ASTHMA MANAGEMENT

DOCTOR CHECKLIST

Admission: DD/MM/YYYY – DD/MM/YYYY

At Admission

Observations
RR………………HR…………….SATS……………..
Temp……………BP…………………..

Oxygen provided
(Should be given if SPO2<94%)

Yes / No

Previous admissions
Yes /
No
- Required IVs
Yes / No
- ITU admissions
Yes / No
- Prev Wheeze
Yes /
No
- Only with colds
Yes / No
- Household smoking status
Yes / No

During Admission

Formal admission
Yes / No
- Ward:
Yes /
No
- PICU admission:
Yes / No

CXR Ordered:
Yes / No
If yes, Indication: .........................

PEF measured:
Yes / No
What Value?  .........................
What Date?  .........................

Treatment

B2 agonists
Yes / No
Ipratropium
Yes / No
Neb / Inhaler / Inhaler with Spacer

Steroids
Yes / No
Started: prior to admission / at admission

Prior to Discharge

Medication for discharge
Reliever
Yes / No
Preventer
Yes / No
Steroid
Yes / No

Medication classes reviewed
Yes / No
(i.e. need for long-term preventer?)

Doses reviewed
(increasing as necessary)
Yes / No

Adherence reviewed
Yes / No

Inhaler technique checked
Yes / No

Inhaler instruction provided
Yes / No

Trigger Factors

Viral
Yes/No/NA

Exeercise
Yes/No/NA

Smoking
Yes/No/NA

Emotion
Yes/No/NA

Other
Yes/No If so....................

Discharge Information

A written action plan has been provided:
Yes / No

Information leaflet:
Yes / No

PEF Given:
Yes / No

Steroid supply given:
Yes / No

Follow-up

Community follow up advised – within 7 working days:
Yes / No

Specialist follow up arranged – within 2 weeks
(If life-threatening exacerbation) Yes / No
If Yes: Resp / General / Nurse-led
My Asthma Discharge Checklist

We want to ensure that our patients understand their asthma and how to manage it prior to discharge. Please ask the medical team caring for you to go through this checklist and your asthma management plan before you go home.

**My treatment:**

- I know which medication I am going home with
- I know the doses of my medication
- I know when and for how long I will take my medication
- I have been shown how to use my inhalers

**My Trigger Factors:**

I am aware of what could make my asthma worse

- Viruses
- Cigarette smoke
- Exercise
- Medicines
- Other ____________________

**My Discharge Information:**

- I have been given a peak flow meter
- I have been shown how to use my peak flow meter
- I have been given my asthma management plan
- I have been given an asthma information leaflet

**My Follow-Up:**

- I will arrange an appointment with my GP within the next 7 days
- I have been given an appointment time for follow-up with the specialist nurse (if needed)

Follow-up appointment details ........................................................................................................
If you are eight or older, then please give me to your nurse to receive your peak flow meter!

Remember to check your peak flow...
Reducing salbutamol puffs when going home

**step 1**
- Take 10 puffs of salbutamol, using a spacer every 4 hours (shake the inhaler, put 1 puff in the spacer and take 4 to 5 normal rate breaths or breathe for a count of 10 for each puff)
- Do this for 36 hours then start to step down this plan
- If your child is sleeping and breathing comfortably overnight, there is no need to wake them up to give them their inhaler

**step 2**
- Take 6 puffs of salbutamol, using a spacer as above, every 4 hours for 36 hours

**step 3**
- Take 2 to 4 puffs of salbutamol, using a spacer as above, every 4 hours for 36 hours

**step 4**
- You should now be back in the green zone of your asthma management plan and should use your salbutamol when needed and **before exposure to any of your triggers**
- Continue to manage your asthma by using your personal asthma management plan

**Please note:**
If your child is unable to progress through the steps or if they are requiring 10 puffs of their salbutamol more than every 4 hours, you must seek further medical advice.
How to use a peak flow meter

1. Stand up or sit up straight.
2. Check that the red arrow on the peak flow meter is on zero.
3. Take a breath in then breathe out fully.
4. When ready to take a reading - take a deep breath in, filling the lungs completely.
5. Place the mouthpiece between your teeth and lips and blow hard and fast into the device, a single blow – like blowing out candles on a birthday cake.
6. Note the number next to the arrow – this is your peak flow measurement.
7. Push the arrow back to zero and breathe a few normal breaths.
8. Repeat the steps above twice more.
9. Record your highest blow.
ACUTE ASTHMA MANAGEMENT IN CHILDREN AGED 2-5 YEARS

ASSESS ASThma SEVERITY

Note: Clinical signs may correlate poorly with the severity of airways obstruction. Some children with acute asthma may not appear distressed.

**Mild - Moderate Exacerbation**
- SpO2 ≥ 92%
- No clinical features of severe asthma

- Salbutamol 10 puffs via spacer ± face mask
- Reassess after 20 minutes

**Severe Exacerbation**
- SpO2 < 92%
- Too breathless to talk or eat
- Heart rate > 140/min
- Respiratory rate > 40/min
- Use of accessory neck muscles

- Oxygen via face mask to achieve normal saturations
- Nebulised Salbutamol 2.5mg
- Consider Prednisolone 20mg or IV Hydrocortisone 4mg/kg
- If poor response add Nebulised Ipratropium Bromide 250micrograms

**Life Threatening Asthma**
- SpO2 < 92%
- Silent chest
- Poor respiratory effort
- Agitation
- Altered consciousness
- Cyanosis

- Oxygen via face mask to achieve normal saturations
- Nebulised Salbutamol 2.5mg plus Ipratropium Bromide 250micrograms
- Consider IV Hydrocortisone 4mg/kg or 50mg
- Discuss with consultant paediatrician

Assess response to treatment

- Record respiratory rate, heart rate, oxygen saturation
- Admit all cases if features of severe exacerbation persist after initial treatment

**Responding:**
- Continue inhaled Salbutamol 1-4 hourly
- Consider oral prednisolone
- Discharge when stable on 4 hourly treatment

Discharge Plan:
- Ensure stable on 4 hourly inhaled treatment
- Consider Prednisolone daily for 3 days
- Provide a Trust written asthma action plan
- Review regular treatment
- Check inhaler technique
- Consider need for hospital follow up; otherwise advise GP follow up within 1 week
- If under hospital follow up inform child’s consultant

**Not responding:**
- Repeat Salbutamol every 20-30 minutes plus Ipratropium Bromide every 20-30 minutes for 2 hours then 6 hourly

Children with continuing severe asthma despite frequent β2 Agonist, Ipratropium bromide and steroids need urgent discussion with a consultant paediatrician

Consider:
- Chest x-ray and blood gases
- Cardiac monitor
- IV Magnesium 40mg/kg (max 2g) infusion over 20 min
- IV Salbutamol 15 micrograms/kg bolus (max 250 micrograms) over 10 mins followed by continuous infusion 1-2 micrograms/kg/min. If not responding child should be transferred to PICU then up to 5mcg/kg/min can be used at this point – CONSULTANT-CONSULTANT DISCUSSION
- IV Aminophylline 5 mg/kg (max 500mg) loading dose over 20 min (omit in those receiving oral Theophyllines)
ACUTE ASTHMA MANAGEMENT IN CHILDREN AGED OVER 5 YEARS

ASSESS ABC

ASSESS ASThma SEVERITY

Note: Clinical signs may correlate poorly with the severity of airways obstruction. Some children with acute asthma may not appear distressed.

Mild - Moderate Exacerbation
- SpO2 ≥ 92%
- PEF ≥ 50% best or predicted
- No clinical features of severe asthma

Severe Exacerbation
- SpO2 < 92%
- Too breathless to talk or eat
- Heart rate > 140/min
- Respiratory rate > 40/min
- Use of accessory neck muscles

Life Threatening Asthma
- SpO2 < 92%
- Silent chest
- Poor respiratory effort
- Agitation
- Altered consciousness
- Cyanosis

Salbutamol 10 puffs via spacer
Reassess after 20 minutes

Oxygen via spacer to achieve normal saturations
Nebulised Salbutamol 5mg
Consider Prednisolone 30-40 mg or IV Hydrocortisone 4mg/kg
If poor response add Nebulised Ipratropium Bromide 250micrograms

Oxygen via spacer to achieve normal saturations
Nebulised Salbutamol 5mg plus Ipratropium Bromide 250micrograms
Consider IV Hydrocortisone 4mg/kg or 100mg
Discuss with consultant paediatrician

Assess response to treatment
- Record respiratory rate, heart rate, oxygen saturation and PEFR every 1-4 hours
- Admit all cases if features of severe exacerbation persist after initial treatment

Responding:
- Continue inhaled Salbutamol 1-4 hourly
- Consider oral prednisolone
- Discharge when stable on 4 hourly treatment

Discharge Plan:
- Ensure stable on 4 hourly inhaled treatment
- Consider Prednisolone daily for 3 days
- Provide a Trust written asthma action plan
- Review regular treatment
- Check inhaler technique
- Consider need for hospital follow up; otherwise advise GP follow up within 1 week
- If under hospital follow up inform child’s consultant

Not responding:
- Repeat Salbutamol every 20-30 minutes plus Ipratropium Bromide every 20-30 minutes for 2 hours then 6 hourly

Children with continuing severe asthma despite frequent β2 Agonist, ipratropium bromide and steroids need urgent discussion with a consultant paediatrician

Consider:
- Chest x-ray and blood gases
- Cardiac monitor
- IV Magnesium 40mg/kg (max 2g) infusion over 20 min
- IV Salbutamol 15 micrograms/kg bolus (max 250 micrograms) over 10 min followed by continuous infusion (see appendix 1) 1-2 micrograms/kg/min (max 60micrograms/min)
- IV Aminophylline 5 mg/kg (max 500mg) loading dose over 20 min (omit in those receiving oral Theophyllines) followed by continuous infusion (see appendix 1) 1mg/kg/hr

CONSULTANT-CONSULTANT DISCUSSION