Prescribing for children in Primary Care

Mike Wise July 2022

My history ;

Adult training UCLH

Paeds training GOSH

PICU / retrieval nurse

Renal unit practice educator

Clinical site practitioner

Senior lecturer LSBU

Advanced Nurse practitioner – General practice

My surgery;

In Rutland – England's smallest county

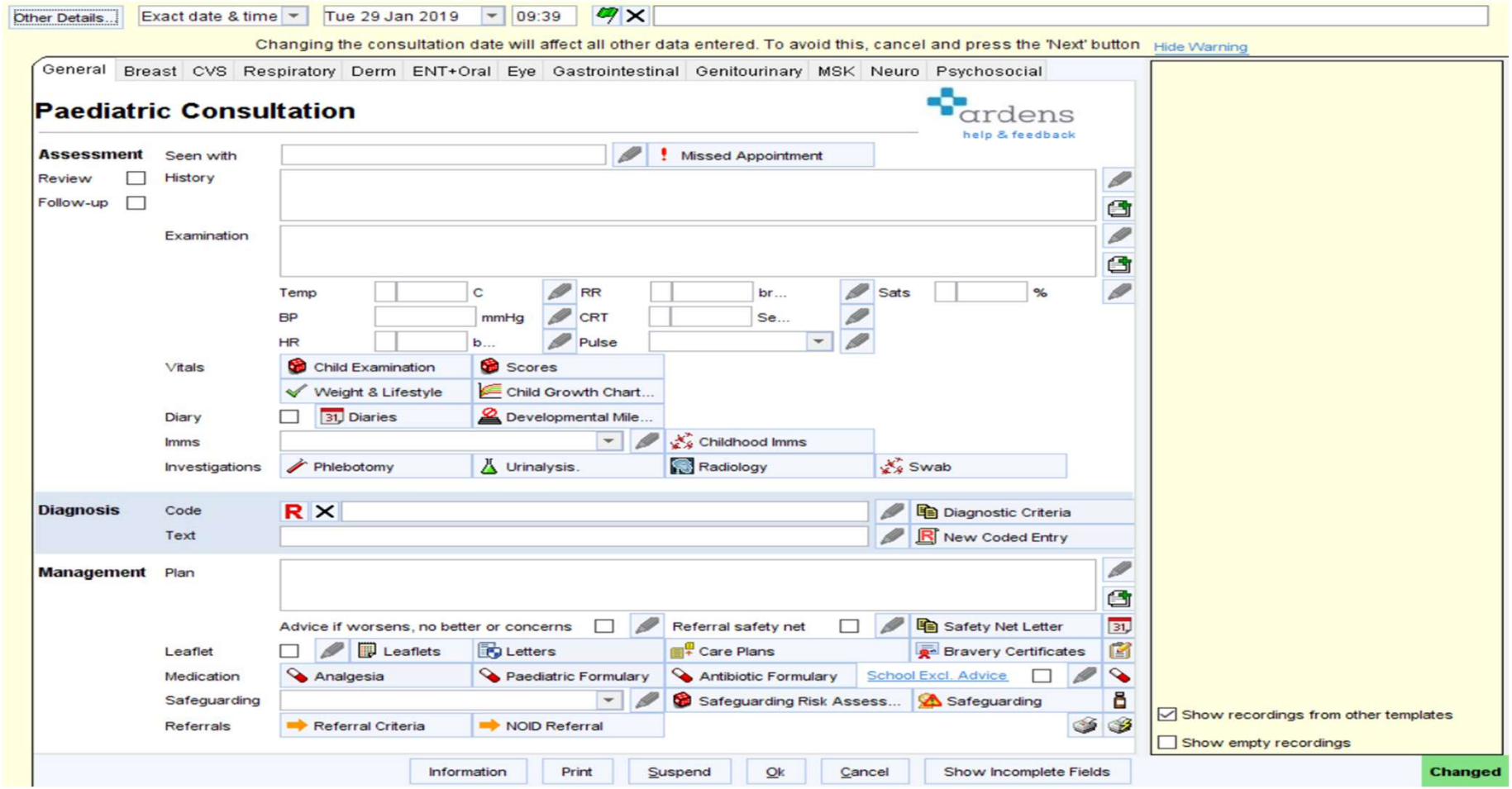
The Practice area covers over 120 square miles in the villages around Rutland Water.

Members of the East Leicestershire and Rutland Clinical Commissioning Group (ELRCCG)

Mainly refer for secondary care to Peterborough City Hospital and its clinics at Stamford

- Current list size 8500 (and growing)
- Current clinical team of 3 partners, 2 Salaried GPs, 2 ANPs, 3 Nurse Practitioners, 3 Practice Nurses, and 1 HCA
- On-site dispensary dispensing to 77% of patients
- 10,000 items dispensed monthly

Electronic consultation - Ardens



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SABA - Short Acting Beta Agonist

ardens
help & feedback

BA DPI

Lower environmental impact


Easyhaler Salbutamol 100mcg ... £3.31 - Cost Effective


Ventolin Accuhaler 200mcg T prn £3.60 (60 doses)


Bricanyl Turbohaler 500mcg T ... £8.30 (120 doses)

pMDI

Higher environmental impact

Salbutamol T-TT prn — Use pMDI With Spacer


Salamol Inhaler 100mcg T-TT p... £1.46 - Cost Effective


Ventolin Evohaler 100mcg T-TT... £1.50 - Avoid as high F-Gas environmental impact

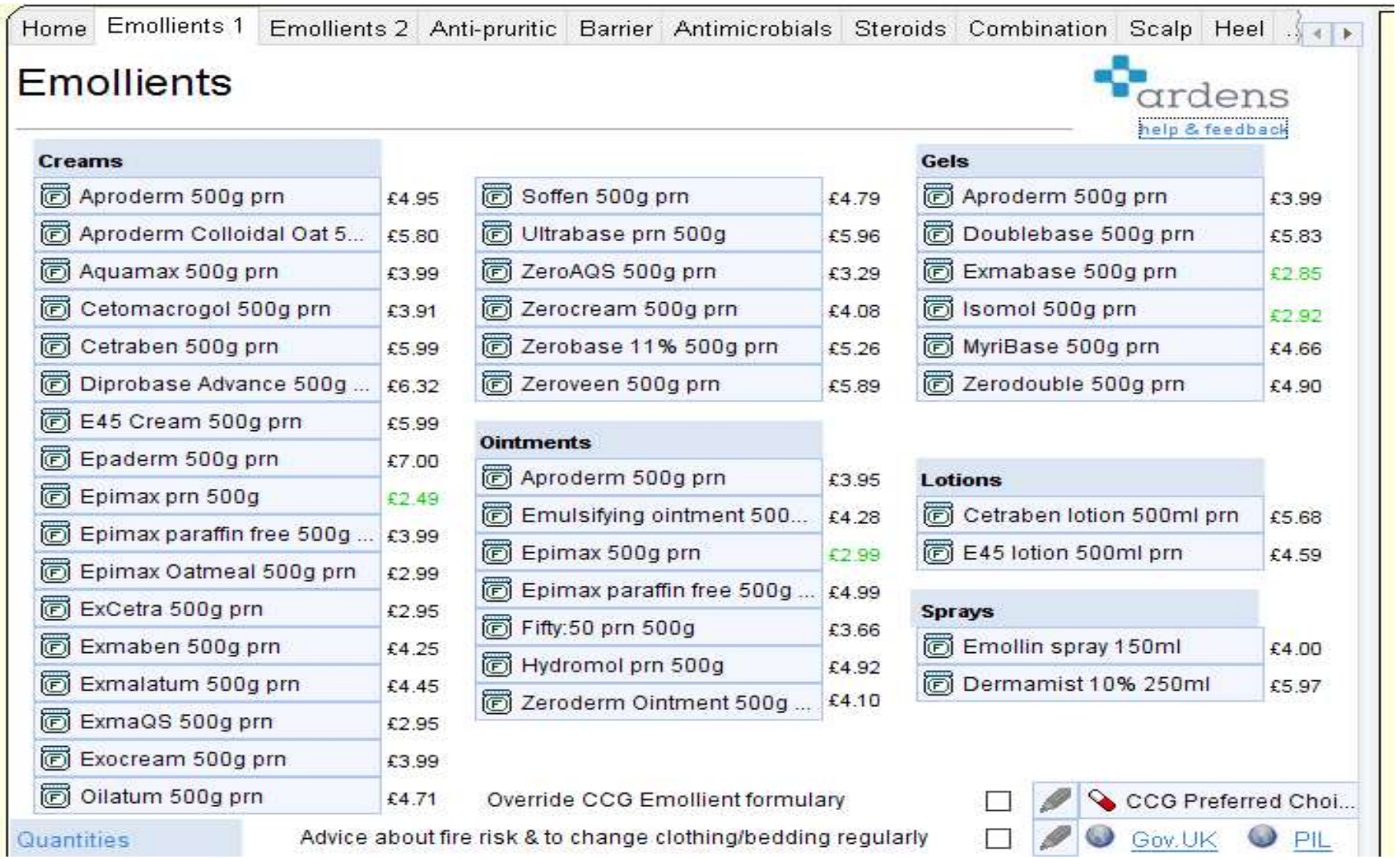

Airomir Inhaler 100mcg T-TT prn £1.97

BA pMDI

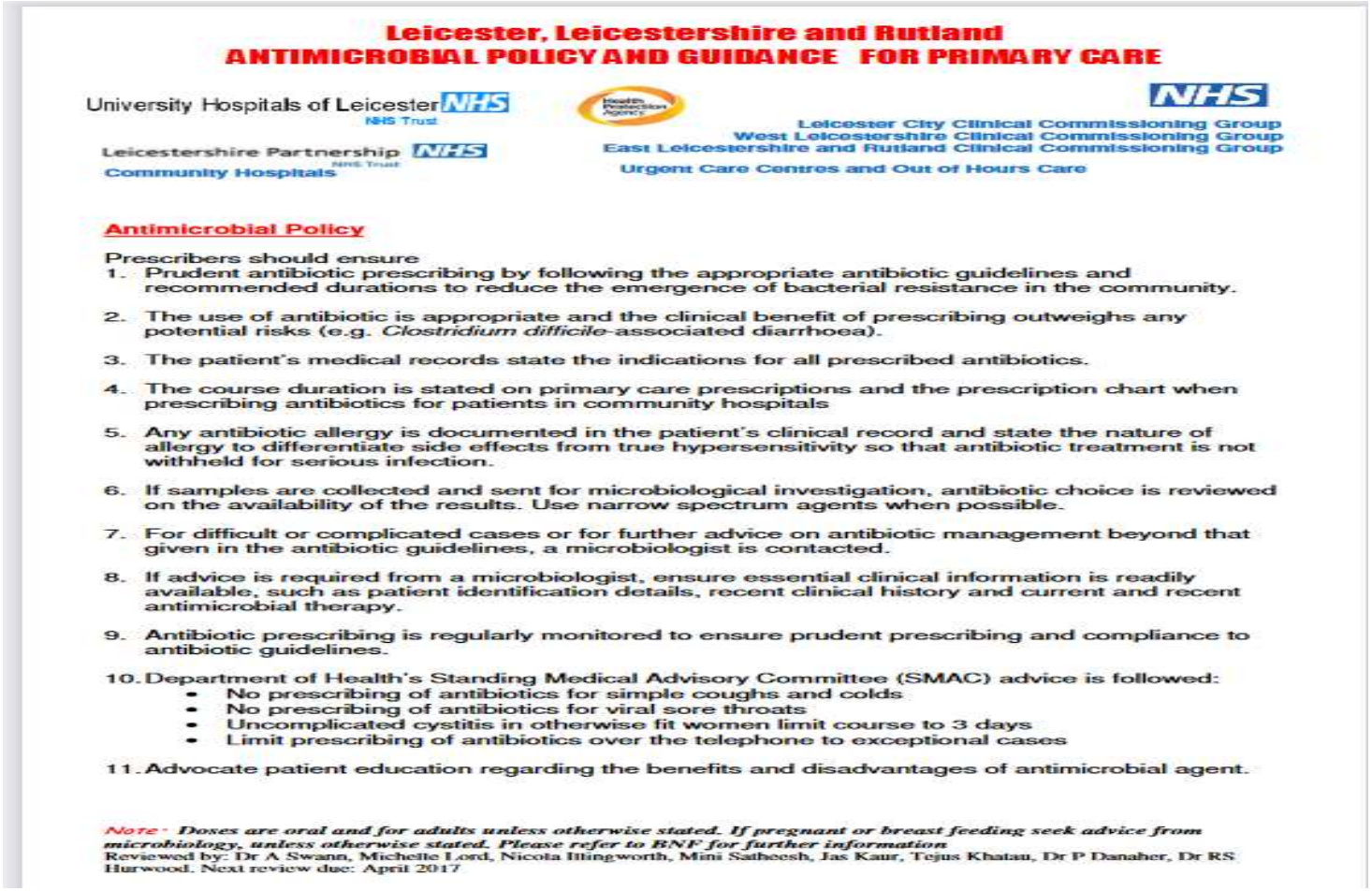

Airomir Autohaler 100mcg T-TT ... £6.02


Salamol Easi-Breathe 100mcg ... £6.30

Dry powder inhaler not indicated ☐ Override CCG SABA formulary ☐ CCG Preferred Choice


Home
Emollients 1
Emollients 2
Anti-pruritic
Barrier
Antimicrobials
Steroids
Combination
Scalp
Heel
Emollients
ardens
help & feedback
Creams
Aproderm 500g prn £4.95
Aproderm Colloidal Oat 5... £5.80
Aquamax 500g prn £3.99
Cetomacrogol 500g prn £3.91
Cetraben 500g prn £5.99
Diprobase Advance 500g ... £6.32
E45 Cream 500g prn £5.99
Epaderm 500g prn £7.00
Epimax prn 500g £2.49
Epimax paraffin free 500g ... £3.99
Epimax Oatmeal 500g prn £2.99
ExCetra 500g prn £2.95
Exmaben 500g prn £4.25
Exmalatum 500g prn £4.45
ExmaQS 500g prn £2.95
Exocream 500g prn £3.99
Oilatum 500g prn £4.71
Soffen 500g prn £4.79
Ultrabase prn 500g £5.96
ZeroAQS 500g prn £3.29
Zerocream 500g prn £4.08
Zerobase 11% 500g prn £5.26
Zeroveen 500g prn £5.89
Ointments
Aproderm 500g prn £3.95
Emulsifying ointment 500... £4.28
Epimax 500g prn £2.99
Epimax paraffin free 500g ... £4.99
Fifty:50 prn 500g £3.66
Hydromol prn 500g £4.92
Zeroderm Ointment 500g ... £4.10
Gels
Aproderm 500g prn £3.99
Doublebase 500g prn £5.83
Exmabase 500g prn £2.85
Isomol 500g prn £2.92
MyriBase 500g prn £4.66
Zerodouble 500g prn £4.90
Lotions
Cetraben lotion 500ml prn £5.68
E45 lotion 500ml prn £4.59
Sprays
Emollin spray 150ml £4.00
Dermamist 10% 250ml £5.97
Override CCG Emollient formulary
CCG Preferred Choi...
Quantities
Advice about fire risk & to change clothing/bedding regularly
Gov.UK
PIL

Local formularies



Leicester, Leicestershire and Rutland
ANTIMICROBIAL POLICY AND GUIDANCE FOR PRIMARY CARE

University Hospitals of Leicester NHS
NHS Trust

Leicestershire Partnership NHS
NHS Trust
Community Hospitals

NHS
Leicester City Clinical Commissioning Group
West Leicestershire Clinical Commissioning Group
East Leicestershire and Rutland Clinical Commissioning Group
Urgent Care Centres and Out of Hours Care

Antimicrobial Policy

Prescribers should ensure

1. Prudent antibiotic prescribing by following the appropriate antibiotic guidelines and recommended durations to reduce the emergence of bacterial resistance in the community.
2. The use of antibiotic is appropriate and the clinical benefit of prescribing outweighs any potential risks (e.g. *Clostridium difficile*-associated diarrhoea).
3. The patient's medical records state the indications for all prescribed antibiotics.
4. The course duration is stated on primary care prescriptions and the prescription chart when prescribing antibiotics for patients in community hospitals
5. Any antibiotic allergy is documented in the patient's clinical record and state the nature of allergy to differentiate side effects from true hypersensitivity so that antibiotic treatment is not withheld for serious infection.
6. If samples are collected and sent for microbiological investigation, antibiotic choice is reviewed on the availability of the results. Use narrow spectrum agents when possible.
7. For difficult or complicated cases or for further advice on antibiotic management beyond that given in the antibiotic guidelines, a microbiologist is contacted.
8. If advice is required from a microbiologist, ensure essential clinical information is readily available, such as patient identification details, recent clinical history and current and recent antimicrobial therapy.
9. Antibiotic prescribing is regularly monitored to ensure prudent prescribing and compliance to antibiotic guidelines.
10. Department of Health's Standing Medical Advisory Committee (SMAC) advice is followed:
    - No prescribing of antibiotics for simple coughs and colds
    - No prescribing of antibiotics for viral sore throats
    - Uncomplicated cystitis in otherwise fit women limit course to 3 days
    - Limit prescribing of antibiotics over the telephone to exceptional cases
11. Advocate patient education regarding the benefits and disadvantages of antimicrobial agent.

Note - Doses are oral and for adults unless otherwise stated. If pregnant or breast feeding seek advice from microbiology, unless otherwise stated. Please refer to BNF for further information

Reviewed by: Dr A Swann, Michelle Lord, Nicola Illingworth, Mini Satheesh, Jas Kaur, Tejus Khatau, Dr P Danaher, Dr RS Hurwood. Next review due: April 2017

Leicester, Leicestershire and Rutland
ANTIMICROBIAL POLICY AND GUIDANCE FOR PRIMARY CARE

INDICATION	COMMENTS	FIRST LINE ANTIBACTERIAL	SECOND LINE OR IF PENICILLIN ALLERGIC
URINARY TRACT INFECTIONS: **In the elderly (>65 yrs), do not treat asymptomatic bacteriuria; it occurs in 25% of women and 10% of men and is not associated with increased morbidity. In the presence of a catheter, do not treat if systemically well. If multi-resistant coliform (e.g. ESBL) previously isolated (in last 3 months) send urine for C&S and follow Primary care guidance via the following link** http://www.lmsg.nhs.uk/wp-content/uploads/2015/09/Extended-Spectrum-Beta-Lactamase-ESBL-Urinary-Tract-Infection-UTI-Guidance-in-Primary-Care.pdf **Note new reference for nitrofurantoin contraindication: Contraindicated in patients with an estimated glomerular filtration rate (eGFR) of less than 45 ml/min (previously 60ml/min).** However, a short course (3 to 7 days) may be used with caution in certain patients with eGFR of 30 to 44 ml/min with suspected or proven multidrug resistant pathogens when the benefits of nitrofurantoin are considered to outweigh the risks of side effects after discussion with microbiologist.			
Uncomplicated UTI	Young-middle aged non-pregnant females with symptoms of lower urinary tract infections	Trimethoprim 200mg BD for 3 days **OR** Nitrofurantoin 50mg QDS for 3 days	Treatment based on culture results if allergic or resistant to first line agents
	If non response – send urine for culture and sensitivity test		
Complicated UTI	Males, older women, abnormal renal tract, immunocompromised patients, or history of recurrent UTI's	Trimethoprim 200mg BD for 5 days **OR** Nitrofurantoin 50mg QDS for 5 days	Special consideration: If organism is found to be resistant to Trimethoprim consider **Nitrofurantoin 50mg QDS for 5 days** if renal function allows. Alternative co-amoxiclav 625mg TDS for 5 days
	In catheterised patients follow the antimicrobial guidance for management of catheterised patients in community via LMSG link http://www.lmsg.nhs.uk/wp-content/uploads/2015/06/catheter-uti-guidance-May-2013.pdf		
UTI in pregnancy	Send MSU for culture. Use urine culture and sensitivity results, when available, to review antibiotic choice. May need specialist input.	**First Trimester:** Nitrofurantoin 50mg QDS for 7 days **OR** Cefalexin 500mg BD for 7 days **Second Trimester:** Nitrofurantoin 50mg QDS for 7 days **OR** Trimethoprim 200mg BD for 7 days **Third Trimester:** Trimethoprim 200mg BD for 7 days **OR** Cefalexin 500mg TDS for 7 days	
UTI in children	Child <3 months: refer urgently for assessment. Child ≥ 3 months: Send pre-treatment MSU for all. Use positive nitrite to start antibiotics.	***For lower UTIs:*** Trimethoprim for 3 days **Or** Nitrofurantoin for 3 days (see BNF for doses) ***For upper UTIs:*** Co-amoxiclav for 7-10 days (see BNF for doses) In penicillin allergy, please confirm child has true allergy and not side effect -Cefalexin for 7-10 days (see BNF for doses)	
Acute pyelonephritis	**Send MSU for culture.** Review microbiological sensitivity results and change antibiotic if needed	Co-amoxiclav 625mg TDS for 14 days	Ciprofloxacin 500mg BD for 7 days

Note: Doses are oral and for adults unless otherwise stated. If pregnant or breast feeding seek advice from microbiology, unless otherwise stated. Please refer to BNF for further information

Reviewed by: Dr A Swann, Michelle Lord, Nicola Illingworth, Mini Satheesh, Jas Kaur, Tejus Khatau, Dr P Danaher, Dr RS Hurwood. Next review due: April 2017

Prescribing errors

- Paediatric prescribing errors are common, with a UK multicentre study identifying errors (using the above definition) in 13.4% of ‘medication orders’ (written prescriptions on medication chart review) in hospitalised children.
- One primary care study found that, within a one-year period, 26.1% of children in primary care received an off-label prescription. Prescribing off-licence is not an error in itself; however, the authors suggested that 75–85% of these prescriptions were associated with error relating to incorrect dosing, implying that up to 22% of children in primary care may have received an incorrect prescription.

TABLE 1

Medicines commonly involved in reported prescribing errors in children in secondary care (n=541)

Medication	Reported prescribing errors; n (%)
Antimicrobials	118 (22%)
Paracetamol	65 (12%)
Intravenous fluids	41 (8%)
Parenteral nutrition*	41 (8%)
Opiates*	23 (4%)
Corticosteroids	22 (4%)
Non-steroidal anti-inflammatory drugs	22 (4%)
Benzodiazepines*	18 (3%)
Anticonvulsants	17 (3%)
Insulin*	12 (2%)

Source: *Pediatr Drugs*[30]
*Medicines that are included on the Institute for Safe Medication Practices high-alert medication list

- **Paediatric-specific causes of errors**
- Stemming from fundamental differences between children and adults — including variations in size and weight, physiology and metabolism, and pharmacokinetics — the review implicated five paediatric-specific factors in prescribing errors:
- Individualised dosing and calculations;
- Off-licence prescribing;
- Different medication formulations;
- Communication with children and parents;
- Inexperience with working with children.

- **Errors associated with electronic prescribing**
- EP refers to systems by which prescriptions can be digitally generated and transmitted. They often incorporate clinical decision support (CDS) — computerised systems that can assist prescribers by providing dosing information, issuing warnings or automating calculations.
- In practice, studies reporting the impact of EP in paediatric hospitals have shown varied results, ranging from a slight increase in mortality to significant decreases in prescribing errors
- . These discrepant results may reflect both the range of different EP systems that are in use and how they are implemented and managed.

- **Box 4: Best practice for aiming to promote safer prescribing for children**
- Prioritise high-risk error types, medications, patient groups and areas of practice.
- When designing paediatric education, consider both paediatric-specific and generic causes of errors.
- Emphasise informal educational opportunities within practice rather than classroom teaching;
- Use a facilitative style of feedback to help prescribers reflect on their prescribing and commit to meaningful changes in practice;
- Explicitly and deliberately emphasise errors' potential to stimulate learning within teams rather than apportioning individual responsibility;
- Carefully consider how electronic prescribing systems are adapted for use in children and give prescribers practical support in their use.

Top 5 paediatric consults

5. **Reflux and Lactose intolerance**

- Give advice about gastro-oesophageal reflux (GOR) and reassure parents and carers that in well infants, effortless regurgitation of feeds:
  - is very common (it affects at least 40% of infants)
  - usually begins before the infant is 8 weeks old
  - may be frequent (5% of those affected have 6 or more episodes each day)
  - usually becomes less frequent with time (it resolves in 90% of affected infants before they are 1 year old)
  - does not usually need further investigation or treatment.

- When reassuring parents and carers about regurgitation, advise them that they should return for review if any of the following occur:

- the regurgitation becomes persistently projectile

- there is bile-stained (green or yellow-green) vomiting or haematemesis.

- there are new concerns, such as signs of marked distress, feeding difficulties or faltering growth.

- there is persistent, frequent regurgitation beyond the first year of life.

- In formula-fed infants with frequent regurgitation associated with marked distress, use the following stepped-care approach:

 - review the feeding history, then

 - reduce the feed volumes only if excessive for the infant's weight, then

 - offer a trial of smaller, more frequent feeds (while maintaining an appropriate total daily amount of milk) unless the feeds are already small and frequent, then

 - offer a trial of thickened formula (not always popular though as can make feeding slow and difficult)

- In formula-fed infants, if the stepped-care approach is unsuccessful, stop the thickened formula and offer alginate therapy (Gaviscon) for a trial period of 1 to 2 weeks.

- If the alginate therapy is successful continue with it, but try stopping it at intervals to see if the infant has recovered.

In breast-fed infants with frequent regurgitation associated with marked distress that continues despite a breastfeeding assessment and advice, consider alginate therapy for a trial period of 1 to 2 weeks.

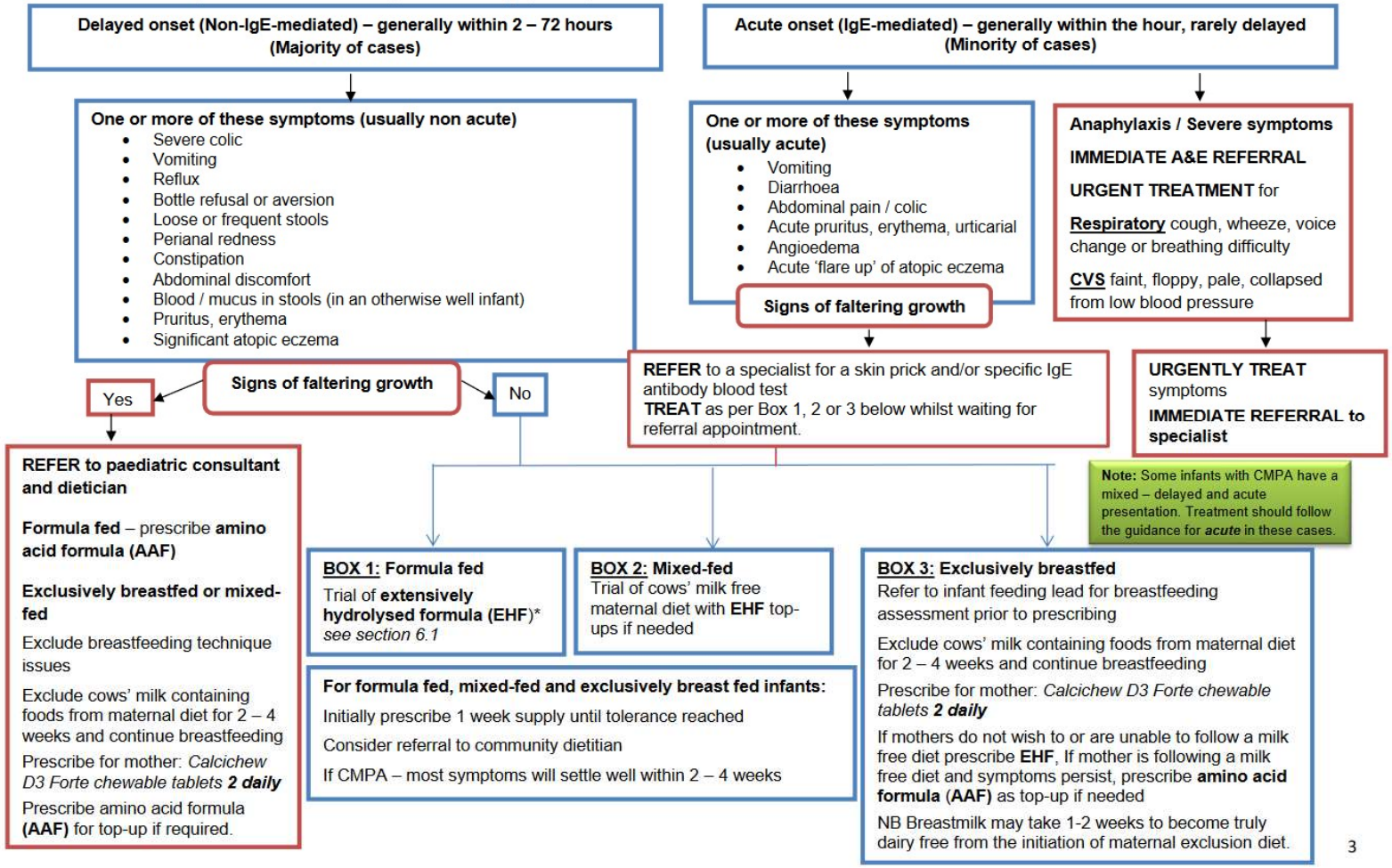
If the alginate therapy is successful continue with it, but try stopping it at intervals to see if the infant has recovered.

- Do not offer acid-suppressing drugs, such as proton pump inhibitors (PPIs) orH2 receptor antagonists (H2RAs), to treat overt regurgitation in infants and children occurring as an isolated symptom.

- Consider a 4-week trial of a PPI or H2RA for children and young people with persistent heartburn, retrosternal or epigastric pain.

- Assess the response to the 4-week trial of the PPI or H2RA, and consider referral to a specialist for possible endoscopy if the symptoms:
  - do not resolve or
  - recur after stopping the treatment

3. The initial management of cows' milk protein allergy (CMPA)



4. On-going management of CMPA following EXCLUSION DIET

Delayed onset (Non-IgE-mediated) CMPA

Improves

Perform Home Challenge using cows' milk formula to confirm diagnosis, 2 – 4 weeks after starting Exclusion Diet (click here for example of home challenge)

For weaning, consider home challenge using the 'Milk Ladder'

If symptoms return, CMPA confirmed referral to a dietitian is required.

- continue with **extensively hydrolysed formula (EHF)** in formula / mixed fed infants (**see section 7** for quantity to prescribe)
- exclude cows' milk containing foods from maternal diet again

If symptoms do not return with challenge, CMPA is ruled out.

Not Improved

CMPA still suspected

Refer to paediatric consultant in secondary care

START a trial of amino acid formula (AAF) in formula / mixed fed infants for 4 weeks whilst waiting for referral appointment

NB: Children with enterocolitis/proctitis or blood in stools with faltering growth, severe atopic dermatitis and symptoms during exclusive breastfeeding are more likely to require amino acid based formula.

With support from a dietitian, evaluate the patient every 6 to 12 months to assess whether they have developed a tolerance to cows' milk.

Continue cows' milk free diet until 9 – 12 months of age and for at least 6 months

A **planned REINTRODUCTION** is then required to determine if tolerance has been achieved. iMAP Guideline: The Early Home Reintroduction to Confirm the Diagnosis of Cow's Milk Allergy This can be done using the milk ladder guided by dieticians. Consult paediatric dietician / paediatric consultant for further advice if reintroduction failed.

NB: This involves reintroducing cows' milk into the diet and monitoring of symptoms return. Advise to start with baked milk products (e.g. muffins, cakes and malted milk biscuits) as they are less allergenic. If symptoms return, continue with exclusion diet and evaluate the child after a further 6 to 12 months

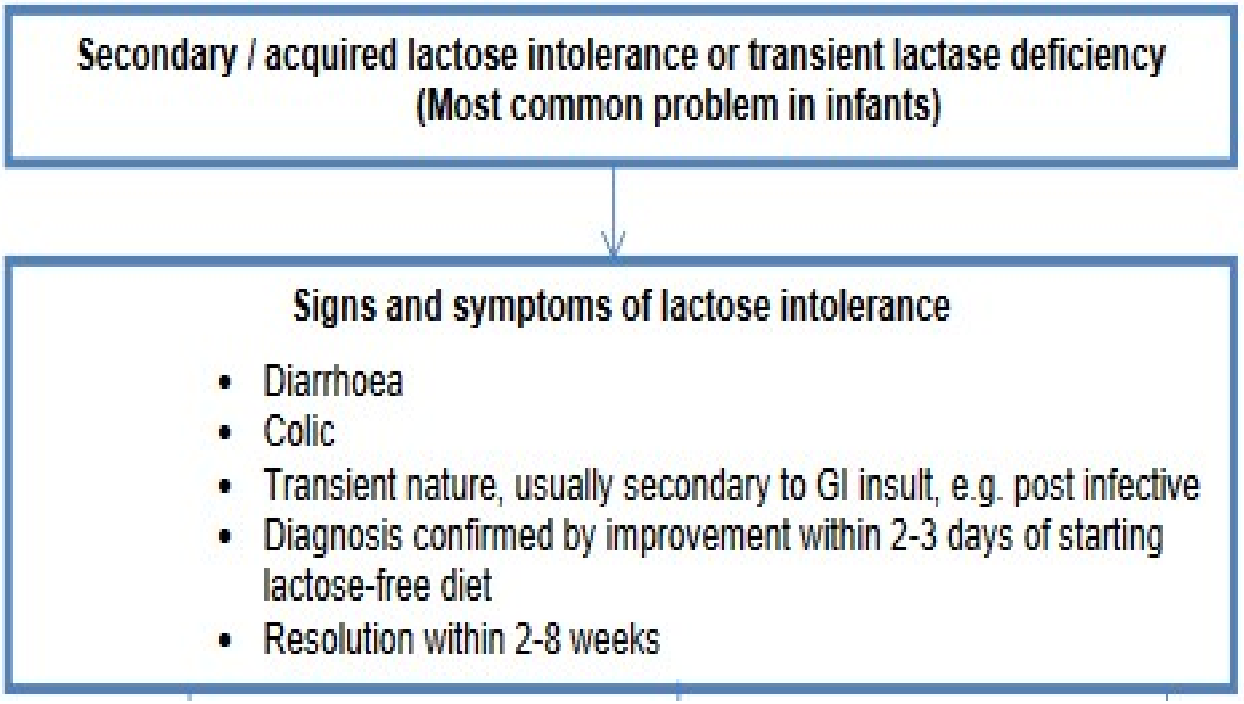
NB: Once tolerance is established, gradually encourage less processed milk as advised in the 'Milk Ladder'

Acute onset (IgE-mediated) CMPA

REINTRODUCTION will be managed by secondary care.

NB: GP will provide on-going specialist formula prescription under specialist advice.

5. The management of lactose intolerance



Breast-fed infants:
Refer to infant feeding lead for breastfeeding assessment prior to prescribing*NB: Lactose-free maternal diet is UNNECESSARY as lactose is present in breast milk.*

- **Pan Mersey APC does not recommend prescribing lactase enzyme drops (Colief®) on the NHS but may be purchased (See policy).**
- Encourage mother to continue with breastfeeding to speed up gut healing and provide support as needed through community paediatric dietitian or infant feeding team.

Formula-fed infants:

Temporary switch to a lactose-free formula for a period of 8 weeks after which regular formula can be reintroduced

e.g. SMA LF® or Enfamil O-Lac ® (suitable from birth to max 12 months)

Lactose free formula can be purchased over the counter at a similar price to standard formula and the GP should not prescribe. *Healthy Start vouchers* can be used to purchase lactose free infant formula based on cows' milk

Infants taking solid foods

- Avoid foods containing lactose
- Offer referral to dietitian for dietary advice
- Consider the impact of lactose-containing medicines

Symptoms usually resolve in 2-3 days when lactose is removed from the diet and achievement of this confirms diagnosis. Most children should be able to revert back to normal formula once the gastro-intestinal insult has resolved i.e. within 8 weeks.

- After 8 weeks gradually reintroduce regular formula / breast milk / cows' milk depending on age
- If symptoms return, revisit the diagnosis and consider **referral to a dietitian.**
- Lactose free infant formula should not be used beyond 18 months and infants can be weaned onto proprietary lactose-free cows' milk purchased at supermarkets from 12 months old.

6. Product choice:

All prescriptions for specialist formula should be endorsed '***ACBS***'.

6.1 Extensively hydrolysed formula (EHF)

EHF formula is appropriate for the majority (around 90%) of children with CMPA.
DO NOT prescribe EHF if there is a history of anaphylaxis or severe symptoms.

Product	Age	Presentation/ Cost	Comment
Nutramigen LGG1®	Birth to 6 months	400g tin / £11.21	Nutramigen LGG® and Similac Alimentum® are LACTOSE-FREE. Lactose-free formula may be beneficial if severe GI symptoms / inflammation in GI tract is suspected. ***This MUST NOT be used in infants with lactose intolerance.***
Nutramigen LGG2®	From 6 months	400g tin / £11.21	
Alimentum®	From birth	400g tin / £10.01	
Aptamil Pepti 1®	Birth to 6 months	400g tin / £9.87 800g tin / £19.73	Aptamil Pepti® and Althera® contain lactose and may be more palatable. Althera® is the only EHF suitable for Halal and vegetarian diets
Aptamil Pepti 2®	From 6 months	400g tin / £9.41 800g tin / £18.82	
SMA Althera®	From birth	450g tin / £11.09	
Aptamil Pepti Junior®	From birth	450g tin / £14.33	
Aptamil Pepti Syneo®	From birth	400g tin / £10.65	

6.2 Amino acid formula (AAF)

Note that these products are almost three times more expensive than EHF and only a small number of infants (around 10%) need to be started on AAF in primary care. They are **suitable** only when

- infant has faltering growth or blood in their stools
- an EHF does not resolve symptoms and / or
- there is evidence of severe (anaphylactic) allergy or
- if the infant remains symptomatic whilst exclusively breast feeding (mother on milk free diet)
-

NB All amino acid formulas are halal, kosher and vegetarian

Product name	Age	Presentation / Cost
EleCare® (Similac)	From birth	400g / £22.98
SMA Alfamino ®	From birth	400g / £22.98
Neocate LCP®	From birth	400g / £22.98
Nutramigen Puramino®	From birth	400g / £22.98
Neocate Syneo®	From birth	400g / £24.82

7. Quantities to prescribe:

To avoid waste, initially prescribe maximum of 1 week supply in case there are palatability issues or until tolerance/compliance is established.

Age of child	Average total volume feed per day (estimated)	No of tins required for 28 days complete nutrition	Department of Health recommendations (based on average weight for age)
Under 6 months	1000mls	10 x 400g (or 450g)	Exclusively formula fed based on 150mls/kg/day of a normal concentrated formula
6 – 9 months	800mls	8 x 400g (or 450g)	Requiring less formula with increased weaning and solid intake
9 – 12 months	600mls	6 x 400g (or 450g)	
Over 12 months – dietitian review for continued need for formula	600mls	6 x 400g (or 450g)	Requiring 600mls of milk or milk substitute per day

NB: Some children may require more e.g. those with faltering growth. This table provides guidance only. Follow advice of specialist or dietitian.

Our Vision
To provide every patient with the care we want for those we love the most

Departments of Nutrition and Dietetics and Norfolk and Norwich University Hospitals NHS Foundation Trust
Also for use by James Paget University Hospitals NHS Foundation Trust and Queen Elizabeth Hospital NHS Foundation Trust

Norfolk NHS

Lactose-free weaning diet

This dietary advice sheet gives some general information to help you make the recommended changes to your child's diet. If you need more detailed advice or if your child is following a special diet that makes it difficult to make these changes, please ask your doctor to refer your child to a registered dietitian.

Some babies do not tolerate the natural milk sugar lactose which is found in ordinary infant formula (made from cow's milk). It is also in breast milk but this is usually well tolerated in most infants. Lactose is also found in goat's and sheep's milk.

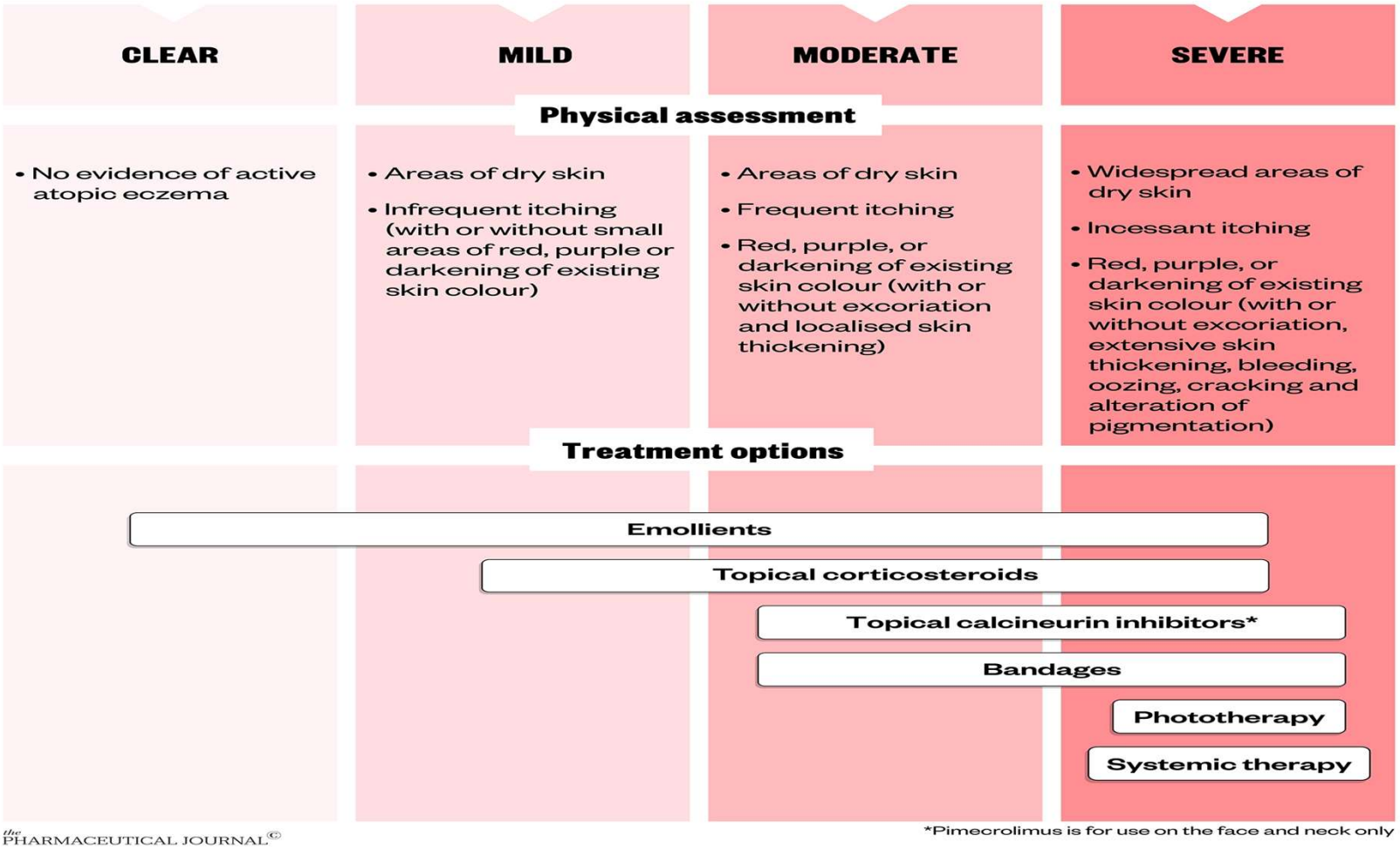
Lactose intolerance in infants is usually a short-term problem often coinciding with colic. It can also occur following gastroenteritis and usually lasts for 2 - 4 months. A small number of infants have a longer term problem with lactose.

Lactose-free infant formulas are available; SMA LF or Aptamil Lactose Free. These taste similar to ordinary formulas and are available from chemists to buy or are available on prescription if your baby is under medical supervision. They are not normally available in supermarkets unless there is a pharmacy within the store. It is important your baby drinks at least 600ml (20 ounces) a day of a lactose-free formula to receive sufficient nutrients, especially calcium.

General advice for introducing Lactose-free solids

- Solid food should be introduced by 6 months of age (not before 17 weeks of age).
- Start with a few teaspoons once/twice a day of baby rice, puréed plain fruit and/or vegetables.
- Gradually increase the amount and range of foods to include foods from the 'allowed' list overleaf.
- Eggs, fish, meat, citrus fruit and cereals with gluten (bread, pasta, rusks, biscuits, cakes) and nuts should not be introduced until 6 months of age.
- From 7 months, gradually increase texture of food to mashed consistency and finger foods.
- Do not add sugar or salt to your baby's food.
- Honey should not be given until 1 year of age due to possible contamination with botulism bacteria.
- By 1 year of age, most infants can manage to eat chopped up family meals.

4. Eczema


CLEAR
MILD
MODERATE
SEVERE
Physical assessment
• No evidence of active atopic eczema
• Areas of dry skin
• Infrequent itching (with or without small areas of red, purple or darkening of existing skin colour)
• Areas of dry skin
• Frequent itching
• Red, purple, or darkening of existing skin colour (with or without excoriation and localised skin thickening)
• Widespread areas of dry skin
• Incessant itching
• Red, purple, or darkening of existing skin colour (with or without excoriation, extensive skin thickening, bleeding, oozing, cracking and alteration of pigmentation)
Treatment options
Emollients
Topical corticosteroids
Topical calcineurin inhibitors*
Bandages
Phototherapy
Systemic therapy
the PHARMACEUTICAL JOURNAL©
*Pimecrolimus is for use on the face and neck only

Thickness

- Thick and greasy;
- Good for very dry, thickened skin and night-time;
- No additives so less likely to irritate the skin;
- May be better for cold, dry weather.

- Light and non-greasy;
- High oil content.

- Easily absorbed;
- Good for daytime use;
- Unlikely to stain clothing;
- May be better for summer use.

- Easily absorbed;
- Good for hairy or damaged skin;
- Not very moisturising.

- Use emollients in larger amounts and more often than other treatments;
- Use emollients on the whole body, both when the eczema is under control and while using all other treatments;
- Use emollients and/or emollient wash products instead of soaps and detergent-based wash products;
- Smooth emollients onto the skin in the direction of the hair growth rather than rubbing them in;
- Most emollients come in pump dispensers, but if in a tub, use a clean spoon to remove the emollient so as to reduce the risk of bacterial contamination;
- If a particular emollient causes irritation or is not acceptable to a child then try a different one;
- Keep away from fire or other naked flames – if emollients come into contact with, and dry on, dressings, clothing and bedding, the fabric can easily be ignited;

Skin thinning and other adverse effects with topical corticosteroids

- Local adverse effects of topical corticosteroids (TCS) can include:
- Transient burning or stinging;
- Worsening and spreading of misdiagnosed fungal infection;
- Reversible thinning of the skin;
- Stretch marks;
- Allergic contact dermatitis;
- Acne vulgaris;
- Reversible, mild hypopigmentation;
- Excessive hair growth at the site of application.

- a recent review bringing together all safety data from 38 systematic reviews of TCS use in adults and children with eczema, found that skin thinning is uncommon when TCS are used intermittently ‘as required’ to treat flares or on two days a week as ‘proactive weekend therapy’ to prevent flares.
- The risks of skin thinning with TCS are increased with:

- Using potent or very potent TCS;

- Inappropriate long-term continuous use;

- Treating sensitive sites where the skin is thinner, e.g. face or genital areas;

- Using TCS under occlusion, e.g. a nappy, dressing, or when applying in skin folds;

- Treating large areas.

- Children, especially infants, are particularly susceptible to systemic adverse effects of TCS because they have a proportionately greater body surface area to weight ratio, and so there is a greater degree of absorption for the same amount applied.
- However, systemic effects, which include adrenal suppression, Cushing's syndrome and growth suppression, are rare.

MILD ECZEMA

Drug name

Hydrocortisone 1.0%*, 2.5%

1 **Potency:**
mild

Common brands:
- Hydrocortisone
- Dioderm
- Efcortelan
- Mildison

Use:
- Mild eczema
- On face and neck

MODERATE ECZEMA

Betamethasone valerate 0.025% | **Clobetasone butyrate 0.05%*** | **Fluocortolone 0.25%**

Fludroxycortide 0.0125% | **Fluocinolone acetonide 0.001%**

5

Potency:
moderately potent

Common brands:
- Betnovate-RD
- Eumovate
- Clobevate
- Synalar 1 in 4 dilution
- Ultralanum Plain
- Haelan Tape

Use:
- Moderate eczema

Do not use:
- On eyelids
- For more than one to two weeks for severe flares in groin, armpits and genitals
- For more than three to five days for severe flares on face and neck

Betamethasone valerate 0.1% | **Diflucortolone valerate 0.1%** | **Mometasone furoate 0.1%**

Fluocinolone acetonide 0.025% | **Fluticasone propionate 0.05%** | **Hydrocortisone butyrate 0.1%**

10

Potency:
potent

Common brands:
- Betnovate
- Nerisone
- Synalar
- Cutivate
- Locoid
- Elocon

Use:
- Moderate eczema not responding adequately to moderate treatment or severe eczema

Do not use:
- In children under 12 months without specialist advice
- On eyelids, face and neck
- For more than one to two weeks for severe flares in groin, armpits and genitals

SEVERE ECZEMA

Clobetasol propionate 0.1% | **Diflucortolone valerate 0.3%**

50 **Potency:** very potent

Common brands:
- Dermovate
- Clarelux
- Nerisone Forte

Do not use:
- In children without specialist advice

*Available over the counter but not for children aged under 10 years (for hydrocortisone) or 12 years (for clobetasone butyrate), and not for use on the eyelids or face, on broken or infected skin, or on anal or genital areas

TOP TIPS:

- First, eczema must be brought under control by using an appropriate potency TCS, once daily, usually for two to six weeks — choose the least potent preparation that is effective;
- Once skin looks and feels better, management can be stepped down to intermittent treatment of flares or proactive weekend therapy (see below);
- Regular emollient use may be enough for mild eczema;
- For flares, start treatment with TCS as soon as signs and symptoms appear and continue for approximately 48 hours after symptoms subside, which may be three to five days for moderate eczema, or up to 10 days if eczema has been under treated;
- In children with frequent flares (two or three per month), consider prophylactic treatment of problem areas with TCS for two consecutive days per week – called weekend therapy. Review after three to six months;
- Do not use topical corticosteroid/antibiotic combinations for clinically infected or uninfected eczema.

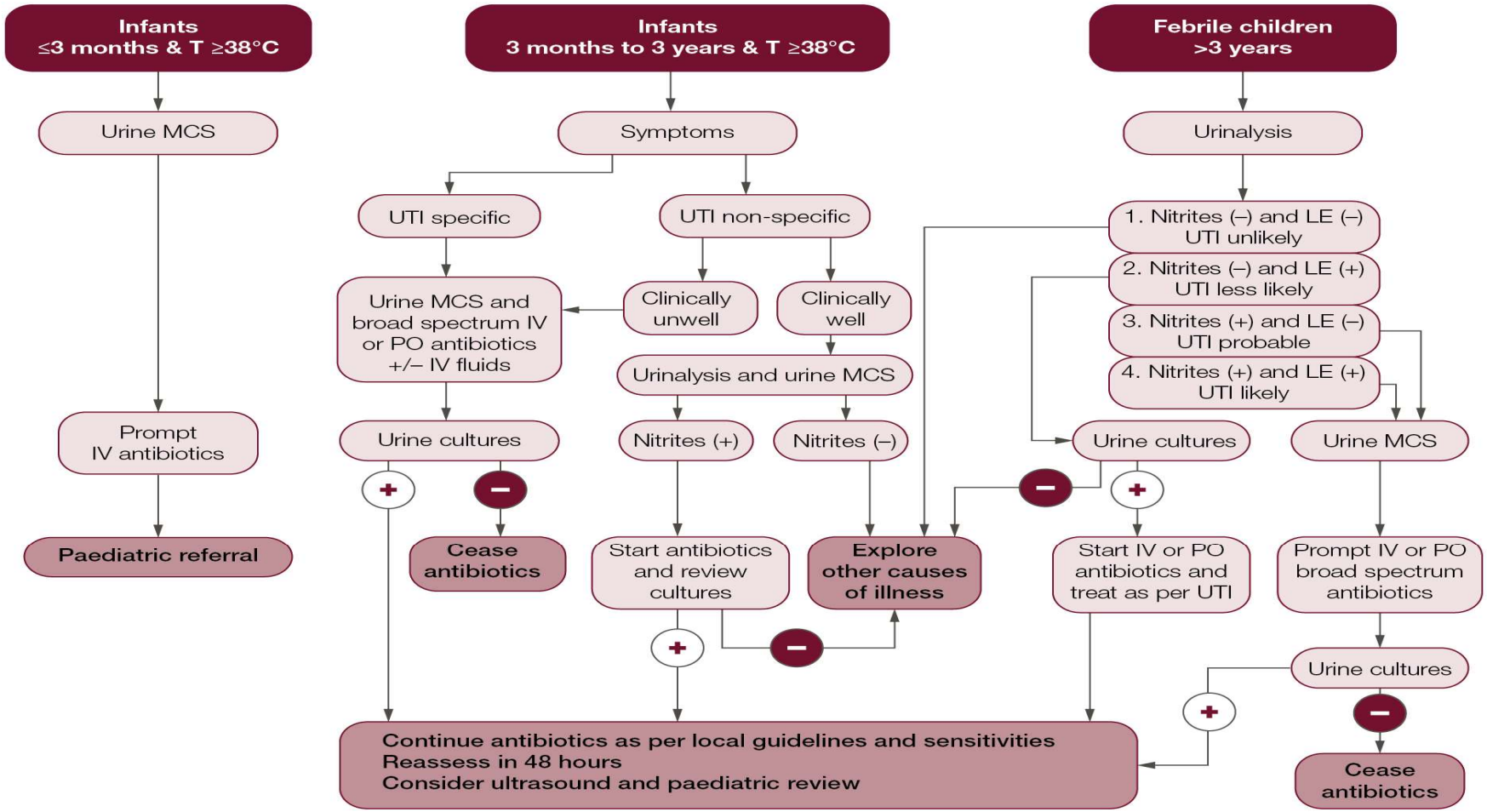
3. **Urinary infection**

- **Prevalence and epidemiology**
- Urinary tract infection (UTI) is one of the most common bacterial infections of childhood.
- Among febrile infants, unwell children in general practice and older children with urinary symptoms, 6%–8% will have a UTI.
- Prevalence varies with age, peaking in young infants, toddlers and older adolescents. UTI is more common in female and uncircumcised male infants.
- During toddler years, toilet training can lead to volitional holding and bladder stasis, promoting UTIs. Prevalence peaks again in adolescent females when sexual activity disrupts bacteria near the urethral orifice.

- The clinical presentation varies and is often non-specific, particularly in young infants. This makes early diagnosis and management of paediatric UTIs challenging.
- Therefore, UTIs should be suspected in every febrile infant until proven otherwise.
- A full voiding history should include frequency, urgency, stream, volume, suprapubic pain, dysuria, secondary enuresis and toileting practices.
- Other relevant history includes the amount of fluid intake and bowel habits. In younger children, carers may report non-specific symptoms such as lethargy, fever, vomiting, malaise, failure to thrive, irritability and offensive urine.

- Although often unremarkable, physical examination should include assessment of the abdomen, external genitalia, lower limbs and hydration status.
- In rare instances, underlying conditions that contribute to UTIs, such as spina bifida, phimosis, labial adhesions or sexual abuse, may be present.
- UTI diagnosis is based on clinical symptoms in association with a positive urine culture. The amount of bacterial growth required for a positive culture varies by age and method of urine collection.
- Urinalysis is a quick, non-invasive method to screen for UTIs. However, urinalysis alone is not sufficient to diagnose a UTI.
- In febrile children, urinalysis can help to identify who should receive antibacterial treatment while cultures are pending.
- Even though treatment may begin prior to receiving culture results, the causative organism and antibiotic sensitivity should be evaluated to formulate a targeted therapeutic regimen.

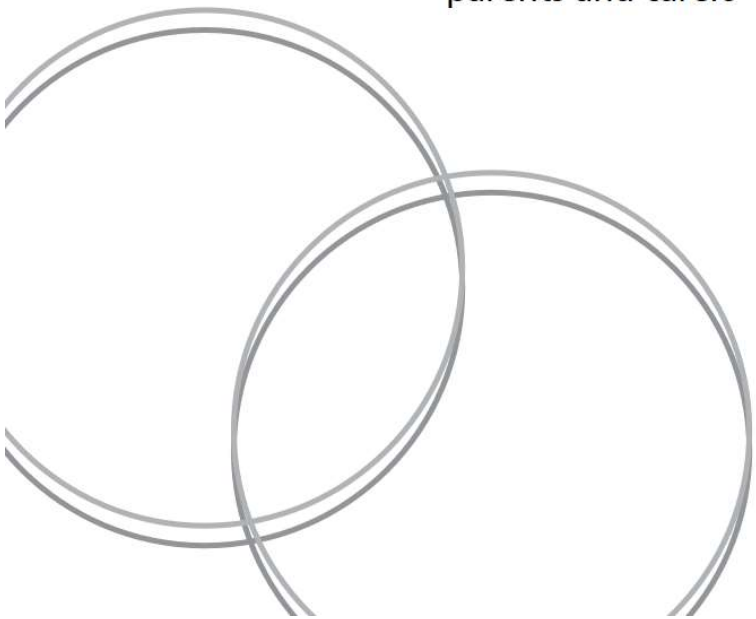
- The evidence indicates that cranberry concentrates effectively treat UTI symptoms in adults. However, there is no evidence to suggest that cranberry concentrate is therapeutic, prophylactic or reduces UTI symptoms in children, and is not recommended.


Infants
≤3 months & T ≥38°C
Urine MCS
Prompt
IV antibiotics
Paediatric referral
Infants
3 months to 3 years & T ≥38°C
Symptoms
UTI specific
UTI non-specific
Urine MCS and
broad spectrum IV
or PO antibiotics
+/– IV fluids
Clinically
unwell
Clinically
well
Urinalysis and urine MCS
Urine cultures
Nitrites (+)
Nitrites (–)
+
–
Cease
antibiotics
Start antibiotics
and review
cultures
Explore
other causes
of illness
+
–
Febrile children
>3 years
Urinalysis
1. Nitrites (–) and LE (–)
UTI unlikely
2. Nitrites (–) and LE (+)
UTI less likely
3. Nitrites (+) and LE (–)
UTI probable
4. Nitrites (+) and LE (+)
UTI likely
Urine cultures
Urine MCS
–
+
Start IV or PO
antibiotics and
treat as per UTI
Prompt IV or PO
broad spectrum
antibiotics
Urine cultures
+
–
Cease
antibiotics
Continue antibiotics as per local guidelines and sensitivities
Reassess in 48 hours
Consider ultrasound and paediatric review

NHS
Oxford University Hospitals
NHS Foundation Trust

Vulvitis in childhood

Information for parents and carers



2. **Asthma**

My child has a cough all the time, especially at night…I've tried everything…

- Asthma
- Viral induced wheeze
- Gord
- Allergy

Royal United Hospital Bath NHS
NHS Trust

RUH | Information for families

Viral induced wheeze management plan

No Symptoms	**Continue with regular medications**
Mild Symptoms	**Reliever** (Blue) Salbutamol 2-10 puffs as required maximum 4 hourly via spacer If you have a **Preventer** it should be **every day** as prescribed
Getting a cold or waking/coughing at night with Asthma	**Take Regular Reliever (Blue)** **Give 5-10 puffs every four hours via spacer.** As long as this dose is effective, your child can stay at home. If your child needs more than this you should see your GP or go to the Emergency Department. **Continue Preventer if prescribed**
Very breathless or poor response to reliever	**Give 10 puffs of reliever via spacer** A large dose of the blue inhaler should last for 4 hours. If needed more frequently: **Seek Medical Advice**

Emergency: 999

It is safe to give another ten puffs while waiting.
If your child has any of these symptoms, you must call an ambulance:

- **Too breathless to speak a full sentence**
- **Floppy or unresponsive**
- **Severe tugging in at the neck or between the ribs.**
- **Pale and grey or blue**
- **Very rapid breathing rate**

Date of publication: September 2012
Ref: RUH PAE/07 Ver 2

Healthcare you can Trust

RUH

Wheeze management plan

Name:	Date:
Date of Birth:	GP:

Discharge home following an episode of wheeze.

When your child is discharged home following an episode of wheeze, they will require more reliever medication than when they are well. This should be gradually reduced using the following guideline:

Dose of Reliever (Blue Salbutamol inhaler) via Spacer:

Today	DAY 1: 8-10 puffs	6 times a day (4 hourly) for 1 day
	DAY 2: 4-6 puffs	4 times a day (5-6 hourly) for 1 day
	DAY 3: 4-6 puff	3 times a day (6-8 hourly) for 1 day
	DAY 4: 2-4 puffs	2 times a day (12 hourly) for 1 day

Other Treatments:

Follow up:
Although your child has not been diagnosed with asthma your GP asthma nurse will usually be happy to review children with viral induced wheeze. We would suggest you see your asthma nurse or GP if your child's symptoms are not improving withing 48 hours, or, if when fully recovered it is felt they are having a lot of problems with wheeze.

Wheeze control:
As a guide – a regular night-time cough or needing to use the reliever more than three times a week could suggest that further medication is needed, and your child should be reviewed.

Acceptable doses of reliever medication:

- Your child has very mild symptoms, **two** puffs should be sufficient
- If not, try **five** puffs, and check inhaler technique
- If this is not helpful, give them **ten** puffs.

If ten puffs does not work, or your child is needing more than ten puffs in four hours, then they need to see a doctor urgently.

Other useful information:
NHS Direct: 0845 46 47
www.asthma.org.uk

What is montelukast?

Montelukast is a medicine that improves asthma symptoms and helps prevent asthma attacks. It is also used to prevent breathing difficulties caused by exercise. Your child may use montelukast to treat seasonal allergies. It is not for use in an acute asthma attack.

Montelukast works by blocking the action of substances in the body that cause the symptoms of asthma and allergies.

You may hear montelukast called by its brand name, Singulair. Montelukast comes as a tablet, a chewable tablet, and granules to be taken by mouth.

- **Dosage**
- Most people take montelukast once a day in the evening to prevent asthma or allergy symptoms. However, if exercise makes your asthma worse, your doctor might tell you to take montelukast 2 hours before you exercise. Never take more than 1 dose a day.
- The usual dose for:
- **adults and children aged 15 years and older** – one 10mg tablet
- **children aged 6 to 14 years** – one 5mg chewable tablet
- **children from 6 months old to 5 years** – 4mg (this can be granules or as a chewable tablet)

- **How to give granules to a child**
- Montelukast granules come in a sachet with 4mg of granules inside (one dose). They can be put directly on your child's tongue. You can also mix the granules with a spoonful of cold, soft food, such as yoghurt or ice-cream.
- Make sure your child takes the whole dose immediately (or within 15 minutes).
- It's important to not dissolve the granules in a drink. You can give your child a drink afterwards.

Ear, Nose, Throat

- **Ear Infections**
- Until a child's sinus drainage systems are fully developed, they're more horizontal than vertical, so it's easier for bacteria to get stuck and cause infections. That's why ear infections are more common in young children than in older children or adults.
    - **When to treat at home:** If the discomfort seems mild, warm compresses and over-the-counter pain relievers may help. But since ear infections are often quite painful and can worsen if not treated, they typically require a trip to the doctor.
    - **When to see your paediatrician:** If your child is in pain, has fever, it's their first or second ear infection in a year and if antibiotics were successful in treating previous infections.
    - **When to see an ENT:** If your child has had four or more ear infections in one year or if antibiotics haven't been successful, your paediatrician will likely recommend a visit to a paediatric ENT to discuss whether ear tubes may help.

- **Common Cold/nasal discharge**
- Kids get colds all year long, which cause issues affecting the ears, nose and throat. Keep in mind that some of the symptoms of a common cold can easily be confused with symptoms of the flu, COVID-19 or other infections such as strep throat or a sinus infection.
    - **When to treat at home:** If your child has sniffles, sneezes, a mild cough and/or sore throat but no fever and it lasts only a week or so.
    - **When to see your paediatrician:** If your child is running a fever of 101 or higher for 72 hours, if the illness lasts for more than 10 days, if there's thick yellow or green discharge (could indicate a sinus infection) or if there are also flu symptoms (chills, body/muscle aches, fatigue) or COVID-19 symptoms (any of the flu symptoms, as well as vomiting, diarrhoea and/or new loss of taste or smell).
    - **When to see an ENT:** Your paediatrician may refer you to an ENT if your child experiences recurring sinus infections or if minor illnesses repeatedly cause inflammation of the tonsils.

- **Snoring or Noisy Breathing**
- These conditions are not normal in children, or even in adults, and should be checked out when they occur on a regular basis.
    - **When to treat at home:** If it only happens when your child has allergies, a cold or other minor illness, there is likely no need to see a doctor (unless other symptoms warrant a visit).
    - **When to see your paediatrician:** If snoring and/or noisy breathing occur consistently, even when your child is not congested.
    - **When to see an ENT:** Your paediatrician will likely refer you to an ENT if he/she suspects enlarged tonsils, adenoids, sleep apnoea, chronic sinusitis or a deviated septum.

- **Nosebleeds**
- Dry air, especially indoor air in the wintertime, can cause nosebleeds. Children are also known to scratch and pick at their noses, which can cause excessive irritation inside the nasal passages, leading to nosebleeds.
    - **When to treat at home:** If the nosebleed is the result of a minor trauma, like being struck in the nose with a toy, or it happens for other suspected reasons (such as when your child has a cold or allergies) and subsides quickly.
    - **When to see your paediatrician:** If bleeding from an injury doesn't subside or if your child is having frequent nosebleeds.
    - **When to see an ENT:** Although uncommon, your paediatrician will likely refer you to an ENT to rule out potential causes of recurring nosebleeds such as a clotting disorder, if nosebleeds occur often, are heavy or aren't alleviated with common measures like placing a humidifier in your child's room.

Some other common issues

- Referral for ADHD / autism – will ALWAYS need input from school otherwise referral rejected.

- Nocturnal enuresis – often managed by community team/school nurses before being referred to paediatrician

- Allergy testing – definitely refer if full anaphylaxis (lip swelling, stridor, need for adrenaline). Otherwise depends on history

- Eating disorders/mental health – CAMHs very busy so often ask for input from primary care. Can be challenging to manage so recognise your own limits and make this clear to the patient and family.

Abdominal pain ? migraine

- **What you need to know**
- Abdominal migraine is episodic central abdominal pain occurring with other features of migraine and associated with other episodic syndromes (particularly cyclical vomiting and migraine limb pain)
- Abdominal migraine usually starts in childhood, though it may occur in adults, commonly with a family history of migraine
- The person is well between episodes with a normal physical examination and developmental milestones
- Abdominal migraine is a positive clinical diagnosis and requires no further investigation once “red flags” are excluded
- To manage abdominal migraine, provide an explanation of the diagnosis and discuss available acute and preventive treatments with the patient and family

Abdominal Migraines – A tummy monster!

31 May 2019

Article by Dr Katy Munro

What is an abdominal migraine?

Mostly common in children, abdominal migraine are episodic abdominal pains with various other migraine features. The child might complain of severe abdominal pains without any headache symptoms. This condition is largely misunderstood and under diagnosed due to lack of information and awareness.

This condition is common in children with abdominal pain especially if there is a family history of migraine. Abdominal migraine (AM) is one of the most common causes of functional abdominal pain in children. Many sufferers will have headaches at other times too or go on to get more classical symptoms of migraine later. Some continue to get abdominal migraine symptoms into adulthood.

Chronic and recurrent abdominal pain is a very distressing symptom that causes significant morbidity in affected children impairing their school performance and overall quality of life. Abdominal migraine (AM) is one of the most common causes of functional abdominal pain in children

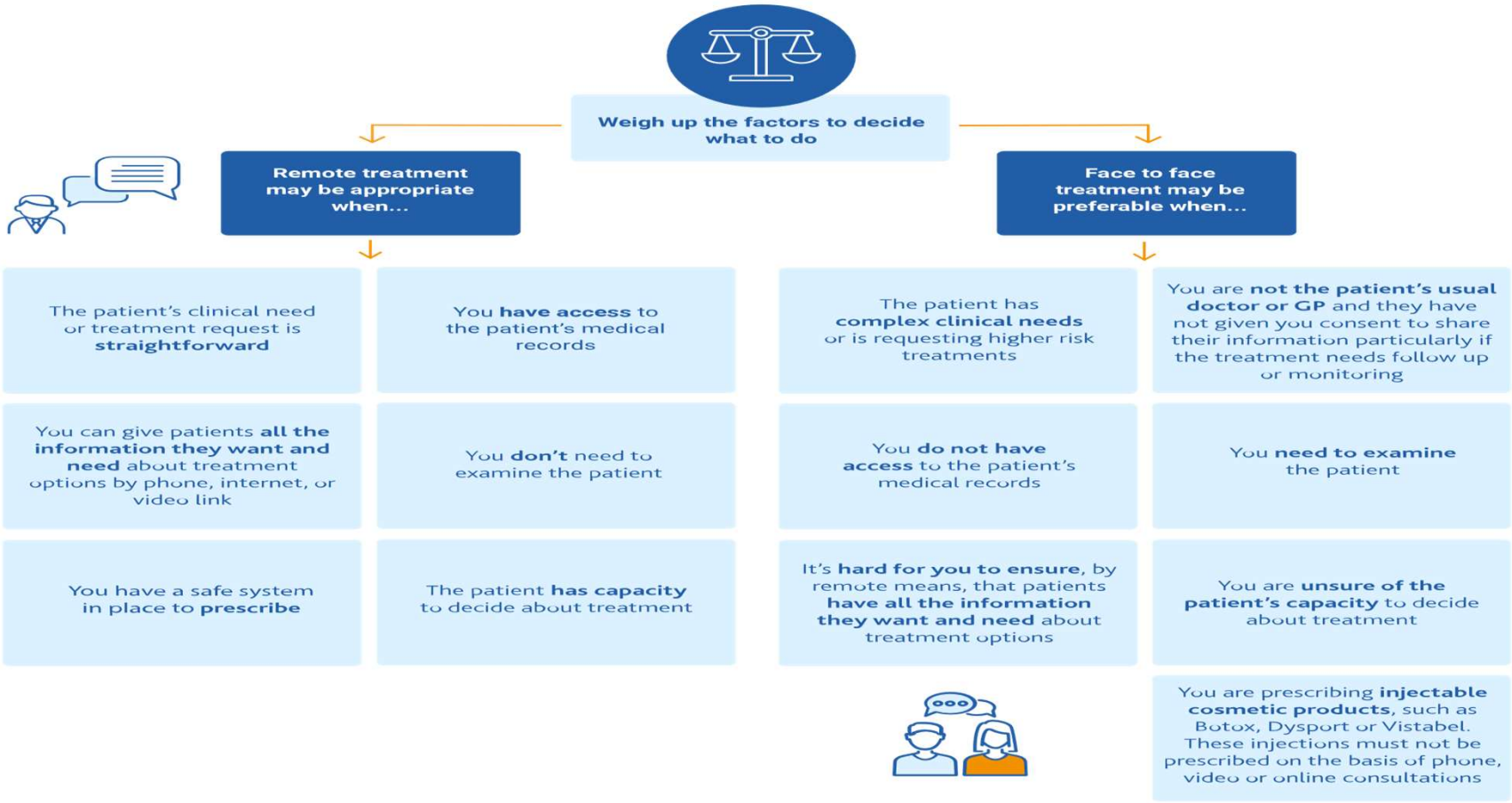
Scare stories…

'Cheeky and happy' identical twin, four, died from a heart condition two hours after he was sent home by a GP with 'raspy' breathing, inquest hears

- George Spencer, 4, seen by his GP because he was having difficulty breathing
- The GP sent George home as his vital stats were all within 'normal parameters'
- Within two hours, George had stopped breathing and went into cardiac arrest
- Four-year-old was rushed to hospital where he died from serious heart infection

By KATIE FEEHAN FOR MAILONLINE
PUBLISHED: 07:48, 14 June 2022 | **UPDATED:** 10:58, 14 June 2022

Record keeping / Remote consultations



- **Recording a consultation**
- In order to best support patient care, your consultation notes should be made as soon as possible and include the following details:
- relevant history and examination findings (both normal and abnormal)
- your differential diagnosis and any steps taken to exclude it
- decisions made and agreed actions
- information given to patients, including the different treatment options and risks explained during the consent discussion
- the patient's concerns, preferences and expressed wishes (this will also be valuable should they no longer have capacity)
- drugs or other treatment prescribed and advice given
- investigations or referrals made
- the date and time of each entry and your identity.

Example 1.

(R) Beclometasone 50micrograms/dose nasal spray - 100 dose - ONE or TWO sprays sniffed in each nostril TWICE a day as needed (Steroid Anti-CONGESTION)

Consultation

ENT+Oral

H: right ear hearing down
popping and crackling
no nasal symptoms

E: TM NAD
Webers >right

P: Conductive deafness - no wax
beconase 1m+
then rev if persists

Example 2

Amoxicillin 250mg/5ml oral suspension sugar free - 100 ml - ONE 5ml spoonful to be taken THREE times daily for 5 days, to treat infection
Otitis Media Formulary
Amoxicillin
Amoxicillin 250mg/5ml oral suspension sugar free - 100 ml - ONE 5ml spoonful to be taken THREE times daily for 5 days, to treat infection
Paediatric Consultation
General
Encounter: Consultation (Xa1qL)
Seen with: mum
ENT+Oral
H: Ear infection
E: Has had upper respiratory symptoms over weekend with fever
Complaining of ear pain in past 24 hours - unwell during night
On examination - alert and well perfused
no lymphadenopathy - eating and drinking
regular Calpol
Ears examined - right ear clear
Left ear (painful) very inflamed TM intact but bulging ++
No mastoid or tragus pain identified
throat appears normal
Temp: 38.5 C
P: Otitis media with bulging TM
have prescribed course of Amoxycillin (no knwon allergies)
Analgesia PRN - fluids ++
To contatc surgery if further concerns

My reflection

- Did I get enough information ?
- Did I feel confident to make my decision ?
- Did I support my decision with guidance or references ?
- Did I safety net appropriately ?
- Did I record accurately and thoroughly ?
- Would I have done anything differently at another time ?

In conclusion….

- The most difficult medication to prescribe is…

Nothing…..

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