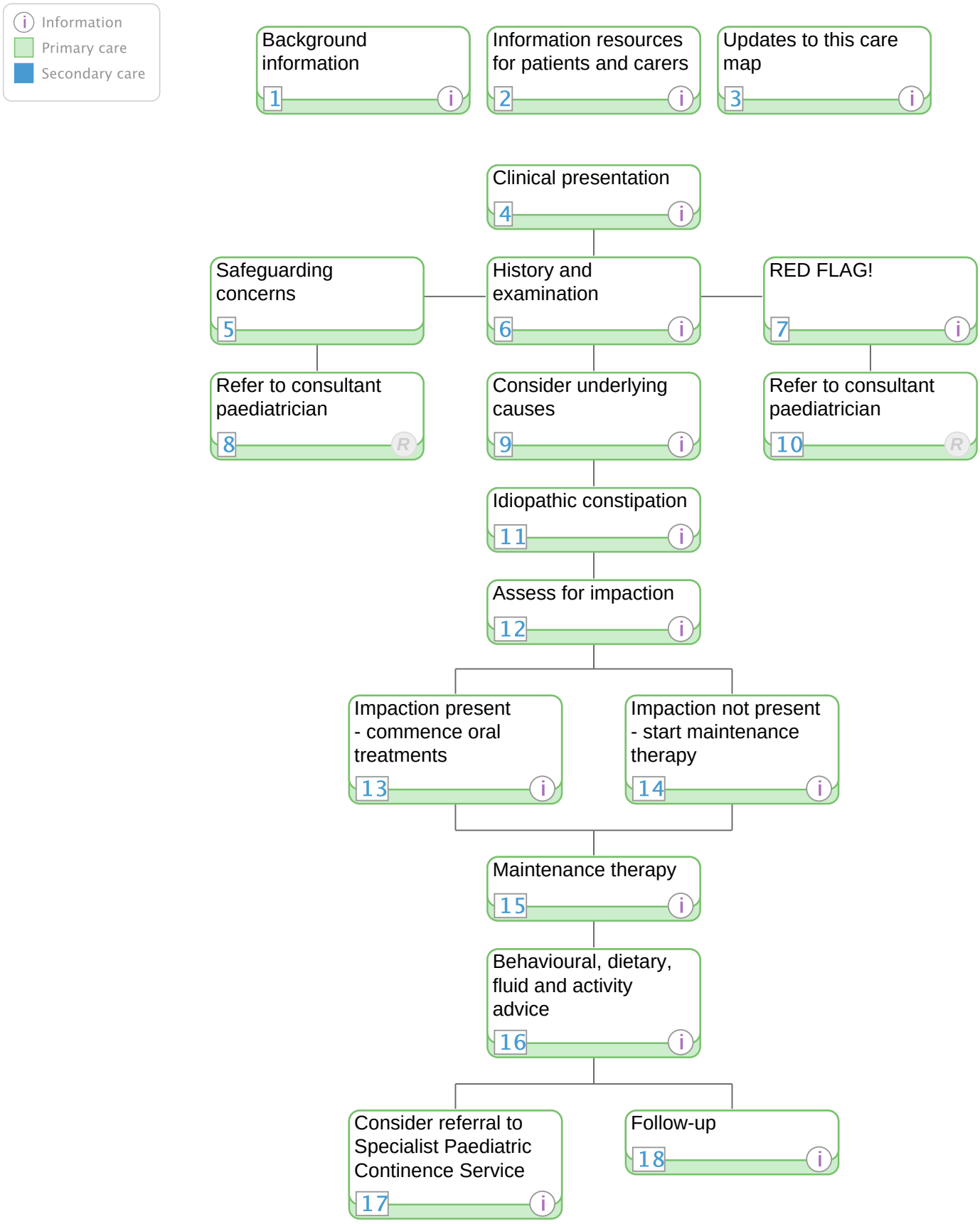
Constipation in Children - Gloucestershire DRAFT 14.09.12

Test > Test > Test



Published: Valid until: Printed on: 14-Sep-2012

This care map was published by . A printed version of this document is not controlled so may not be up-to-date with the latest clinical information.

Constipation in Children - Gloucestershire DRAFT 14.09.12

1 Background information

Quick info:

Scope:

- diagnosis and management of idiopathic constipation in children age 16 years and under

Definition:

- bowel movements that are hard and/or difficult to pass and/or less than 3 stools passed a week
- described as idiopathic if it cannot be explained by anatomical or physiological abnormalities

Incidence and prevalence:

- constipation:
  - occurs in approximately 5-30% of the child population
  - becomes chronic in more than a third of patients
- approximately 95% of children referred for evaluation of constipation have no underlying pathological conditions
- peak incidence occurs at toddler to preschool age

Risk factors:

- pain
- fever
- poor diet:
  - dehydration
  - insufficient nutrients
- psychological or psychiatric issues:
  - depression
  - sexual abuse
  - unusual attitudes to food and bowel function
  - toilet phobia
- coercive toilet training
- family history of constipation
- physical disability, eg cerebral palsy
- Down's syndrome
- impaired colon motility:
  - colonic inertia
  - slow-transit constipation (STC)
  - Ogilvie's syndrome
  - drugs
  - neurological causes, eg spinal cord injury
- difficult access to toilet:
  - position of defecation
  - reduced mobility
  - limited privacy

References:

[1] National Institute for Health and Clinical Excellence (NICE). Constipation in children: the diagnosis and management of idiopathic childhood constipation in primary and secondary care. Clinical guideline 99. London: NICE; 2010.

[2] University of Michigan Health System. Guidelines for clinical care. Functional constipation and soiling in children. Michigan: University of Michigan Health System; 2008.

[3] Clinical Knowledge Summaries (CKS). Constipation in children. Version 1.0. Newcastle upon Tyne: CKS; 2010.

[4] World Gastroenterology Organisation (WGO). WGO practice guidelines. Constipation. 2007.

2 Information resources for patients and carers

Published: Valid until: Printed on: 14-Sep-2012

Quick info:

Recommended resources for patients and carers, produced by organisations certified by The Information Standard:

- 'Constipation' (URL) from Bupa at http://www.bupa.co.uk
- 'Constipation' (URL) from Datapharm at http://www.medicines.org.uk
- 'Constipation in children' (PDF) from Patient UK at http://www.patient.co.uk

The following resources have been written or recommended by national policy bodies or guideline producers whose content has informed this care map:

- 'Constipation' patient leaflet (URL) from Clinical Knowledge Summaries (CKS) at http://www.cks.nhs.uk

NICE Guidance - Constipation in Children

3 Updates to this care map

Quick info:

Date of publication:

Interim update:

Three information points now appear at the top of each care map page. These provide:

- easy access to scope and background information on each page of the care map whilst reducing repetition between care points
- easy access to patient resources/leaflets
- information on care map updates

4 Clinical presentation

Quick info:

Clinical presentation includes:

- pain or discomfort on passage of hard stools
- passing occasional hard, large stools or frequent small pellets
- withholding or straining to stop passage of stools
- soiling or overflow
- abdominal pain
- distension or discomfort
- lack of energy
- irregular bowel activity
- foul smelling wind and stools
- excessive flatulence
- irregular stool texture
- general malaise
- poor appetite
- angry or irritable mood

In exclusively breastfed infant age older than age 6 weeks:

- often great variability in stool frequency or irregular bowel motion may occur
- constipation is unusual; suspect an organic cause
- investigate if failure to thrive or signs and symptoms of obstruction or enterocolitis

This information was drawn from the following references:

[1] National Institute for Health and Clinical Excellence (NICE). Constipation in children: the diagnosis and management of idiopathic childhood constipation in primary and secondary care. Clinical guideline 99. London: NICE; 2010.

[3] Clinical Knowledge Summaries (CKS). Constipation in children. Version 1.0. Newcastle upon Tyne: CKS; 2010.

Published: Valid until: Printed on: 14-Sep-2012

6 History and examination

Quick info:

History:

- enquire about stool pattern:
  - fewer than 3 stools per week
  - hard large stool
  - 'rabbit dropping'
- enquire about symptoms associated with defecation:
  - distress
  - bleeding
  - straining
- previous constipation
- check Rome III criteria: constipation in children age up to 4 years should include two of the following for one month:
  - two or fewer defecations per week
  - at least one episode per week of incontinence after acquiring toileting skills
  - history of excessive stool retention
  - history of painful or hard bowel movements
  - presence of large-diameter stools that may obstruct the toilet
- functional constipation in children age 4-18 years includes one of the following per week for at least two months:
  - two or fewer defecations per week
  - at least one episode per week of incontinence
  - history of retentive posturing or excessive volitional stool retention
  - painful or hard bowel movements
  - large-diameter stools that may obstruct the toilet
  - presence of large faecal mass in the rectum
- previous or current anal fissure
- failure to pass meconium within 48 hours of birth (in term baby)
- symptoms in legs/locomotor development
- abdominal distension and vomiting
- faltering growth
- precipitating factors coinciding with the start of symptoms:
  - fissure
  - change in diet
  - infection
  - timing of potty training
  - acute events, such as, moving house, starting nursery, fears and phobia, major family change
- weight and height
- fitness and activity level (age 1 year and over)
- diet and fluid intake:
  - age 1 year and younger:
    - change in formula
    - weaning
    - insufficient fluid intake
  - age 1 year and older:
    - history of poor diet
    - insufficient fluid intake
- medication history, eg:

- antiepileptics
- sedating antihistamines
- family history
- psychosocial history

Examination:

- abdominal examination:
  - distention (faecal mass may be palpable if impaction is present)
  - palpable liver or spleen
- inspection of perianal area; assess:
  - appearance
  - position
  - patency
- rectal examination (visual):
  - presence or consistency of stool
  - blood in stool
  - anal wink or tone
- do not perform digital rectal examination (DRE) in children or young people older than age 1 year
- in children under age 1 year, DRE should only be undertaken by healthcare professionals competent to interpret features of anatomical abnormalities or Hirschsprung's disease
- spine, lumbosacral region, gluteal examination
- lower limb neuromuscular examination
- plot height and weight on a growth chart

This information was drawn from the following references:

[1] National Institute for Health and Clinical Excellence (NICE). Constipation in children: the diagnosis and management of idiopathic childhood constipation in primary and secondary care. Clinical guideline 99. London: NICE; 2010.

[2] University of Michigan Health System. Guidelines for clinical care. Functional constipation and soiling in children. Michigan: University of Michigan Health System; 2008.

[4] World Gastroenterology Organisation (WGO). WGO practice guidelines. Constipation. 2007.

[5] Map of Medicine (MoM). London: MoM; 2010.

This information was drawn from the following references:

[1] National Institute for Health and Clinical Excellence (NICE). Constipation in children: the diagnosis and management of idiopathic childhood constipation in primary and secondary care. Clinical guideline 99. London: NICE; 2010.

[2] University of Michigan Health System. Guidelines for clinical care. Functional constipation and soiling in children. Michigan: University of Michigan Health System; 2008.

[3] Clinical Knowledge Summaries (CKS). Constipation in children. Version 1.0. Newcastle upon Tyne: CKS; 2010.

[4] World Gastroenterology Organisation (WGO). WGO practice guidelines. Constipation. 2007.

7 RED FLAG!

Quick info:

If the child presents with the following, refer urgently to a child healthcare professional:

- history of:
  - constipation reported from birth or first few weeks of life [1]
  - failure to pass or delay in passing stools within the first 48 hours of birth (in term baby) [1]
  - previous unknown or undiagnosed weakness in legs, or locomotor delay [1]
- other symptoms that may warrant consideration of referral include:
  - bloody diarrhoea [2,3]
  - fatigue [2,3]

- fever [2,3]
- bilious vomiting [2,3]
- rash [2]
- suspicion of abuse [2]
- global developmental delay [2]
- severe urinary symptoms [3]
- polyuria, polydipsia [3]

- on examination:
  - gross abdominal distension [1]
  - abdominal distension and vomiting [1]
  - abnormal appearance, position, or patency of the anus, such as [1]:
    - fistulae
    - bruising
    - multiple fissures [3]
    - tight or patulous anus
    - anteriorly placed anus [2]
    - absent anal wink [3]
- abnormalities in the spine/lumbosacral/gluteal region:
  - abnormal asymmetry or flattening of the gluteal muscle [1,3]
  - evidence of sacral agenesis [1,2]
  - discoloured skin [1]
  - naevi or sinus [1]
  - hairy patch [1,2]
  - lipoma [1]
  - central pit [1]
  - scoliosis [1]
- unexplained abnormal neuromuscular signs [1]
- abnormal reflexes [1]
- pencil-thin stools [2] or 'ribbon stools' [1]

Consider referral if [2]:

- global developmental delay is an ongoing problem and requires urgent investigation
- severe pneumonia is suspected

References:

[1] National Institute for Health and Clinical Excellence (NICE). Constipation in children: the diagnosis and management of idiopathic childhood constipation in primary and secondary care. Clinical guideline 99. London: NICE; 2010.

[2] University of Michigan Health System. Guidelines for clinical care. Functional constipation and soiling in children. Michigan: University of Michigan Health System; 2008.

[3] Clinical Knowledge Summaries (CKS). Constipation in children. Version 1.0. Newcastle upon Tyne: CKS; 2010.

9 Consider underlying causes

Quick info:

Approximately 95% of children with constipation seen in a specialist clinic do not have an underlying cause. Investigation is seldom required and should normally only be initiated by specialist services. Occult blood in stools is not routinely tested. Underlying organic causes are usually very obvious.

- anatomic:
  - imperforate anus
  - anal stenosis

- peri-anal abscess or fissure
- pelvic mass

- metabolic:
  - hypothyroidism
  - hypercalcaemia
  - hypokalaemia
  - cystic fibrosis (CF)
  - diabetes mellitus
  - multiple endocrine neoplasia type 2B
- gastrointestinal – coeliac disease
- neurological:
  - spinal or pelvic nerve abnormality, or trauma:
    - neurofibromatosis (NF)
    - tethered cord
    - myelomeningocele
  - static encephalopathy
  - Hirschsprung's disease
  - intestinal neuronal dysplasia
  - visceral neuropathies
  - visceral myopathies
- encephalopathy
- pharmacological:
  - anticholinergics
  - aluminium antacids
  - chemotherapy (eg vincristine)
  - iron treatment
  - lead intoxication
  - vitamin D intoxication
- anatomical abdominal abnormalities:
  - prune belly syndrome
  - gastroschisis
  - Down's syndrome
- connective tissue disorders:
  - scleroderma
  - systemic lupus erythematosus (SLE)
  - Ehlers-Danlos syndrome
- dietary:
  - low fibre and fluids intake
  - dehydration
  - malnutrition
  - intolerance:
    - genetic predisposition
    - infant dyschezia
    - cow's milk intolerance (particularly if of pre-weaning age)
- developmental, behaviour, or social situation:
  - mental retardation
  - autism or Asperger's syndrome

Published: Valid until: Printed on: 14-Sep-2012

- oppositional defiant disorder
- depression
- anxiety
- delayed toilet training
- attention deficit hyperactivity disorder (ADHD)
- child abuse

This information was drawn from the following references:

[2] University of Michigan Health System. Guidelines for clinical care. Functional constipation and soiling in children. Michigan: University of Michigan Health System; 2008.

[3] Clinical Knowledge Summaries (CKS). Constipation in children. Version 1.0. Newcastle upon Tyne: CKS; 2010.

[5] Map of Medicine (MoM). London: MoM; 2010.

11 Idiopathic constipation

Quick info:

Indications for idiopathic constipation [1]:

- age <1 year, presence of precipitating factors:
  - fissure
  - change in diet
  - infection
- age >1 year, presence of precipitating factors:
  - fissure
  - change in diet
  - timing of potty training
  - acute events, such as:
    - moving house
    - starting nursery
    - fears and phobias
    - major family change
- normal passage of meconium (within first 48 hours after birth)
- normal weight and height
- fit and active (age 1 year and over)
- no neurological problems in legs, normal locomotor development
- diet and fluid intake:
  - age <1 year – change in formula, weaning, insufficient fluid intake
  - age >1 year – history of poor diet, insufficient fluid intake
- normal appearance of anus
- soft abdomen
- flat or distended abdomen that can be explained by age or overweight child
- normal appearance of skin and anatomical structures
- normal gait
- reflexes present and of normal amplitude

Reference:

[1] National Institute for Health and Clinical Excellence (NICE). Constipation in children: the diagnosis and management of idiopathic childhood constipation in primary and secondary care. Clinical guideline 99. London: NICE; 2010.

12 Assess for impaction

Quick info:

Assess all children with idiopathic constipation for faecal impaction [1] – impaction is diagnosed based on reports of [3]:

- passing hard, lumpy stools (large and infrequent, or small and relatively frequent)
- having to use manual methods to extract faeces
- overflow faecal incontinence or loose stools
- palpable abdominal or perianal faecal masses

Offer all children and their families a contact point with a specialist health professional who can provide ongoing support [1]. Do not use rectal medications for disimpaction in primary care.

References:

[1] National Institute for Health and Clinical Excellence (NICE). Constipation in children: the diagnosis and management of idiopathic childhood constipation in primary and secondary care. Clinical guideline 99. London: NICE; 2010.

[3] Clinical Knowledge Summaries (CKS). Constipation in children. Version 1.0. Newcastle upon Tyne: CKS; 2010.

13 Impaction present - commence oral treatments

Quick info:

Faecal Impaction Clearout Regime

Oral medications to treat impaction:

- The National Institute for Health and Clinical Excellence (NICE) recommend polyethylene glycol (PEG) with electrolytes (macrogol) as the first-line treatment for all children older than age 1 month, using an escalating dose regimen [1]
- PEG with electrolytes may be mixed with a cold drink [1]
- if PEG is not tolerated, substitute for a stimulant laxative singly or in combination with an osmotic laxative, eg lactulose [1]
- inform parents that disimpaction can initially increase soiling and abdominal pain [1]
- if PEG does not cause disimpaction within 2 weeks, add a stimulant laxative, eg:
  - sodium picosulphate [1,3]
  - bisacodyl [1,6]
  - senna [1,3,6]
- adjust dose, choice, and combination of laxatives according to symptoms and response to treatment [1]
- possible side effects include [1]:
  - colicky diarrhoea
  - abdominal distension
  - flatulence
  - vomiting
  - anal irritation
  - anorexia
  - abdominal pain
  - nausea
  - hard stools
- continue with maintenance therapy once the child is disimpacted [1]

NB: The use of polyethylene glycol for treating impaction in children younger than age 5 years, or constipation in children under 2 years, is outside of its marketing authorisation (product licence) in the UK.

References:

[1] National Institute for Health and Clinical Excellence (NICE). Constipation in children: the diagnosis and management of idiopathic childhood constipation in primary and secondary care. Clinical guideline 99. London: NICE; 2010.

[2] University of Michigan Health System. Guidelines for clinical care. Functional constipation and soiling in children. Michigan: University of Michigan Health System; 2008.

[3] Clinical Knowledge Summaries (CKS). Constipation in children. Version 1.0. Newcastle upon Tyne: CKS; 2010.

Published: Valid until: Printed on: 14-Sep-2012

[6] Constipation Guideline Committee of the North American Society for Pediatric Gastroenterology. Evaluation and treatment of constipation in infants and children: recommendations of the North American Society for Paediatric Gastroenterology, Hepatology, and Nutrients. J Pediatr Gastroenterol Nutr 2006: 43: e1-13.

14 Impaction not present - start maintenance therapy

Quick info:

Recommendations in the absence of impaction [1]:

- commence maintenance therapy for constipation in the absence of impaction
- patients can benefit from diet and lifestyle modifications

Reference:

[1] National Institute for Health and Clinical Excellence (NICE). Constipation in children: the diagnosis and management of idiopathic childhood constipation in primary and secondary care. Clinical guideline 99. London: NICE; 2010.

15 Maintenance therapy

Quick info:

Commence maintenance therapy and treatment for a minimum of 3 months as soon as the child is disimpacted.

Maintenance therapy, and treatment of acute constipation:

- polyethylene glycol as the first line treatment [1,3]
- adjust the dose of polyethylene glycol according to symptoms and response [1,3]
- add a stimulant laxative if polyethylene glycol does not work, eg [1,3]:
  - sodium picosulphate
  - bisacodyl
  - senna
- substitute a stimulant laxative if polyethylene glycol is not tolerated by the child or young person – add another laxative if stools are hard, eg [1,3]:
  - lactulose
  - docusate
- osmotic laxatives [2]:
  - glycolax
  - lactulose
  - sorbitol
- in infants [2]:
  - juices containing sorbitol
  - lactulose or sorbitol
  - corn syrup
  - glycolax
  - barley malt extract
  - barley water

Where previous impaction was present:

- start as soon as the child's bowel is disimpacted [1]
- reassess child frequently to ensure they do not become reimpacted [1]
- continue medication as maintenance dose for several weeks after regular bowel habit is established [1]
- reduce dose over a period of months according to response in stool consistency and frequency [1]
- continue for a minimum of 3 months [2]
- may be required for several years – up to 2 years in some cases [3]

- a shorter duration of therapy may be possible in children with a very short history of constipation, though this should be done with careful monitoring [3]

Reassess child frequently during maintenance treatment to ensure they do not become reimpacted and assess issues in maintaining treatment. Frequency of assessment needs to be tailored to individual needs of the child and their family, as a guide:

- 1 week by phone
- 2, 4, 6-8 and 12 weeks by phone or clinic

References:

[1] National Institute for Health and Clinical Excellence (NICE). Constipation in children: the diagnosis and management of idiopathic childhood constipation in primary and secondary care. Clinical guideline 99. London: NICE; 2010.

[2] University of Michigan Health System. Guidelines for clinical care. Functional constipation and soiling in children. Michigan: University of Michigan Health System; 2008.

[3] Clinical Knowledge Summaries (CKS). Constipation in children. Version 1.0. Newcastle upon Tyne: CKS; 2010.

16 Behavioural, dietary, fluid and activity advice

Quick info:

Diet and lifestyle advice should be offered once the child is on an effective dose of laxative. Do not use dietary interventions alone as first-line treatment.

- dietary modifications:
  - a balanced diet containing sufficient fibre is recommended
    - this is not applicable to exclusively breast-fed infants
    - advise parents not to press food on the child [3]
    - do not recommend unprocessed bran, which may cause bloating and flatulence, and reduce absorption of micronutrients [3]
    - there is little evidence that increasing fibre-rich foods is effective in managing constipation [1,3]
  - increasing dietary fibre is recommended – wholegrain cereal, fruits, vegetables, baked beans
- fluid intake:
  - adequate fluid intake is important, as dehydration may be worsened by laxatives (6-8 cups daily) :
    - there is little evidence that increasing fluid intake relieves constipation [1,3]
  - consider increasing juices containing sorbitol – eg prune, pear and apple [2,3,6]:
    - infants who have not been weaned – advise extra water between feeds [3]
  - avoid excessive milk consumption (>1 pint) beyond infancy [4]:
    - review daily calcium requirements for age and suggest alternative sources if restricting dairy intake [2]
    - consider cow's milk exclusion only on advice of specialist services [1]
    - do not delay treatment with laxatives by changing infant formulas [1,3]
  - lactulose, or sorbitol – can be used as stool softeners [1]
- physical activity:
  - advise 60 minutes of physical activity per day [1]
  - should be tailored to child's stage of development and individual ability [1], eg:
    - in children who have not been weaned, consider bicycling the infant's legs [3]
- toilet training should include [2]:
  - negotiated and non-punitive behavioural interventions suitable for the child or young person's stage of development [1,2]
  - this can include:
    - scheduled toileting [1-3]
    - support to encourage a regular bowel habit [1]
    - maintenance and discussion of a bowel diary [1,2]
    - information on constipation [1]
    - use of encouragement and reward systems [1], eg star charts [3]

- demonstration of proper toilet sitting position – consider support for feet in younger children [3]

References:

[1] National Institute for Health and Clinical Excellence (NICE). Constipation in children: the diagnosis and management of idiopathic childhood constipation in primary and secondary care. Clinical guideline 99. London: NICE; 2010.

[2] University of Michigan Health System. Guidelines for clinical care. Functional constipation and soiling in children. Michigan: University of Michigan Health System; 2008.

[3] Clinical Knowledge Summaries (CKS). Constipation in children. Version 1.0. Newcastle upon Tyne: CKS; 2010.

[4] World Gastroenterology Organisation (WGO). WGO practice guidelines. Constipation. 2007.

[6] Constipation Guideline Committee of the North American Society for Pediatric Gastroenterology. Evaluation and treatment of constipation in infants and children: recommendations of the North American Society for Paediatric Gastroenterology, Hepatology, and Nutrients. J Pediatr Gastroenterol Nutr 2006: 43: e1-13.

17 Consider referral to Specialist Paediatric Continence Service

Quick info:

Consider referral to the Specialist Paediatric Continence Service if there is no improvement. A full history of previous interventions should be included in the referral.

- age >1 year, within 3months
- age <1 year, within 4 weeks

Referral by Choose and Book:

- select the specialty "Children's & Adolescent Services" and "Urology" clinic type
- service name "Specialist Paediatric Continence Service

Specialist Paediatric Continence Service
The Orchard Centre
Gloucestershire Royal Hospital
Great Western Road
Gloucester
GL1 3NN
Tel: ?
Fax: ?

18 Follow-up

Quick info:

Follow up:

- should be consistent and individualised [1,3]
- other healthcare practitioners, such as health visitors and school nurses may be of great value [1,3]
- consider a schedule of [2]:
  - every 1-2 weeks during clean out and maintenance phase
  - at three monthly intervals until medication is weaned
- weaning is recommended over several months after about 4-6 months of treatment, whilst continuing with dietary and behavioural treatment [2]
- 50-70% of children recover 1-6 years after diagnosis [2]
- review adherence to treatment and assess:
  - consistency or frequency of stools
  - pain or bleeding with passing stools
  - faecal soiling

- nausea or vomiting
- abdominal pain
- change in appetite
- weight loss
- faecal or other mass

- continue treatment until stools are regular and soft for 3 months, then gradually decrease treatment regime over 6 months, whilst continuing with dietary and behavioural treatment

Reference:

[1] National Institute for Health and Clinical Excellence (NICE). Constipation in children: the diagnosis and management of idiopathic childhood constipation in primary and secondary care. Clinical guideline 99. London: NICE; 2010.

[2] University of Michigan Health System. Guidelines for clinical care. Functional constipation and soiling in children. Michigan: University of Michigan Health System; 2008.

[3] Clinical Knowledge Summaries (CKS). Constipation in children. Version 1.0. Newcastle upon Tyne: CKS; 2010.

Published: Valid until: Printed on: 14-Sep-2012

Constipation in Children - Gloucestershire DRAFT 14.09.12

Test > Test > Test

Key Dates

Published: , by
Valid until:

Evidence summary for Constipation in Children - Gloucestershire DRAFT 14.09.12

