### Management of Acute Asthma in Children and Adolescents in the Emergency Department

#### Mild Asthma
- Normal mental state
- Subtle or no accessory muscle use
- Initial \( \text{SpO}_2 > 94\% \)
- Talks in sentences
- Wheeze + normal breath sounds

#### Moderate Asthma
- Normal mental state
- Some accessory muscle use
- Initial \( \text{SpO}_2 91-94\% \)
- Tachycardia
- Talks in phrases
- Wheeze ± reduced breath sounds

#### Severe Asthma
- Agitated
- Moderate-marked accessory muscle use
- Initial \( \text{SpO}_2 85-90\% \)
- Tachycardia
- Talks in single words
- Wheeze ± reduced breath sounds

#### Critical Asthma
- Confused/Drowsy
- Maximal accessory muscle use
- Exhaustion ± central cyanosis
- Initial \( \text{SpO}_2 < 85\% \)
- Marked tachycardia
- Unable to talk
- Quiet chest

Note: If a patient has signs and symptoms that cross categories always treat according to their most severe features.

#### Oxygen Administration
- Administer oxygen (5-15 L/min) via face mask if \( \text{SpO}_2 \) are < 92% (Use Non-Rebreathing Reservoir Mask if giving O2 8L/min)

#### Bronchodilator
- via MDI and Spacer (may only be needed once):
  - Salbutamol
    - <6 years: 6 puffs
    - ≥6 years: 12 puffs
  - (Ventolin)

- Consider Oral Corticosteroid
  - Oral prednisolone 1mg/kg/day (max. 50mg)

#### Response after 20 minutes?
- GOOD
  1. Discharge on prn salbutamol (2-6 puffs, up to 3-4 hourly)
  2. Continue oral prednisolone up to 3 days if needed

- POOR
  Treat as for Moderate Asthma

#### Response after 1st hour of treatment?
- GOOD
  1. Observe for a further hour
  2. Discharge on prn salbutamol, up to 3-4 hourly
  3. Continue oral prednisolone up to 3 days

- POOR
  Admit

- POOR
  Treat as for Moderate Asthma

#### Response during 1st hr of treatment?
- GOOD
  1. Consult senior staff
  2. Admit to hospital

- POOR
  Consult senior staff
  Treat as for Critical Asthma

- POOR
  ARRANGE TRANSFER TO INTENSIVE CARE

#### Prior to discharge:
- Arrange follow up appointment
- Review prophylaxis
- Give and explain a written Asthma Action Plan with clear instructions on when to return if asthma worsens

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| **Response after 1st hr of treatment?**                                                                        |
| **GOOD** 1. Observe for a further hour 2. Home on prn Salbutamol, up to 3-4 hourly 3. Continue oral prednisolone up to 3 days |
| **POOR** 1. Repeat Salbutamol 1-4 hrly Arrange transfer to Hospital                                         |
| **Arrange Admission to Hospital**                                                                             |
| **Response during 1st hr of treatment?**                                                                       |
| **GOOD** 1. Consult senior staff 2. Repeat Salbutamol ½ - 4hrly after first hour of treatment               |
| **POOR** 1. Consult senior staff 2. Treat as for Critical Asthma                                              |

**ARRANGE IMMEDIATE ADMISSION**
CALL AMBULANCE 000
Stay with patient until ambulance arrives

**CONSULT SENIOR STAFF**

**Arrange follow up appointment of all patients presenting with acute asthma**

For patients sent home, all should receive a written Asthma Action Plan, which should be explained, with clear instructions on when to return if asthma worsens