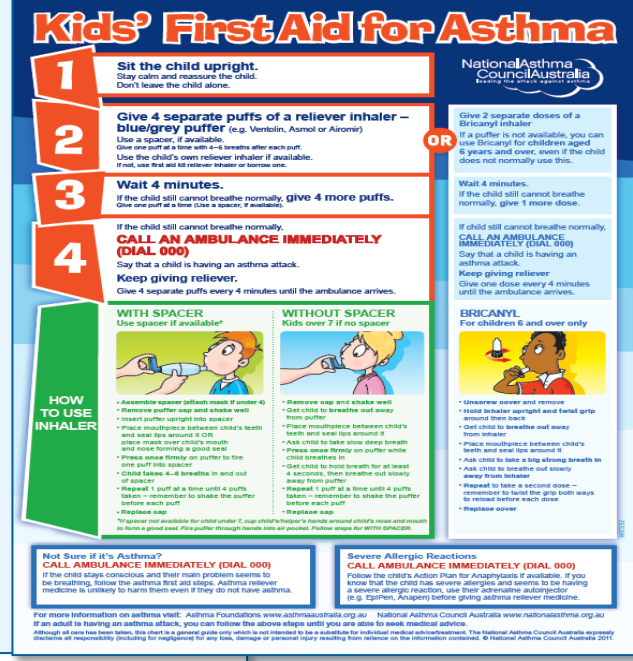
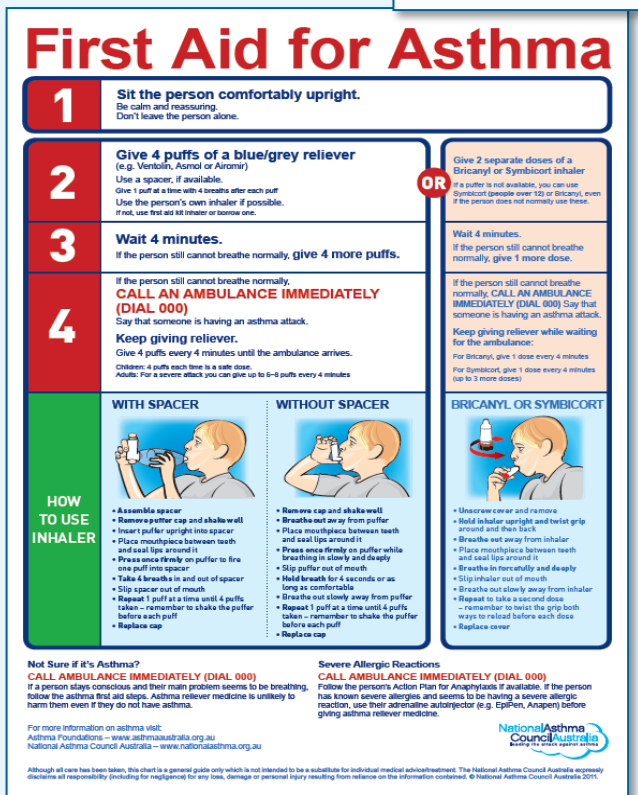
Community first aid protocol

1. Give 4 separate puffs of SABA via spacer
2. Take 4 breaths per puff
3. Wait 4 minutes
4. If symptoms persist, repeat steps 1-3

If still no improvement, call ambulance and continue steps 1-3 until help arrives





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Asthma and Telehealth

Now is a good time for an asthma review via telehealth, it's a way to engage and keep in touch with your patients

What can you do?

- Review asthma control by using an asthma score check
- Check they have a current written asthma action plan
- Ensure adequate supply of medication, especially reliever
- If video conferencing can check device technique
- See http://www.mbsonline.gov.au/ for the fact sheet

Asthma and COVID-19

Refer to Australian Asthma Handbook for reference

- Check everyone with asthma has a current written asthma action plan – telehealth if need be
- Avoid performing spirometry unless urgent
- Advise to continue with current asthma 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
- www.sensitivechoice.com
  - Consumer resources, information

Health Professional Network: nationalasthma.org.au

Twitter: @asthmacouncilau
Facebook: National Asthma Council Australia