CHECKLIST FOR HEALTH PROFESSIONALS

Is it severe asthma?
A guide to identifying patients with severe asthma among adults and adolescents with asthma that is not well controlled despite treatment

1 CONFIRM AND CHECK

THE DIAGNOSIS
☐ Check that variable expiratory airflow limitation has been documented. [A]
☐ Investigate signs/symptoms suggesting alternative diagnosis or comorbidity. [B]

ADHERENCE
☐ Assess adherence to ICS-based preventer and explore barriers. [C]

INHALER TECHNIQUE
☐ Use a checklist of correct steps for the specific inhaler type. [D]

FOR SABA OVERUSE
☐ Ask how many puffs taken per day and how long reliever puffer lasts. Check prescribing records.
☐ Ask if patient also uses non-prescription reliever. [E]

2 ASSESS

COMORBIDITIES
☐ Consider anxiety, obesity, symptomatic GORD, rhinosinusitis, untreated OSA, deconditioning, upper airway dysfunction. [B]

TRIGGERS
☐ Assess and manage exposure to asthma triggers. Ask about exposure to cigarette smoke, other triggers (e.g. infections, allergens, irritants, moulds/dampness, indoor/outdoor air pollution). Consider AERD. [F]

3 CONSIDER

EARLY REFERRAL
☐ Identify patients with possible severe asthma who might benefit from monoclonal antibody therapy, and offer referral for specialist assessment without delay (after confirming correct inhaler technique and adherence). [G]
Also consider immediate referral to an immunologist if food allergy present/suspected.

4 OPTIMISE TREATMENT

CONSIDER [H]
☐ 1. budesonide plus formoterol as MART instead of fixed-dose ICS–LABA plus as-needed SABA
☐ 2. add-on tiotropium by mist inhaler
☐ 3. high-dose ICS–LABA for 3–6 months.

5 REFER FOR SEVERE ASTHMA

Refer at any time if patient needs prolonged high-dose ICS, needs maintenance OCS, has needed ≥2 courses of OCS for acute asthma despite treatment with ICS–LABA, has used SABA 6–8 puffs/day for several weeks, or has frequent flare-ups, after ruling out/correcting common reasons for uncontrolled asthma (low adherence/poor inhaler technique with ICS, continued exposure to triggers). [I]

DEFINITIONS
Severe asthma: asthma that remains uncontrolled despite regular treatment with high-dose ICS plus LABA or with maintenance OCS, or asthma that requires this level of treatment to prevent loss of control. Less than 4% of adults with asthma have severe asthma. 2
Uncontrolled asthma: poor symptom control, e.g. during previous 4 weeks symptoms during night or on waking or limitation of activities due to asthma, daytime symptoms > 2 days/week or need for SABA reliever > 2 days/week (not including doses taken prophylactically before exercise), frequent/serious flare-ups or persistent airflow limitation on spirometry.
High-dose ICS: > 400 microg/day beclometasone dipropionate, > 800 microg/day budesonide, > 320 microg/day ciclesonide, 200 microg/day fluticasone furoate, > 500 microg/day fluticasone propionate.

AERD: aspirin-exacerbated respiratory disease
GORD: gastroesophageal reflux disease
ICS: inhaled corticosteroid
LABA: long-acting beta, agonist
MART: maintenance-and-reliever therapy
OCS: oral corticosteroids
OSA: obstructive sleep apnoea
SABA: short-acting beta, agonist
Refer to notes A–I on reverse page.
NOTES
Provide every patient with an individualised written asthma action plan and update it regularly (at least yearly, and whenever treatment is changed).

A. Airflow limitation (reduced FEV\textsubscript{1}/FVC on spirometry) and any of:
   - increase in FEV\textsubscript{1} ≥200 mL and ≥12% from baseline 10–15 minutes after bronchodilator
   - increase or decrease in FEV\textsubscript{1} of ≥20% measured on different visits
   - clinically important reduction in lung function on exercise challenge test or bronchial provocation test in specialist laboratory
   - increase in FEV\textsubscript{1} ≥200 mL and ≥12% from baseline after ICS treatment trial (≥4 weeks)
   - peak expiratory flow variability ≥10%.

B. Consider and manage contributing factors, e.g. anxiety, obesity, symptomatic GORD, allergic rhinitis, rhinosinusitis, OSA, deconditioning, upper airway dysfunction, hormonal influences such as premenstrual asthma, menarche, menopause, thyroid disorders.

C. Ask open questions in a non-judgemental tone, e.g.: \textit{In the last 4 weeks, how many days a week would you have taken your preventer medication? None at all? One? Two? (etc). How many times a day would you take it? Morning only? Eveniing only? Morning and evening? (or other) Each time, how many puffs would you take? One? Two? (etc). Do you find it easier to remember your medication in the morning or the evening?}

D. Most patients do not use their inhaler correctly, even with experience. Repeated one-to-one training is essential.\textsuperscript{4}

E. Dispensing of 3 or more canisters in a year (average 1.6 puffs per day) is associated with increased risk of flare-ups.\textsuperscript{5} Dispensing 12 or more canisters in a year (average 6.6 puffs per day) is associated with increased risk of asthma death.\textsuperscript{6}

F. AERD is characterised by airway inflammation including asthma, nasal polyposis, and flare-ups (which may be severe) in response to nonsteroidal anti-inflammatory drugs.

G. Monoclonal antibody treatments for severe asthma (benralizumab, omalizumab, mepolizumab) can only be prescribed for patients attending a public hospital or approved private hospital (see PBS listing). PBS criteria include treatment by the same specialist for ≥6 months or asthma diagnosis by a multidisciplinary severe asthma clinic team, and inadequate asthma control despite documented adherence to optimised standard treatment including high-dose ICS+LABA for ≥12 months. Tests to determine severe asthma phenotype and eligibility (e.g. skin prick testing, blood eosinophil count, exhaled nitric oxide) need not be ordered by GP (preferably arranged by specialist).

H. Follow the stepped approach to treatment (see asthmahandbook.org.au). Review inhaler technique and adherence before trialling treatment changes (see TGA indications and PBS listings). Monitor asthma symptom control during treatment trials and stop if ineffective. MART has been shown to reduce the risk of severe flare-ups compared with higher-dose maintenance ICS or ICS-LABA.\textsuperscript{7} Add-on montelukast can also be trialled (limited evidence for benefit in AERD but very little evidence for benefit in severe asthma; warn patient about potential neuropsychiatric effects).\textsuperscript{8} Trial maintenance OCS only if ineligible for monoclonal antibody treatment and after optimising treatment regimen, adherence and inhaler technique. Avoid daily OCS dosing. For patients taking OCS (maintenance treatment or frequent courses) or high-dose ICS, monitor and manage potential adverse effects (e.g. blood pressure, blood glucose, bone mineralisation, eye examination, adrenal function).

I. Refer to respiratory physician or multidisciplinary severe asthma clinic. If not possible, refer to a general physician, allergist or clinical immunologist with expertise in managing severe asthma.

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References

Disclaimer
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