Management of acute asthma in adults in general practice

Many deaths from asthma are preventable. Delay can be fatal. Factors leading to poor outcome include:

- Clinical staff failing to assess severity by objective measurement
- Patients or relatives failing to appreciate severity
- Under use of corticosteroids

Regard each emergency asthma consultation as for acute severe asthma until shown otherwise.

Assess and record:

- Peak expiratory flow (PEF)
- Symptoms and response to self treatment
- Heart and respiratory rates
- Oxygen saturation (by pulse oximetry)

Caution: *Patients with severe or life-threatening attacks may not be distressed and may not have all the abnormalities listed below. The presence of any should alert the doctor.*

Moderate asthma	Acute severe asthma	Life-threatening asthma
INITIAL ASSESSMENT		
PEF >50–75% best or predicted	PEF 33–50% best or predicted	PEF <33% best or predicted
FURTHER ASSESSMENT		
■ SpO_2 ≥92% ■ Speech normal ■ Respiration <25 breaths/min ■ Pulse <110 beats/min	■ SpO_2 ≥92% ■ Can't complete sentences ■ Respiration ≥25 breaths/min ■ Pulse ≥110 beats/min	■ SpO_2 <92% ■ Silent chest, cyanosis or poor respiratory effort ■ Arrhythmia or hypotension ■ Exhaustion, altered consciousness
MANAGEMENT		
Treat at home or in surgery and ASSESS RESPONSE TO TREATMENT	**Consider admission**	**Arrange immediate ADMISSION**
TREATMENT		
■ β_2 bronchodilator: □ via spacer[A] If no improvement: □ via nebuliser (preferably oxygen-driven), salbutamol 5 mg ■ Give prednisolone 40–50 mg ■ Continue or increase usual treatment If good response to first treatment (symptoms improved, respiration and pulse settling and PEF >50%) continue or increase usual treatment and continue prednisolone	■ Oxygen to maintain SpO_2 94–98% if available ■ β_2 bronchodilator □ via nebuliser (preferably oxygen-driven), salbutamol 5 mg □ or if nebuliser not available, via spacer[A] ■ Prednisolone 40–50 mg or IV hydrocortisone 100 mg ■ **If no response in acute severe asthma: ADMIT**	■ Oxygen to maintain SpO_2 94–98% ■ β_2 bronchodilator with ipratropium: □ via nebuliser (preferably oxygen-driven), salbutamol 5 mg and ipratropium 0.5 mg □ or if nebuliser and ipratropium not available, β_2 bronchodilator via spacer[A] ■ Prednisolone 40–50 mg or IV hydrocortisone 100 mg immediately
Admit to hospital if any: ■ Life-threatening features ■ Features of acute severe asthma present after initial treatment ■ Previous near-fatal asthma Lower threshold for admission if afternoon or evening attack, recent nocturnal symptoms or hospital admission, previous severe attacks, patient unable to assess own condition, or concern over social circumstances	**If admitting the patient to hospital:** ■ Stay with patient until ambulance arrives ■ Send written asssessment and referral details to hospital ■ β_2 bronchodilator via oxygen-driven **nebuliser in ambulance**	**Follow up after treatment or discharge from hospital:** ■ Continue prednisolone until recovery (minimum 5 days) ■ **GP review within 2 working days** ■ Monitor symptoms and PEF ■ Check inhaler technique ■ **Written asthma action plan** ■ Modify treatment according to guidelines for chronic persistent asthma ■ Address potentially preventable contributors to admission

[A] β_2 bronchodilator via spacer given one puff at a time, inhaled separately using tidal breathing; according to response, give another puff every 60 seconds up to a maximum of 10 puffs