Local Primary Care Federation
Nurse Clinics – Asthma Reviews
Standard Operating Procedure

Approved by:	**Dr Mohammed Umer**
Date Approved:	**7th June 2018**
Implemented by:	**Dr Mohammed Umer and Jolene Gregory**
Date issued:	**8th June 2018**
Review date:	**June 2019**

SOP: Nurse Clinics- Asthma Reviews
Purpose: To set out procedures for Practice Nurses and GPs undertaking asthma reviews in the Extended Access Hubs.
Scope: ➢ Routine Asthma Reviews ➢ Proactive asthma reviews in patients frequently exacerbating
Criteria: Children aged 12 years and above
Responsibilities: Compliance with this SOP will be the responsibility of all Practice Nurses working for Local Primary Care Federation. Local Primary Care Federation is responsible for ensuring this SOP is up-to-date
Review: This SOP will be reviewed annually It will also be reviewed in the event of any of the following: ❑ Changes in relevant legislation or recommended guidance ❑ Changes in staffing ❑ Following an error or significant event Next review due: June 2019
Risks: Patients presenting with symptoms of acute exacerbation. Patients presenting with symptoms of acute exacerbation to be reviewed urgently by the onsite spoke GP. See section acute exacerbation presentations.

Procedure for the management of asthma in patients accessing the extended access service

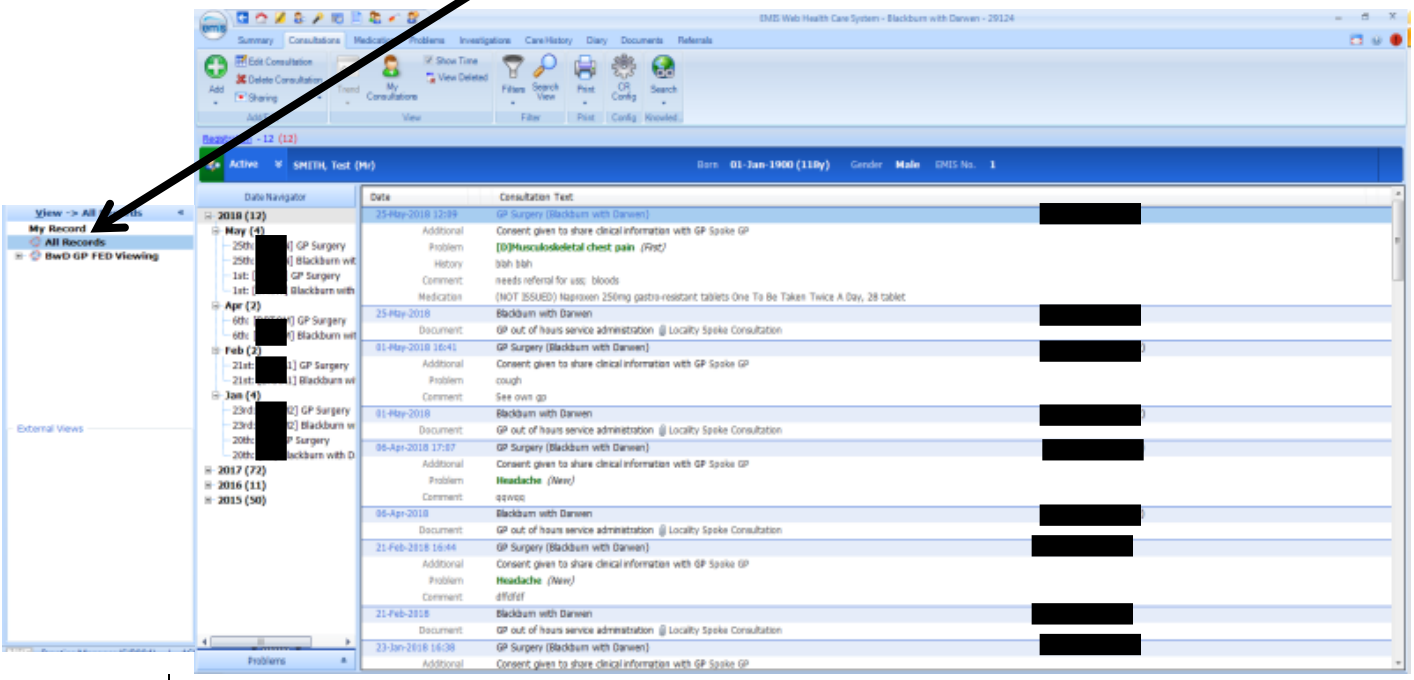
Contents

1. Arrival of patient	Obtain consent from the patient to access full medical records
2. Clinical system/Accessing medical records	Access full medical records by selecting view all records. Guidance and instructions can be found in Appendix 1
3. Template	Record consultation by accessing relevant template a. QOEST Template for proactive reviews b. Asthma Template for routine reviews Guidance can be found in Appendix 2
4. Adherence and control	1. Discuss 'move up and down' steps as appropriate with spoke GP 2. Spoke GP to make any changes as necessary 3. Record changes in template See: ➢ Appendix 3 – adherence and control ➢ Appendix 5 – summary of management of asthma in adults ➢ Appendix 6 - summary of management of asthma in children
5. Routine Asthma review and management in	Evaluation: ➢ Assess symptoms ➢ measure lung function

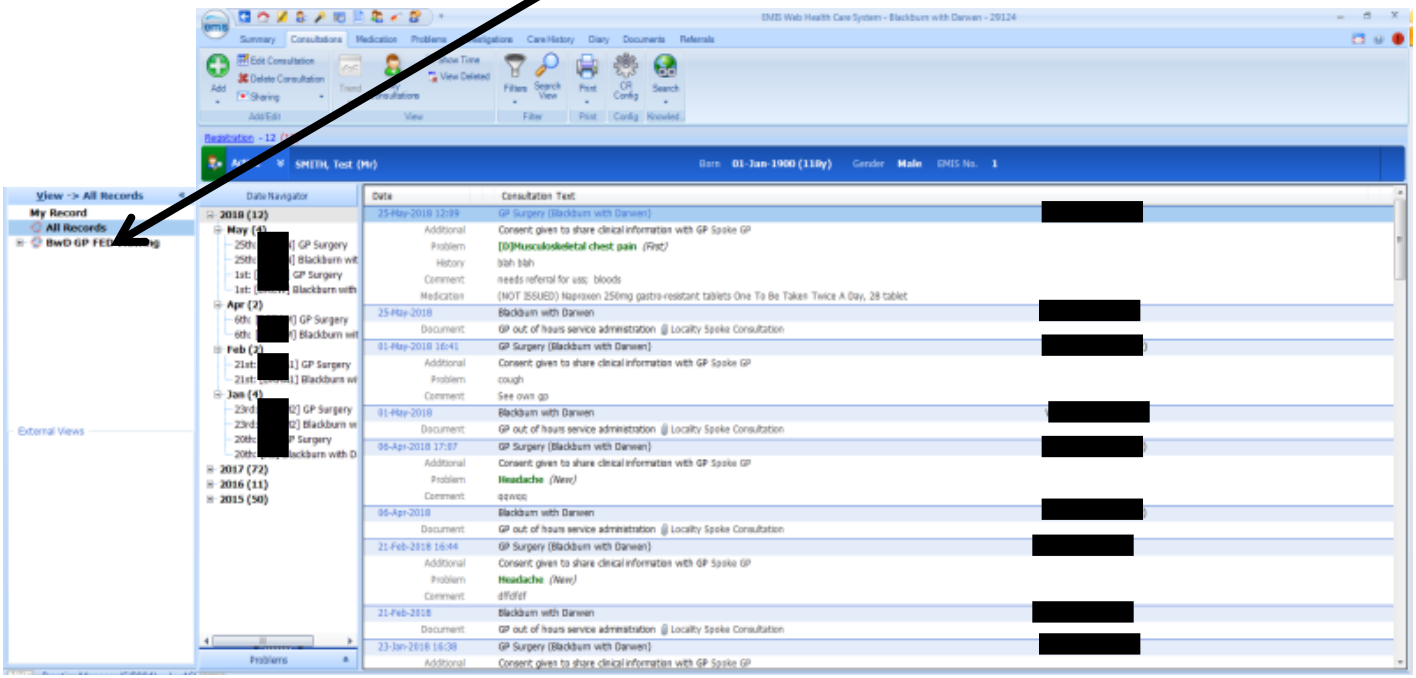
adults	➢ check inhaler technique and adherence ➢ Update self-management plan See: ➢ Appendix 4 for management of asthma ➢ Appendix 5 for summary of management of asthma in adults ➢ Appendix 7 for asthma care plan
6. Routine Asthma review and management in children	Evaluation: ➢ Assess symptoms ➢ measure lung function ➢ check inhaler technique and adherence ➢ Update self-management plan See: ➢ Appendix 4 for management of asthma ➢ Appendix 6 for summary of management of asthma in children ➢ Appendix 7 for asthma care plan
7. Frequent exacerbations Proactive Reviews	Evaluation: ➢ Assess symptoms ➢ measure lung function ➢ check inhaler technique and adherence ➢ Update self-management plan See: ➢ Appendix 4 for management of asthma ➢ Appendix 6 for summary of management of asthma in children ➢ Appendix 7 for asthma care plan ➢ Appendix 8 for QOEST proactive reviews
8. Patients presenting with acute exacerbations	Patients presenting with symptoms of acute exacerbation to be reviewed urgently by the onsite spoke GP. See: ➢ Appendix 10 – acute asthma
9. Communication	Document consultation and send electronically to patients GP practice. See: ➢ Appendix 11- sending consultations

Appendix 1- Accessing full medical records guide

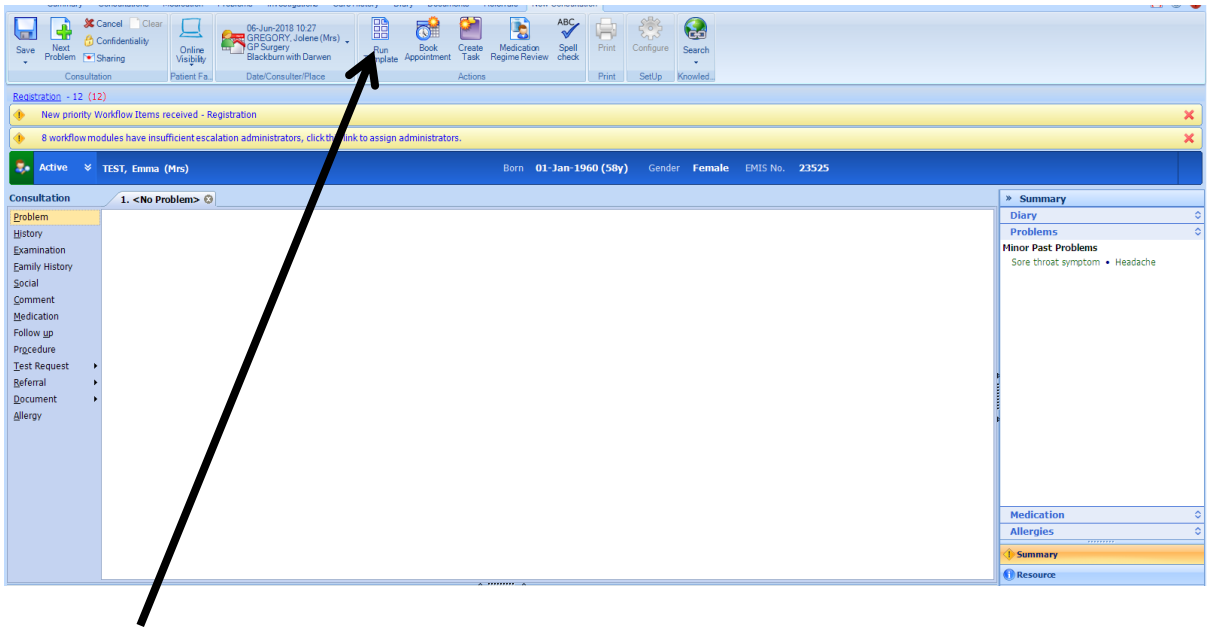
My Record: this is all the patient's spokes consultations.



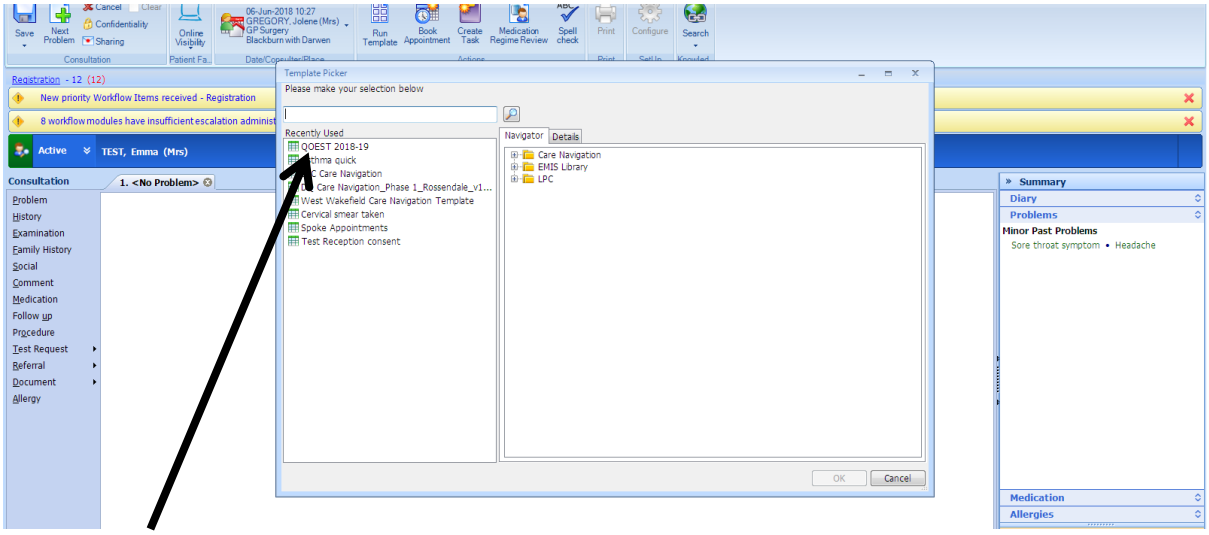
All Records: Access to full medical records from patient's own surgery and spokes service



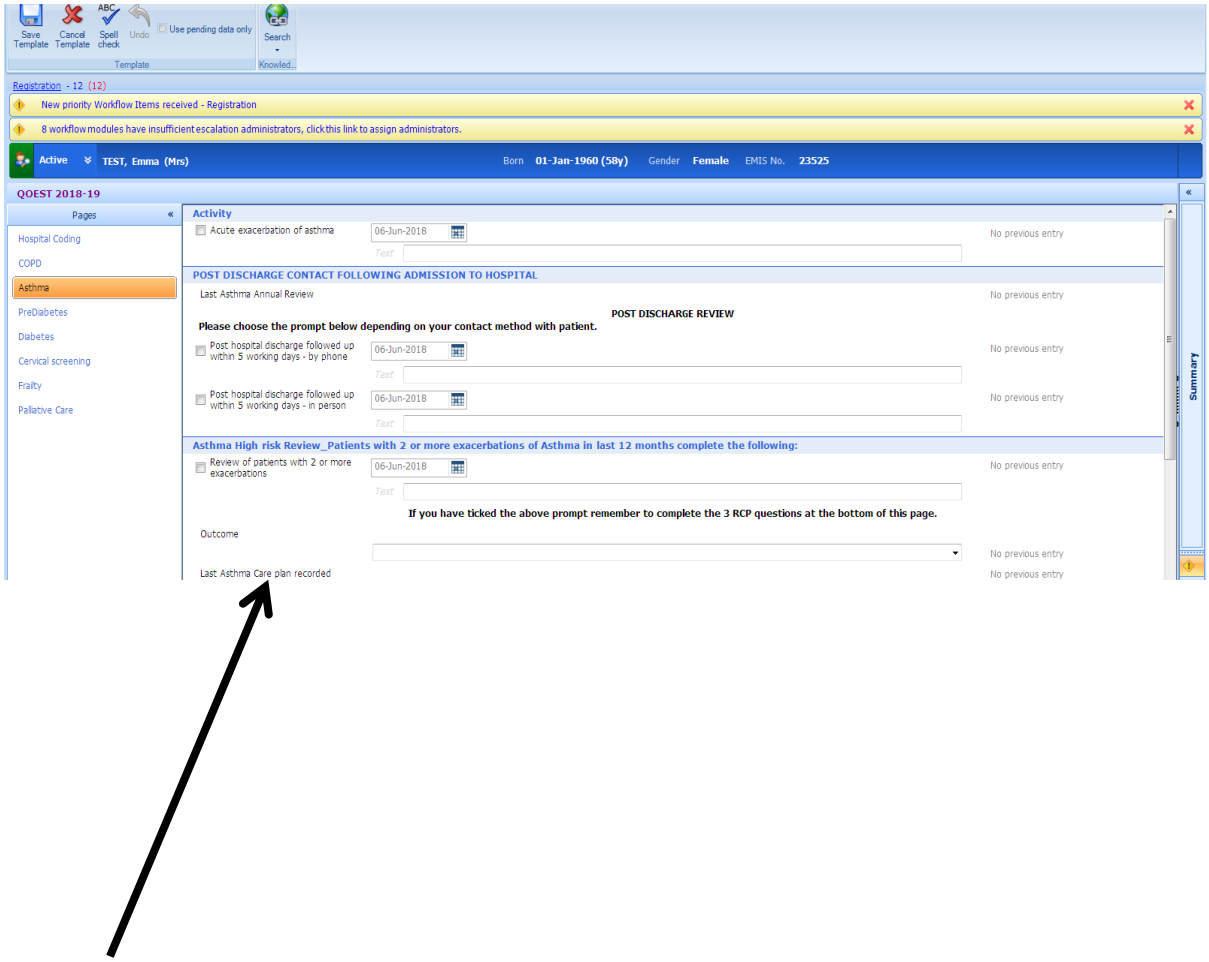
Appendix 2- Accessing templates guide



Run template in consultation mode



Select template. For Proactive reviews select QOEST 2018-2019 template and for Routine asthma reviews select DQ Asthma Template



Complete template and save template.

Appendix 3- Adherence and control

ADHERENCE AND CONCORDANCE

Adherence to long-term asthma treatment should be routinely and regularly addressed by all healthcare professionals within the context of a comprehensive programme of accessible proactive asthma care.

Ask about adherence to medication, and assess prescribing and any other data available. Explore attitudes to medication as well as practical barriers to adherence in a non-judgemental way.

Appendix 4- Management of asthma

PHARMACOLOGICAL MANAGEMENT

The aim of asthma management is control of the disease.

Complete control is defined as:

- no daytime symptoms
- no night-time awakening due to asthma
- no need for rescue medication
- no asthma attacks
- no limitations on activity including exercise
- normal lung function (in practical terms
- FEV1 and/or PEF >80% predicted or best)
- Minimal side effects from medication.

APPROACH TO MANAGEMENT

1. Start treatment at the level most appropriate to initial severity.

2. Achieve early control.

3. Maintain control by:

- increasing treatment as necessary
- decreasing treatment when control is good.

Before initiating a new drug therapy practitioners should check adherence with existing therapies, check inhaler technique and eliminate trigger factors.

Until May 2009 all doses of inhaled corticosteroids were referenced against beclometasone dipropionate (BDP) given via CFC-MDIs. BDP-CFC is now unavailable. Doses of ICS are expressed as very low (generally paediatric dose), low (generally starting dose for adults), medium and high. Adjustments to doses will have to be made for other inhaler devices and other corticosteroid molecules.

COMBINATION INHALERS

In efficacy studies, where there is generally good adherence, there is no difference in efficacy in giving inhaled corticosteroid and a long-acting β2 agonist in combination or in separate inhalers. In clinical practice, however, it is generally considered that combination inhalers aid adherence and also have the advantage of guaranteeing that the long-acting β2 agonist is not taken without the inhaled corticosteroid.

Combination inhalers are recommended to:

- guarantee that the long-acting β2 agonist is not taken without inhaled corticosteroid
- Improve inhaler adherence.

DECREASING TREATMENT

- Regular review of patients as treatment is decreased is important. When deciding which drug to decrease first and at what rate, the severity of asthma, the side effects of the treatment, time on current dose, the beneficial effect achieved, and the patient's preference should all be taken into account.

- **Patients should be maintained at the lowest possible dose of inhaled corticosteroid**. Reduction in inhaled corticosteroid dose should be slow as patients deteriorate at different rates. **Reductions should be considered every three months,** decreasing the dose by approximately 25–50% each time.

EXERCISE INDUCED ASTHMA

For most patients, exercise-induced asthma is an expression of poorly-controlled asthma and **regular treatment including inhaled corticosteroids should be reviewed.**

If exercise is a specific problem in patients taking inhaled corticosteroids who are otherwise well controlled, consider adding one of the following therapies:

- leukotriene receptor antagonists
- long-acting β2 agonists
- sodium cromoglicate or nedocromil sodium
- oral β2 agonists
- theophyllines.
-

Immediately prior to exercise, inhaled short-acting β2 agonists are the drug of choice.

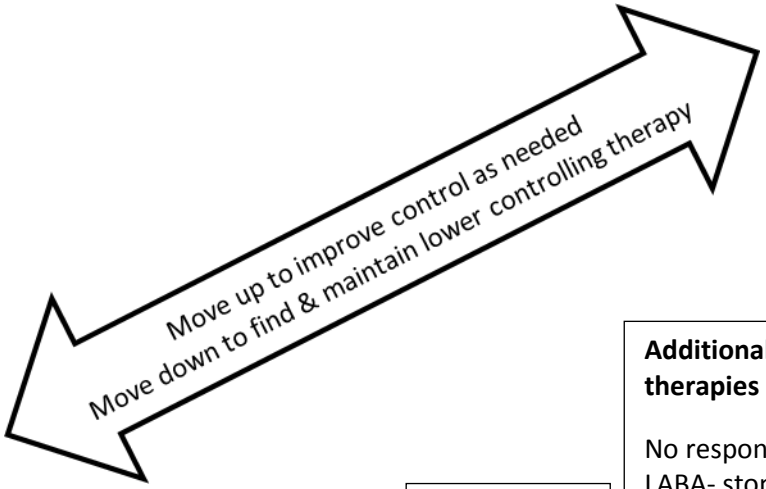
Monotherapy with SABAs is now recommended only for those with INFREQUENT SHORT LIVED WHEEZE (typically occasional exercise-induced symptoms lasting no more than an hour or two) Using more than 3 doses of SABA a week should prompt a review and consideration of moving up to the next step of therapy.

ANYONE PRESCRIBED MORE THAT ONE SABA INHALER DEVICE A MONTH SHOULD BE IDENTIFIED AND HAVE THEIR ASTHMA ASSESSED URGENTLY

Appendix 5

SUMMARY OF MANAGEMENT IN ADULTS

Asthma Suspected	**Asthma - diagnosed**
Diagnosis & assessment	Evaluation: - Assess symptoms, measure lung function, check inhaler technique and adherence - -Adjust dose - Update self-management plan - Move up & down as appropriate



INFREQUENT, SHORT –LIVED WHEEZE

Consider monitored initiation of treatment with low dose ICS

IE: QVAR 50 1-2PF BD

CLENIL 100 1-2 PF BD

Regular Preventer

Lose dose ICS

QVAR 50 1-2 PF BD

CLENIL 100 1-2 PF BD

Budesonide easyhaler 100mcg 1pf bd

Initial add-on therapy

Add inhalers LABA to low dose ICS- combined inhaler

I.e. Fostair 100mcg 1pf bd/nexhaler

Spiromax 160mcg 1pf bd

Additional add-on therapies

No response to LABA- stop LABA & consider inc dose ICS

If benefit from LABA but control still inadequate – continue LABA & inc ICS to medium dose

Ie 2pf bd fostair or spiromax

OR Consider trial of other therapy

LTRA-montelukast (good for atopy)

LAMA (Spiriva respimat)

High dose therapies

Consider trials of:

Increasing ICS up to high dose

Addition of fourth drug eg LTRA, SR theophylline, Beta agonist tablet, LAMA

REFER PATIENT FOR SPECIALIST CARE

Continuous or frequent use of oral steroids

Use daily steroid table in the lowest dose providing adequate control

Maintain high dose ICS

Consider other treatments to minimize use of steroid tablets

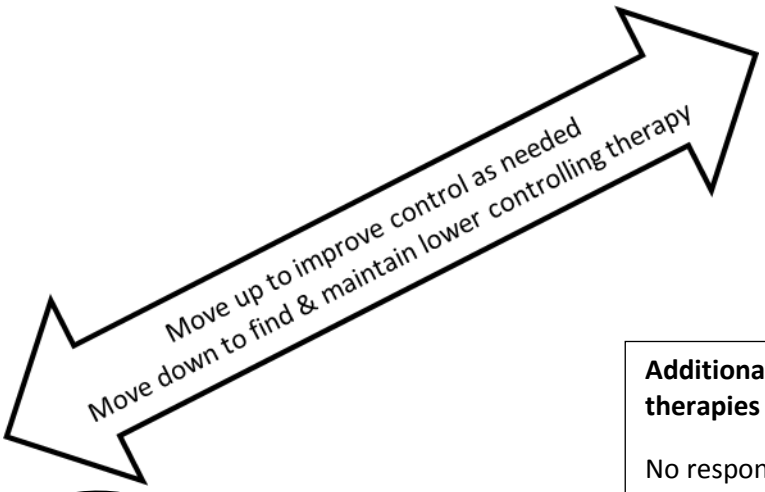
REFER PATIENT FOR SPECIALIST CARE

Short acting B_2 agonists as required – consider moving up if using three doses a week or more

Generic prescribing of inhalers should be avoided as this might lead to people with asthma being given an unfamiliar inhaler device which they are not able to use properly
to use properly

Appendix 6- Summary of management of asthma in children

Asthma Suspected	Asthma - diagnosed
Diagnosis & assessment	Evaluation: - Assess symptoms, measure lung function, check inhaler technique and adherence - -Adjust dose - Update self-management plan - Move up & down as appropriate



INFREQUENT, SHORT –LIVED WHEEZE

Consider monitored initiation of treatemetn with **VERY low dose ICS**

CLENIL 50 1-2 PF BD (AGE DEPENDENT)

Regular Preventer

VERY Lose dose ICS

QVAR 50 1-2 PF BD(OVER AGE 12)
CLENIL 50-100 1-2 PF BD/Budeson ide easyhaler 100mcg 1pf bd

(OR LTRA montelukast 4mg <5YR)

Initial add-on therapy

VERY LOW DOSE ICS

PLUS

CHILDREN >5 ADD laba

Symbicort

100 1pf bd

Children <5 yr add LTRA – montelukast sachets (baby 6/12 or chew tablet 4mg until age 6 then 5mg

Additional add-on therapies

No respone to LABA- stop LABA & consider inc dose ICS to low dose

If benefit from LABA but control still inadequate – continue LABA & inc ICS to low dose

Symbicort 100 1pf bd

Consider trial of other therapy

LTRA montelukast (good for atopy)

High dose therapies

Consider trials of:

Increasing ICS up to medium dose

Addition of fourth drug SR theophylline,

REFER PATIENT FOR SPECIALIST CARE

Continuous or frequent use of oral steroids

Use daily steroid table in the lowest dose providing adequate control

Maintain medium dose ICS

Consider other treatments to minimize use of steroid tablets

REFER PATIENT FOR SPECIALIST CARE

Short acting B_2 agonists as required – consider moving up if using three doses a week or more

Appendix 7

SUPPORTED SELF MANAGEMENT

Asthma action plans

Self-management education incorporating written personalised asthma action plans (PAAPs) improves health outcomes for people with asthma. Asthma UK action plans and resources can be downloaded from their website: www.asthma.org.uk/control. This is also embedded is our emis documents.

All people with asthma (and/or their parents or carers) should be offered self-management education which should include a written personalised asthma action plan and be supported by regular reviews.

In adults, written personalised asthma action plans may be based on symptoms and/or peak flows: symptom-based plans are generally preferable for children.

The service will aim to look at:

- Hospital admission represents a window of opportunity to review self-management skills. No patient should leave hospital without a written personalised asthma action plan. Following a hospital admission patients will be given an action plan.
- An acute consultation offers the opportunity to determine what action the patient has already taken to deal with the asthma attack. Their self-management strategy may be reinforced or refined and the need for consolidation at a routine follow up considered.

- A consultation for an upper respiratory tract infection or other known trigger is an opportunity to rehearse with the patient their self-management in the event of their asthma deteriorating.

- Education should include personalised discussion of issues such as trigger avoidance and achieving a smoke-free environment to support people and their families living with asthma.

- Brief simple education linked to patient goals is most likely to be acceptable to patients.

SELF MANAGEMENT IN SPECIFIC PATIENT GROUPS

Self-management education, supported by a written personalised asthma action plan, should be offered to all patients on general practice 'active asthma' registers.

Local Primary Care Federation should ensure that they have trained professionals and an environment conducive to providing supported self-management.

Prior to discharge, inpatients should receive written personalised asthma action plans, given by healthcare professionals with expertise in providing asthma education. If this has not happened the Practice Nurse in the spoke will provide the patient with an action plan.

Culturally appropriate supported self-management education should be provided for people with asthma in ethnic minority groups. Addressing language barriers is insufficient.

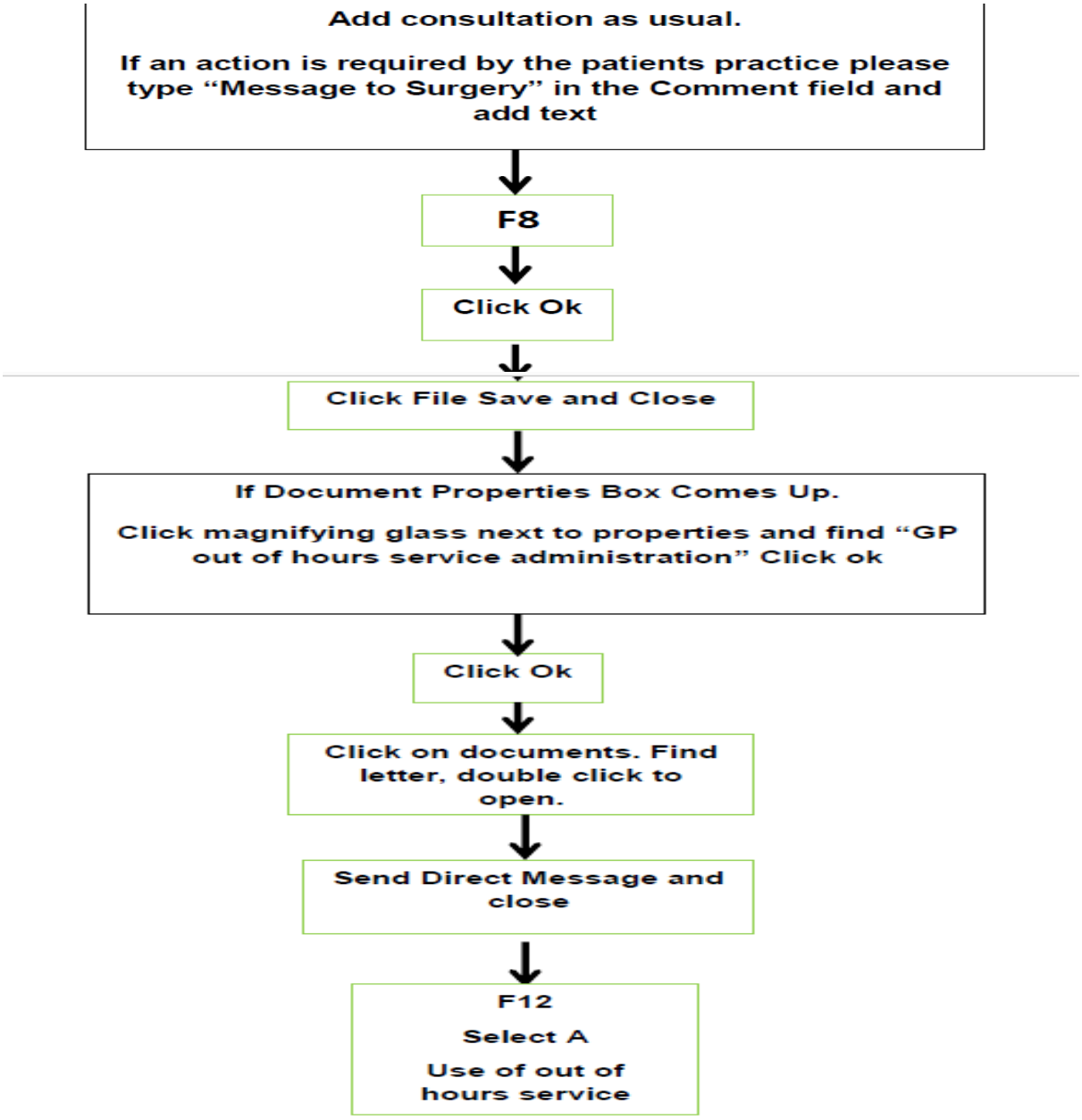
Appendix 8-QOEST Criteria

Monitoring Indicators and Read codes
Asthma

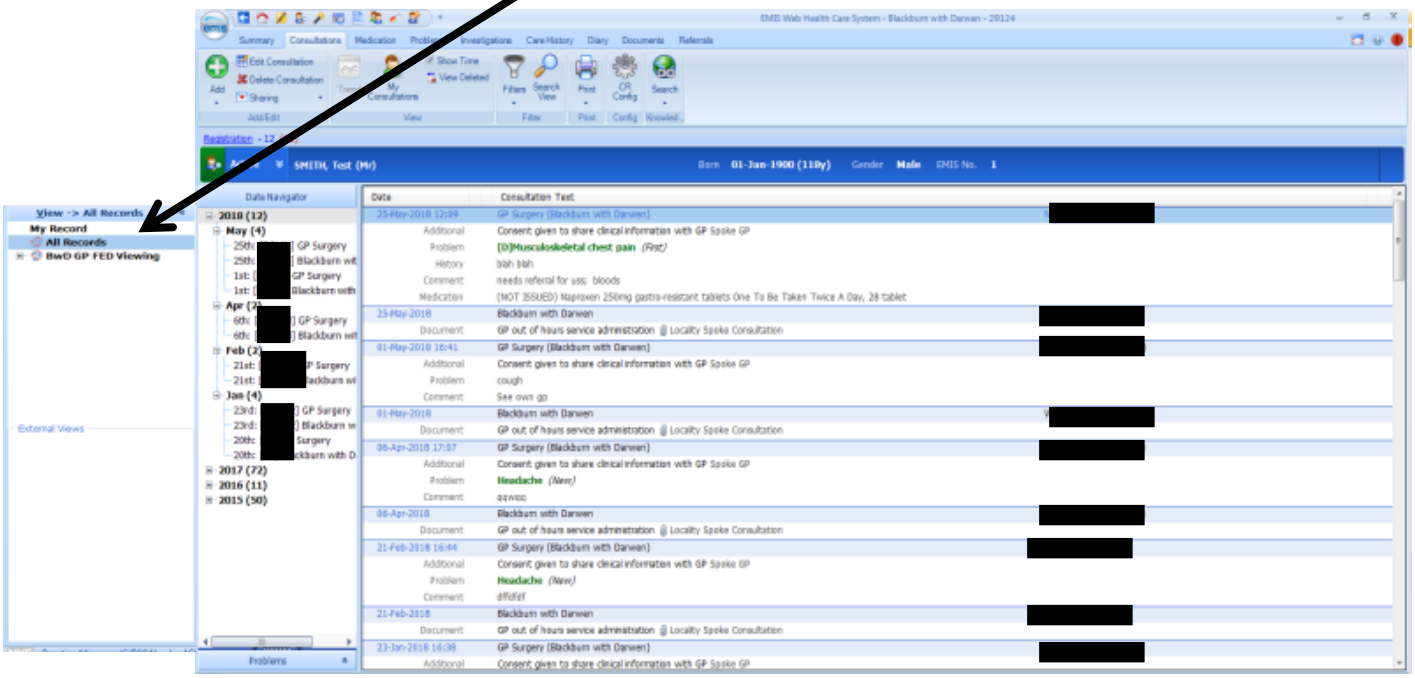
Indicator	Description	Read Code Description	Read code	Monitored from	Measure	Source of data	
1. Review all patients post admission	The percentage of patients admitted to hospital who were offered a post admission review within 5 working days of discharge. Reviews can be undertaken by: • LCFT nursing team • Visit to GP surgery • Home visit • Telephone consultation * * Practices would need to provide evidence that inhaler technique was checked and that patient attends for an annual review within the year where post admission review was undertaken via telephone.	Emergency admission asthma Emergency hospital admission Initial post discharge review	**8H2P** **8H2** **9B0O**	1.4.2018	75% of patients who have been discharged from hospital are reviewed Evidence of review in consultation	Remote data extraction	25 pence per registered patient
2. Proactive review and care management in those frequently incurring exacerbations	The percentage of patients with 2 exacerbations or more within a one year period are provided with the following: 1. A proactive review and titration increased if clinically indicated 2. Provided with a written care Patients who have attended A+E, Out of hours,	Acute exacerbation of asthma Asthma monitoring check done **Proactive review:** • Step up change in asthma management plan • Step down change in asthma management plan	**H333** **9OJA** **66Y9** **66YA**	1.4.2018	70 % of patients who have had 2 or more exacerbation in the last 12 months within 12 weeks of second exacerbation	Remote data extract	25 pence per registered patient

	GP spokes and GP surgery are to be included. Reviews to be undertaken within 12 weeks of second exacerbation ***Searches look back 12 months. The second exacerbations are counted from 1st April 2018 onwards***	• New medication commenced • Referral to respiratory physician **Care Plan** • Asthma management plan given • Asthma self –management plan review Seen in hospital casualty Seen in urgent care A &E report OOH report	**8B3A3** **8H4g** **663U** **661N1** **9N19** **9Nk4** **9b00** **9b0w**				

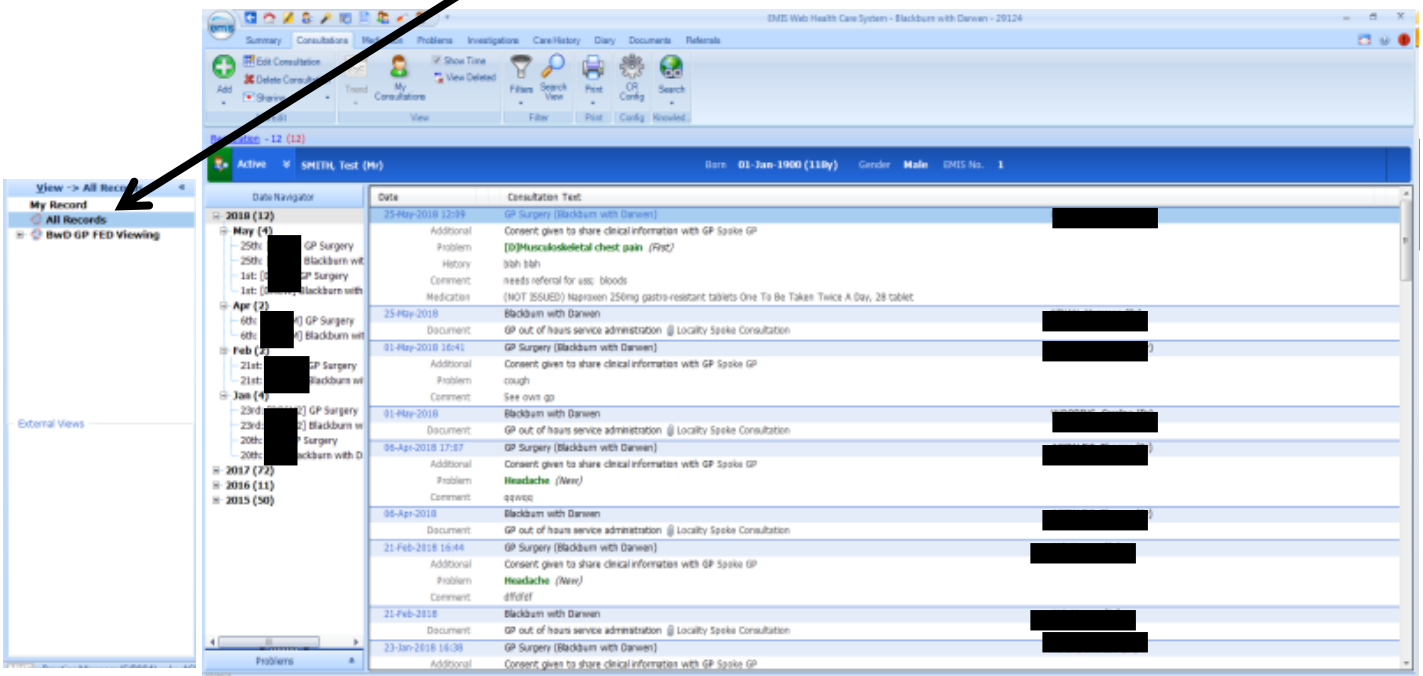
Appendix 9- Sending consultations



My Record: this is all the patient's spokes consultations.



All Records: Access to full medical records of the patients from own GP and spokes.



Appendix 10- Acute Asthma

MANAGEMENT OF ACUTE ASTHMA IN ADULTS

INITIAL ASSESSMENT OF SEVERITY

Healthcare professionals must be aware that patients with severe asthma and one or more adverse psychosocial factors are at risk of death.

MODERATE ACUTE ASTHMA

- increasing symptoms
- PEF >50–75% best or predicted
- no features of acute severe asthma

ACUTE SEVERE ASTHMA

Any one of:

- PEF 33–50% best or predicted
- respiratory rate ≥25/min
- heart rate ≥110/min
- inability to complete sentences in one breath

LIFE-THREATENING ASTHMA

In a patient with severe asthma any one of:

- PEF <33% best or predicted
- SpO2 <92%
- PaO2 <8 kPa
- normal PaCO2 (4.6–6.0 kPa)
- silent chest
- Cyanosis
- poor respiratory effort
- arrhythmia
- exhaustion
- altered conscious level
- hypotension

INITIAL ASSESSMENT OF SYMPTOMS, SIGNS AND MEASUREMENTS

Clinical Features	Severe breathlessness (including too breathless to complete sentences in one breath), tachypnoea, tachycardia, silent chest, cyanosis or collapse None of these singly or together is specific and their absence does not exclude a severe Attack
PEF or FEV1	PEF or FEV1 are useful and valid measures of airway calibre. PEF expressed as a % of the patient's previous best value is most useful clinically. In the absence of this, PEF as a % of predicted is a rough guide
Pulse oximetry	Oxygen saturation (SpO2) measured by pulse oximetry determines the adequacy of oxygen therapy and the need for arterial blood gas measurement (ABG). The aim of oxygen therapy is to maintain SpO2 94–98%

Blood gases (ABG)	Patients with SpO2 <92% or other features of life-threatening asthma require ABG measurement
Chest X-ray	Chest X-ray is not routinely recommended in patients in the absence of: - suspected pneumomediastinum or pneumothorax - suspected consolidation - life-threatening asthma - failure to respond to treatment satisfactorily - requirement for ventilation

MANAGEMENT OF ACUTE ASTHMA IN ADULTS

CRITERIA FOR ADMISSION (999)

- Admit patients with any feature of a life-threatening or near-fatal asthma attack.
- Admit patients with any feature of a severe asthma attack persisting after initial treatment.

TREATMENT OF ACUTE ASTHMA

OXYGEN

- Give controlled supplementary oxygen to all hypoxaemic patients with acute severe asthma to maintain an SpO2 level of 94–98%. Do not delay oxygen administration in the absence of pulse oximetry but commence monitoring of SaO2 as soon as it becomes available.
- In hospital, ambulance and primary care, nebulisers for giving nebulised β2 agonist bronchodilators should preferably be driven by oxygen.

β2 AGONIST BRONCHODILATORS

- Use high-dose inhaled β2 agonists as first line agents in patients with acute asthma and administer as early as possible. Reserve intravenous β2 agonists for those patients in whom inhaled therapy cannot be used reliably.
- In patients with acute asthma with life-threatening features the nebulised route (oxygen-driven) is recommended.
- In patients with severe asthma that is poorly responsive to an initial bolus dose of β2 agonist, consider continuous nebulisation with an appropriate nebuliser.

IPRATROPIUM BROMIDE

- Add nebulised ipratropium bromide (0.5 mg 4–6 hourly) to β2 agonist treatment for patients with acute severe or life-threatening asthma or those with a poor initial response to β2 agonist therapy.

STEROID THERAPY

- Give steroids in adequate doses to all patients with an acute asthma attack.
- Continue prednisolone (40–50 mg daily) for at least five days or until recovery.
- Following recovery from the acute asthma attack steroids can be stopped abruptly.
- Doses do not need tapering provided the patient receives ICS (apart from patients on maintenance steroid treatment or rare instances where steroids are required for three or more weeks)

OTHER THERAPIES

- Routine prescription of antibiotics is not indicated for patients with acute asthma.

REFERRAL TO INTENSIVE CARE

Refer any patient:

- requiring ventilatory support
- with acute severe or life-threatening asthma, who is failing to respond to therapy

MANAGEMENT OF ACUTE ASTHMA IN CHILDREN AGED 1 YEAR AND OVER

ACUTE SEVERE	**LIFE-THREATENING**
SpO2 <92% PEF 33–50% best or predicted • Can't complete sentences in one breath or too breathless to talk or feed • Heart rate >125 (>5 years) or >140 (1-5 years) • Respiratory rate >30 breaths/min (>5 years or >40 (1–5 years)	SpO2 <92% PEF <33% best or predicted • Silent chest • Cyanosis • Poor respiratory effort • Hypotension • Exhaustion • Confusion

CRITERIA FOR ADMISSION

- Increase β2 agonist dose by giving one puff every 30–60 seconds, according to response, up to a maximum of ten puffs
- Parents/carers of children with an acute asthma attack at home and symptoms not controlled by up to 10 puffs of salbutamol via a pMDI and spacer, should seek urgent medical attention.
- If symptoms are severe additional doses of bronchodilator should be given as needed whilst awaiting medical attention.
- Paramedics attending to children with an acute asthma attack should administer nebulised salbutamol, using a nebuliser driven by oxygen if symptoms are severe, whilst transferring the child to the emergency department.
- Children with severe or life-threatening asthma should be transferred to hospital urgently

The following clinical signs should be recorded:

- Pulse rate – increasing tachycardia generally denotes worsening asthma; a fall in heart rate in lifethreatening asthma is a pre-terminal event
- Respiratory rate and degree of breathlessness – ie too breathless to complete sentences in one breath or to feed

- Use of accessory muscles of respiration – best noted by palpation of neck muscles
- Amount of wheezing – which might become biphasic or less apparent with increasing airways obstruction.
- Degree of agitation and conscious level – always give calm reassurance

NB Clinical signs correlate poorly with the severity of airways obstruction. Some children with acute severe asthma do not appear distressed.

INITIAL TREATMENT OF ACUTE ASTHMA
OXYGEN

Children with life-threatening asthma or SpO2 <94% should receive high-flow oxygen via a tight-fitting face mask or nasal cannula at sufficient flow rates to achieve normal saturations of 94–98%.

MANAGEMENT OF ACUTE ASTHMA IN CHILDREN AGED 1 YEAR AND OVER

BRONCHODILATORS

- Inhaled β2 agonists are the first-line treatment for acute asthma in children
- A pMDI + spacer is the preferred option in children with mild to moderate asthma.
- Individualise drug dosing according to severity and adjust according to the patient's response.
- If symptoms are refractory to initial β2 agonist treatment, add ipratropium bromide (250 micrograms/ dose mixed with the nebulised β2 agonist solution).
- Repeated doses of ipratropium bromide should be given early to treat children who are poorly responsive to β2 agonists.
- Discontinue long-acting β2 agonists when short-acting β2 agonists are required more often than four hourly

STEROID THERAPY

Give oral steroids early in the treatment of acute asthma attacks in children.

- Use a dose of 10 mg prednisolone for children under 2 years of age, 20 mg for children aged 2–5 years and 30–40 mg for children >5 years. Those already receiving maintenance steroid tablets should receive 2 mg/kg prednisolone up to a maximum dose of 60 mg.
- Repeat the dose of prednisolone in children who vomit and consider intravenous steroids in those who are unable to retain orally ingested medication.
- Treatment for up to three days is usually sufficient, but the length of course should be tailored to the number of days necessary to bring about recovery. Tapering is unnecessary unless the course of steroids exceeds 14 days.

LEUKOTRIENE RECEPTOR ANTAGONISTS

Initiating oral montelukast in primary care settings, early after the onset of an acute asthma attack, can result in decreased asthma symptoms and the need for subsequent healthcare attendances in those with mild asthma attacks.

DISCHARGE PLANNING AND FOLLOW UP

Children can be discharged when stable on 3-4 hourly inhaled bronchodilators that can by continued at home. PEF and/or FEV1 should be >75% of best or predicted and SpO2 >94%.

- Arrange follow up by primary care services within two working days
- Arrange follow up in a paediatric asthma clinic within one to two months
- Arrange referral to a paediatric respiratory specialist if there have been life-threatening features.