These clinical case scenarios accompany the clinical guideline: ‘Crohn's disease: management in adults, children and young people’ (available at www.nice.org.uk/guidance/CG152).

**Issue date:** October 2012

This is a support tool for implementation of the NICE guidance.

It is not NICE guidance.

This resource has been developed to illustrate how the recommendations from ‘Crohn's disease’ (NICE clinical guideline 152) could be applied in practice. It is intended to be used to support learning and development. The scenarios are illustrative cases that align with ‘real’ patient presentations. They have been compiled with expertise from the field, to highlight the application of NICE guidance in a particular stage of a care pathway. They may not reflect all the considerations that will need to be made. The recommendations from CG152 should be regarded as the definitive recommended actions for Crohn’s disease.

Implementation of the guidance is the responsibility of local commissioners and/or providers. Commissioners and providers are reminded that it is their responsibility to implement the guidance, in their local context, in light of their duties to avoid unlawful discrimination and to have regard to promoting equality of opportunity. Nothing in the guidance should be interpreted in a way that would be inconsistent with compliance with those duties.

**What do you think?**

Did this tool meet your requirements, and did it help you put the NICE guidance into practice?

We value your opinion and are looking for ways to improve our tools. Please email your comments to implementation@nice.org.uk

If you are experiencing problems using this tool, please email implementation@nice.org.uk

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Introduction

**NICE clinical case scenarios**

Clinical case scenarios are an educational resource that can be used for individual or group learning. Each question should be considered by the individual or group before referring to the answers.

These 5 clinical case scenarios have been put together to improve your knowledge of Crohn's disease. They illustrate how the recommendations from ‘Crohn's disease’ ([NICE clinical guideline 152](https://www.nice.org.uk/guidance/CG152)) can be applied to the care of people presenting to secondary care.

The clinical case scenarios are available in two formats: this PDF, which can be used for individual learning, and a [slide set](#) that can be used for groups.

You will need to refer to the NICE clinical guideline to help you decide what steps you would need to follow to manage each case, so make sure that users have access to a copy (either online at [www.nice.org.uk/guidance/CG152](https://www.nice.org.uk/guidance/CG152) or as a printout). You may also want to refer to the [Crohn's disease NICE pathway](#).

Each case scenario includes details of the person’s initial presentation, their medical history and their clinician’s summary of the situation after examination. The clinical decisions about management are then examined using a question and answer approach. Relevant recommendations from the NICE guideline are quoted in the text (after the answer), with corresponding recommendation numbers.
**Crohn's disease**

Crohn's disease is a chronic inflammatory disease that mainly affects the gastrointestinal tract. There are currently at least 115,000 people in the UK with Crohn’s disease. The causes of Crohn’s disease are widely debated.

Typically people with Crohn’s disease have recurrent attacks, with acute exacerbations interspersed with periods of remission or less active disease. Treatment is largely directed at symptom relief rather than cure, and active treatment of acute disease (inducing remission) should be distinguished from preventing relapse (maintaining remission).

In up to a third of patients Crohn’s disease is diagnosed before the age of 21 but there is a lack of studies on treatment for children and young people. Paediatric practice is often based on extrapolation from adult studies and in the NICE guideline all recommendations relate to adults, children and young people unless otherwise specified.

Current management options for Crohn’s disease include drug therapy, attention to nutrition, smoking cessation and, in severe or chronic active disease, surgery.

The aims of drug treatment are to reduce symptoms and maintain or improve quality of life, while minimising toxicity related to drugs over both the short and long-term.

Between 50 and 80% of people with Crohn’s disease will eventually need surgery for complications of the disease such as strictures, fistula formation and bowel perforation or because of failure of medical therapy.

The NICE guideline recommends the use of some drugs for indications for which, at the time of publication, they did not have UK marketing authorisation. If these drugs are prescribed for these indications as recommended in the NICE guideline, the prescriber should follow relevant professional guidance, taking full responsibility for the decision. Informed consent should be obtained and documented.
Clinical case scenarios for inducing remission

Case scenario 1: Ben

Learning objectives
At the end of this case scenario the learner will be able to:

- describe 3 presenting features of Crohn’s disease in a child or young person
- identify how enteral nutrition can be used as a treatment option
- discuss how the physical, emotional, psychological and educational needs of children and young people with Crohn’s disease can be addressed.

Presentation
Ben has recurrent abdominal pain, weight loss and diarrhoea. He has been finding it difficult to manage at school because he finds his diarrhoea embarrassing. This has led to him missing school.

Medical history
Ben is an 8-year-old boy who presented in primary care. There are concerns about his growth, his appetite is reduced and he is losing weight. He has been referred to secondary care for investigation.

On examination
Ben is small for his age (height on the 9th centile) and quite thin (weight below the 2nd centile). He appears tired, is pale and is tender in the right iliac fossa.

Next steps for management
Blood tests show that he is anaemic with a high platelet count, low albumin level and raised inflammatory markers (ESR and C-reactive protein). Ben is referred for endoscopy, which shows patchy inflammation in the terminal ileum (the most distal part of the small intestine) – a typical appearance of Crohn’s disease.

1.1 Question
What are Ben’s treatment options?
1.1 Answer
Glucocorticosteroids.

Enteral nutrition.

Related recommendations from the NICE Crohn’s guideline
Offer monotherapy with a conventional glucocorticosteroid (prednisolone, methylprednisolone or intravenous hydrocortisone) to induce remission in people with a first presentation or a single inflammatory exacerbation of Crohn’s disease in a 12-month period. [1.2.1]

Consider enteral nutrition as an alternative to a conventional glucocorticosteroid to induce remission for:

- children in whom there is concern about growth or side effects, and
- young people in whom there is concern about growth. [1.2.2]

Next steps for management
Ben has been lacking in energy. He is also upset because he is much smaller than the other boys in his class. After a discussion about the treatment choices and side effects, Ben and his family decide to try enteral nutrition.

1.2 Question
What do Ben and his parents need to know?
1.2 Answer

Ben and his parents should be told that Ben needs to stop eating normal food for 6–8 weeks and drink only enteral nutrition and water. Ben and his family should be referred to a nurse specialist (or a dietitian) for further support and advice.

Rationale for decision

Although glucocorticosteroids are more effective at inducing remission than enteral nutrition, they have side effects, including growth suppression. So when there is concern about the side effects of glucocorticosteroids or about a child’s growth, many children, parents and clinicians prefer to try enteral nutrition first to avoid side effects of glucocorticosteroids and to promote weight gain and growth.

Related recommendations from the NICE Crohn’s guideline

Discuss treatment options and monitoring with the person with Crohn’s disease, and/or their parent or carer if appropriate, and within the multidisciplinary team. Apply the principles outlined in Patient experience in adult NHS services (NICE clinical guidance 138). [1.1.2]
Supporting information – implications of enteral nutrition for Ben, his family and his school

Find out how Ben feels about his condition and how it is affecting him. Be positive but honest about his treatment and the effect it will have on his life. Discuss the practical and social effects of not being able to eat. Ensure Ben and his family know that his dietitian and/or nurse specialist can give support and advice. They will provide a local information sheet with hints and tips on how Ben can have his treatment with minimal effects on his family’s life. The family will need to discuss Ben’s treatment with his school so he is supported to take the treatment at school and has somewhere at school to store it. Although the full course of treatment is 6–8 weeks there will be regular reviews (for example, every 2 weeks) to ensure Ben and his family are managing. Ben and his family should record his symptoms in a diary, focusing on the positives. Advise Ben that if he is having difficulty taking the treatment, his family should contact the team for advice and support.

The IBD nurse/consultant will liaise with the school to ensure that healthcare and education professionals are working together to ensure Ben receives the support he needs – Crohn’s and Colitis UK have an excellent information sheet on how teachers can support young people. Ensure Ben’s family are provided with a copy of this (link below). Suggest how Ben might explain to his peers why he has been off school. If Ben is off school for more than 6 weeks, ensure that home tuition is discussed. However, ensure Ben and his family know that he will be able to attend school and carry out his normal activities and that he should be encouraged to do so. Ensure the family know who is leading Ben’s care, how to contact them and how soon they can expect a response.

Some centres have a psychologist attached to the IBD team. Many schools have counsellors who can provide similar support for children with long-term conditions. Ben will be able to see a psychologist or a counsellor if he needs psychological/emotional support.

Information sheet – Children and young people with IBD: a guide for schools from Crohn’s and Colitis

**Next steps for management**

Enteral nutrition has not induced remission after 4 weeks. Ben has worsening abdominal pain, continuing diarrhoea and weight loss.

**1.3 Question**

What treatment should Ben be offered next?
1.3 Answer
Glucocorticosteroids.

**Rationale for decision**
There is clear evidence that conventional glucocorticosteroid treatment is the most effective option for inducing remission in Crohn’s disease.

**Next steps for management**
Ben is started on glucocorticosteroids. There is an initial improvement in his symptoms (abdominal pain and diarrhoea) but they recur when the dosage is reduced.

1.4 Question
What other treatments could be offered to Ben and his family?
1.4 Answer

Azathioprine.

Mercaptopurine.

Ben is offered azathioprine in addition to the glucocorticosteroids after a blood test to check thiopurine methyltransferase (TPMT) activity.

<table>
<thead>
<tr>
<th>Related recommendations from the NICE Crohn’s guideline</th>
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<tbody>
<tr>
<td>Consider adding azathioprine or mercaptopurine to a conventional glucocorticosteroid or budesonide to induce remission of Crohn’s disease if:</td>
</tr>
<tr>
<td>- there are two or more inflammatory exacerbations in a 12-month period, or</td>
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<tr>
<td>- the glucocorticosteroid dose cannot be tapered. [1.2.7]</td>
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Assess thiopurine methyltransferase (TPMT) activity before offering azathioprine or mercaptopurine. Do not offer azathioprine or mercaptopurine if TPMT activity is deficient (very low or absent). Consider azathioprine or mercaptopurine at a lower dose if TPMT activity is below normal but not deficient (according to local laboratory reference values). [1.2.8]

Monitor the effects of azathioprine, mercaptopurine and methotrexate as advised in the current online version of the British national formulary (BNF) or British national formulary for children (BNFC). Monitor for neutropenia in those taking azathioprine or mercaptopurine even if they have normal TPMT activity. [1.2.10].

Ensure that there are documented local safety monitoring policies and procedures (including audit) for adults, children and young people receiving treatment that needs monitoring. Nominate a member of staff to act on abnormal results and communicate with GPs and people with Crohn's disease and/or their parents or carers, if appropriate. [1.2.11].
Supporting information – monitoring requirements, use of drugs ‘off label’

At the time of publication (October 2012), advice on length of initial weekly monitoring of azathioprine for this indication in its summary of product characteristics (SPC) differs from that in BNF; SPC: for the first 8 weeks, BNF: for the first 4 weeks. The guideline assumes that prescribers will use a drug's summary of product characteristics to inform decisions made with individual patients.

Although use of these immunosuppressives to induce remission in Crohn’s disease is common in UK clinical practice, at the time of publication, azathioprine did not have UK marketing authorisation for this indication. Advice on monitoring of immunosuppressives when used for this indication can be found in the BNF/BNFC.

When prescribing a drug outside of its UK marketing authorisation, the prescriber should follow relevant professional guidance, taking full responsibility for the decision. Informed consent should be obtained and documented. See the GMC's Good practice in prescribing medicines – guidance for doctors for further information.

Next steps for management

Since the azathioprine has been added to Ben’s treatment there has been little benefit and after 4 months Ben’s symptoms are as bad as ever whenever the glucocorticosteroid dosage is reduced.

1.5 Question

What other treatments could be offered to Ben and his family?
1.5 Answer

Infliximab.

Surgery.

Rationale for decision

Ben’s quality of life is being severely affected by Crohn’s disease. He has remained at the same height for the past 18 months and he is missing a lot of school. His condition has not responded to conventional therapy with glucocorticosteroids and immunosuppressives. Surgery may be beneficial but Ben and his parents are keen to pursue other options first.

It is agreed that it would be reasonable to try infliximab but if there is no improvement to reconsider surgery depending on how growth is being affected.
Infliximab, within its licensed indication, is recommended for the treatment of people aged 6–17 years with severe active Crohn's disease whose disease has not responded to conventional therapy (including corticosteroids, immunosuppressives and primary nutrition therapy), or who are intolerant of or have contraindications to conventional therapy. The need to continue treatment should be reviewed at least every 12 months. [1.2.17]

When a person with Crohn's disease is starting infliximab or adalimumab (in line with recommendations 1.2.12, 1.2.15, 1.2.17 and 1.2.20), discuss options of:

- monotherapy with one of these drugs or

- combined therapy (either infliximab or adalimumab, combined with an immunosuppressant)

and tell the person there is uncertainty about the comparative effectiveness and long-term adverse effects of monotherapy and combined therapy. [1.2.14]

For the purposes of this guidance, severe active Crohn's disease is defined as very poor general health and one or more symptoms such as weight loss, fever, severe abdominal pain and usually frequent (3–4 or more) diarrhoeal stools daily. People with severe active Crohn's disease may or may not develop new fistulae or have extra-intestinal manifestations of the disease. This clinical definition normally, but not exclusively, corresponds to a Crohn's Disease Activity Index (CDAI) score of 300 or more, or a Harvey-Bradshaw score of 8 to 9 or above. [1.2.18]

When using the CDAI and Harvey-Bradshaw Index, healthcare professionals should take into account any physical, sensory or learning disabilities, or communication difficulties that could affect the scores and make any adjustments they consider appropriate. [1.2.19]

Treatment with infliximab or adalimumab should only be started and reviewed by clinicians with experience of TNF inhibitors and of managing Crohn's disease. [1.2.20]
Consider surgery as an alternative to medical treatment early in the course of the disease for people whose disease is limited to the distal ileum, taking into account the following:

- benefits and risks of medical treatment and surgery
- risk of recurrence after surgery

individual preferences and any personal or cultural considerations.

Record the person's views in their notes. [1.5.1]

Consider surgery early in the course of the disease or before or early in puberty for children and young people whose disease is limited to the distal ileum and who have:

- growth impairment despite optimal medical treatment and/or
- refractory disease.

Discuss treatment options within the multidisciplinary team and with the person's parent or carer and, if appropriate, the child or young person. [1.5.2]
Supporting information – implications of prescribing infliximab

Discuss the risks and benefits of infliximab treatment with Ben and his family and ensure tests are undertaken (for example, full blood count, urea and electrolytes [U/E], ESR, liver function tests, C-reactive protein, hepatitis B and C, varicella zoster virus [VZV], Epstein–Barr virus [EBV] and chest X-ray) before treatment starts. Ensure the family are aware of the schedule of treatment (that is, infusion at week 0, 2 and 6). Many centres will assess effectiveness at week 10 and then give 8-weekly maintenance infusions if the treatment has been effective. Ensure Ben and his family know that the infusion needs to be given in hospital and that this will mean a half-day attendance at a children’s day care or ambulatory care unit. The infusion will be given over 2 hours and he will be observed for 1 hour after the infusion for possible reactions to the treatment. In some centres the IBD nurse will oversee the infusion; this gives the family extra time to talk to the nurse about further educational, physical, physiological or emotional support. The dietitian will review Ben’s diet if requested by the family or IBD team. Advise the family that the pharmacist is available for questions about drug treatments. Also advise the family to seek support from support groups.

Some hospitals have infliximab screening checklists. Check whether one is available locally.

Next steps for management

After discussing the potential benefits and risks with Ben and his parents, Ben starts infliximab treatment.

At his 6-month review, Ben has unfortunately not made as much progress on infliximab as hoped for, he has continued to have abdominal pain and diarrhoea and there are still concerns about his growth. Therefore, medical treatment has failed to control Ben’s condition. A repeat upper and lower endoscopy and MRI scan shows that his disease is limited to the distal ileum.

1.6 Question

What are Ben’s treatment options?
1.6 Answer

Surgery of the distal ileum.

Rationale for decision

Ben is really fed up with feeling constantly unwell and all the drugs he has been taking. Medical treatment has failed to control his Crohn’s disease. He and his parents agree to meet the surgeon and stoma nurse. He also meets another child who has had surgery. Ben and his parents agree to go ahead with the operation. The alternative would be to keep on taking multiple drugs which have been of limited help and all have potentially serious side effects. Although this may be acceptable when the drugs are working and quality of life is good, it is difficult to justify when they are not working. Ben and his family’s decisions about surgery are recorded in his notes.

Related recommendations from the NICE Crohn’s guideline

Consider surgery as an alternative to medical treatment early in the course of the disease for people whose disease is limited to the distal ileum, taking into account the following:

- benefits and risks of medical treatment and surgery
- risk of recurrence after surgery\(^1\)
- individual preferences and any personal or cultural considerations.

Record the person’s views in their notes. [1.5.1]

Consider surgery early in the course of the disease or before or early in puberty for children and young people whose disease is limited to the distal ileum and who have:

- growth impairment despite optimal medical treatment and/or
- refractory disease.

Discuss treatment options within the multidisciplinary team and with the person’s parent or carer and, if appropriate, the child or young person. [1.5.2]

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\(^1\) Appendix N of the full guideline contains observational data on recurrence rates after surgery for Crohn’s disease limited to the distal ileum.
Supporting information – implications of surgery for Ben and his family

Ensure that Ben and his family understand why surgery is probably the best option at this stage. Ensure the family understand the need for the stoma being sited before the surgery. Discuss how surgery will improve Ben’s life, not only his growth but also his general quality of life. Discuss which team will undertake the surgery (paediatric surgical team or adult colorectal team – depending on local arrangements). Allow the family time to ask questions and, if they feel it is appropriate, get a second opinion. Provide the family with information on how to get a second opinion if they wish and reassure them that seeking a second opinion will not affect Ben’s care if they return to the team.
**Case scenario 2: Rosie**

**Learning objectives**
At the end of this case scenario the learner will be able to:

- describe 2 treatment options to manage an exacerbation of Crohn’s disease
- list 2 benefits and 2 harms of glucocorticosteroids for a 15-year-old girl
- explain 3 actions to address the transition of care from child to adult services
- identify the information needs of a young person with Crohn’s disease
- explain how drugs can be used ‘off label’ to treat Crohn’s disease.

**Presentation**
Rosie has abdominal pain and diarrhoea.

**Medical history**
Rosie is a 15-year-old girl with a 6-month history of abdominal pain and diarrhoea. She was initially thought to have irritable bowel syndrome but has now developed rectal bleeding, weight loss and amenorrhoea.

**On examination**
Rosie appears well grown but is pale and thin with diffuse abdominal tenderness.

**Next steps for management**
Blood tests reveal mild anaemia and raised inflammatory markers (ESR and C-reactive protein). Endoscopy reveals distal ileitis and extensive severe colitis. Histology shows typical features of Crohn’s disease.

Rosie is sitting her GCSEs in 6 months’ time. She needs to get her Crohn’s disease under control quickly.

**2.1 Question**
What are Rosie’s treatment options?
2.1 Answer

Conventional glucocorticosteroids.

Rationale for decision

Enteral nutrition is less effective than a glucocorticosteroid and because Rosie is well grown it is not an option. Budesonide is not appropriate because of widespread colitis. Rosie wants the best chance of being in remission to prepare for her GCSEs so she opts for a conventional glucocorticosteroid rather than a less effective 5-aminosalicylate.

Related recommendations from the NICE Crohn’s guideline

Offer monotherapy with a conventional glucocorticosteroid (prednisolone, methylprednisolone or intravenous hydrocortisone) to induce remission in people with a first presentation or a single inflammatory exacerbation of Crohn’s disease in a 12-month period. [1.2.1]

Discuss treatment options and monitoring with the person with Crohn’s disease, and/or their parent or carer if appropriate, and within the multidisciplinary team. Apply the principles outlined in Patient experience in adult NHS services (NICE clinical guidance 138). [1.1.2]

Supporting information – implications of glucocorticosteroid treatment

Discuss the benefits and risks of glucocorticosteroids. Ensure that Rosie knows that although they have a rapid mode of action, they also have a number of possibly serious side effects. These include bone thinning, with the need for calcium supplementation, possible body image issues (moon face, weight gain and acne) and difficulty concentrating because of mood swings and possible sleep disturbance. Provide written information on the benefits and risks of glucocorticosteroid treatment.

Provide a steroid information card as indicated in the British national formulary for children (BNFC).
**Next steps for management**

For the first 6 months the treatment appears to have worked, but then over the course of the next 2 months Rosie calls her IBD nurse and paediatric gastroenterology department three times because her symptoms (diarrhoea, rectal bleeding and weight loss) are recurring.

**2.2 Question**

What treatment can Rosie be offered to alleviate her symptoms?
2.2 Answer
Azathioprine.

Mercaptopurine.

After a blood test to check TPMT activity, azathioprine is added to the conventional glucocorticosteroid after discussing the potential benefits and side effects with Rosie and her parents.

Rationale for decision
Azathioprine or mercaptopurine can be added to a conventional glucocorticosteroid when there are two or more inflammatory exacerbations in a 12-month period. Azathioprine can be prescribed by a GP, but mercaptopurine tends to be used mainly in hospitals. Because it is more convenient for families to obtain prescriptions locally, azathioprine is the drug of choice in the UK.
**Related recommendations from the NICE Crohn’s guideline**

Consider adding azathioprine or mercaptopurine to a conventional glucocorticosteroid or budesonide to induce remission of Crohn’s disease if:

- there are two or more inflammatory exacerbations in a 12-month period, or
- the glucocorticosteroid dose cannot be tapered. [1.2.7]

Assess thiopurine methyltransferase (TPMT) activity before offering azathioprine or mercaptopurine. Do not offer azathioprine or mercaptopurine if TPMT activity is deficient (very low or absent). Consider azathioprine or mercaptopurine at a lower dose if TPMT activity is below normal but not deficient (according to local laboratory reference values). [1.2.8]

Monitor the effects of azathioprine, mercaptopurine and methotrexate as advised in the current online version of the British national formulary (BNF) or British national formulary for children (BNFC). Monitor for neutropenia in those taking azathioprine or mercaptopurine even if they have normal TPMT activity. [1.2.10]

Ensure that there are documented local safety monitoring policies and procedures (including audit) for adults, children and young people receiving treatment that needs monitoring. Nominate a member of staff to act on abnormal results and communicate with GPs and people with Crohn’s disease and/or their parents or carers, if appropriate. [1.2.11].
Supporting information – implications of taking immunosuppressives

Discuss the risks and benefits of immunosuppressives (azathioprine, mercaptopurine) and explain the need for regular blood tests for monitoring treatment. Ensure that Rosie and her parents know who will be reviewing the results of the blood tests and how these will be fed back. Explain how Rosie will get repeat prescriptions and give Rosie and her parents a copy of the shared care guidelines, explaining that the primary care team will also receive a copy. Ensure that a pharmacist is available to discuss differences between immunosuppressives and provide information sheets about the possible drug options.

At the time of publication, advice on length of initial weekly monitoring of azathioprine for this indication in its summary of product characteristics (SPC) differs from that in BNF; SPC – for the first 8 weeks, BNF – for the first 4 weeks. The guideline assumes that prescribers will use a drug’s summary of product characteristics to inform decisions made with individual patients.

Immunosuppressives can affect contraception. The need for effective contraception applies to any sexually active person of child-bearing age. The GDG suggest that decisions about contraception are made with individual people with Crohn’s disease based on their specific clinical and personal circumstances. Ensure that contraception is considered because Rosie is of child-bearing age.

Next steps for management

Rosie is unable to tolerate azathioprine because of severe neutropenia.

2.3 Question

What are Rosie’s other treatment options?
2.3 Answer

Methotrexate.

Rationale for decision

Methotrexate can be added to a conventional glucocorticosteroid in people who cannot tolerate azathioprine or mercaptopurine. Azathioprine is a prodrug of mercaptopurine and therefore mercaptopurine is likely to have similar side effects to azathioprine. Rosie has had severe neutropenia with azathioprine and so methotrexate with a conventional glucocorticosteroid is the preferred option now.

Related recommendations from the NICE Crohn’s guideline

Consider adding methotrexate to a conventional glucocorticosteroid or budesonide to induce remission in people who cannot tolerate azathioprine or mercaptopurine, or in whom TPMT activity is deficient if:

- there are two or more inflammatory exacerbations in a 12-month period, or
- the glucocorticosteroid dose cannot be tapered. [1.2.9]

Supporting information – implications of methotrexate treatment

Explain to Rosie that she will continue to need regular blood tests to monitor the treatment.

Although the use of methotrexate to induce remission in Crohn’s disease is common in UK clinical practice, at the time of publication (October 2012) methotrexate did not have UK marketing authorisation for this indication. Advice on monitoring of methotrexate when used for this indication can be found in the BNF/BNFC.

When prescribing a drug outside of its UK marketing authorisation, the prescriber should follow relevant professional guidance, taking full responsibility for the decision. Informed consent should be obtained and documented. See the GMC’s Good practice in prescribing medicines – guidance for doctors for further information.
Next steps for management

Rosie’s symptoms are controlled by the treatment; she has taken her GCSEs and entered 6th form to start her A-levels.

Rosie is given information about transition to adult services. She’s told that care can be taken over by the adult team at any point between the ages of 16 and 18 years. Rosie feels that she is too grown up to continue attending the paediatric clinic and is keen to be seen in the transition clinic.

Related recommendations from the NICE Crohn’s guideline

Give people with Crohn’s disease, and/or their parents or carers if appropriate, additional information on the following when appropriate:

- possible delay of growth and puberty in children and young people
- diet and nutrition
- fertility and sexual relationships
- prognosis
- side effects of their treatment
- cancer risk
- surgery
- care of young people in transition between paediatric and adult services
- contact details for support groups. [1.1.5]

Supporting information – information about the transition of care

If the person is under 16, healthcare professionals should follow the guidelines in the Department of Health’s Seeking consent: working with children.

Care of young people in transition between paediatric and adult services should be planned and managed according to the best practice guidance described in the Department of Health’s Transition: getting it right for young people.

(continued on next page)
Supporting information – information about the transition of care: continued

Adult and paediatric healthcare teams should work jointly to provide assessment and services to young people with Crohn’s disease. Diagnosis and management should be reviewed throughout the transition process, and there should be clarity about who is the lead clinician to ensure continuity of care.

Explain that transition is a process. Allow Rosie and her family time to make decisions about moving to adult services. Advise that at the next clinic you will jointly decide the next step. Commence transition 6 months after diagnosis if the young person is older than 13, or from the age of 13 years, and do not transfer care to a new team at key times (GCSEs, major changes to treatment or if the young person is not in remission). Provide the young person with a copy of the local transition policy. Explain the importance of continuing care in the secondary service (‘not falling out of service’).

Ensure the young person understands their condition, how to access support and advice and what to do if they move away from home (for example, they go to university). Ensure they know how to get prescriptions, that they will need to pay for prescriptions, and that they can seek advice from their pharmacist/local chemist.

Provide a handover to the local adult team outlining the course of the disease, investigations undertaken, treatments used and the response. Make an appointment in the transition clinic and set a date for handover of care. If available, make an appointment in a young person’s clinic.

Ensure the young person is aware of the differences between adult and paediatric services (for example, they may be seen less frequently, their GP will be more involved in their care, clinics will be busier so they should make best use of their appointment time by writing a list of questions). Ensure the young person knows that they will be more responsible for their own care (for example, they will need to contact the IBD nurse if they need advice).
**Case scenario 3: Joseph**

**Learning objectives**
At the end of this case scenario the learner will be able to:

- indicate how right-sided colonic disease may be managed
- compare treatment options for disease management when a person cannot tolerate a conventional glucocorticosteroid
- describe the information needs of the person with Crohn’s disease relating to employment.

**Presentation**
Joseph presents with an exacerbation of his Crohn’s disease, with diarrhoea and right-sided abdominal pain.

**Medical history**
Joseph is a 50-year-old man. He has had Crohn’s disease for 10 years and has been in remission for some time on no treatment. His last flare-up was 1–2 years ago. He had tonsillectomy at 11 years of age, but has had no other significant illnesses.

**On examination**
On examination Joseph is pale and has finger clubbing. He has a palpable tender abdominal mass in the right iliac fossa. Rectal examination is unremarkable apart from the presence of anal skin tags.

**Next steps for management**
Joseph is unable to tolerate conventional glucocorticosteroids because of sleep disturbance. When he previously took them he would stay awake much of the night and felt anxious to be active, cleaning the house and even decorating the living room. His partner felt that his behaviour was not normal for him.

**3.1 Question**
What are Joseph’s treatment options?
3.1 Answer
Budesonide.

Rationale for decision
Budesonide is less effective than a conventional glucocorticosteroid for inducing remission of a flare-up of Crohn’s disease, but has fewer side effects. Joseph is prescribed budesonide. He hopes that he will not experience the side effects he had with conventional glucocorticosteroids.

**Related recommendations from the NICE Crohn’s guideline**
In people with one or more of distal ileal, ileocaecal or right-sided colonic disease who decline, cannot tolerate or in whom a conventional glucocorticosteroid is contraindicated, consider budesonide for a first presentation or a single inflammatory exacerbation in a 12-month period. Explain that budesonide is less effective than a conventional glucocorticosteroid but may have fewer side effects. [1.2.3]

**Supporting information**
Suggest Joseph contacts Crohn’s and Colitis UK for support and ensure that he has up to date contact details of the IBD nurse.

**Next steps for management**
Joseph is unable to tolerate budesonide either. He has similar side effects to those he experienced with a conventional glucocorticosteroid.

3.2 Question
What are Joseph’s other treatment options?
3.2 Answer

Localised surgical resection.

5-ASA treatment. 5-ASA refers to both 5-aminosalicylates (mesalazine [including Pentasa MR, Mesren MR, Asacol MR and Octasa MR], olsalazine, balsalazide) and sulfasalazine (Salazopyridine).

Rationale for decision

Joseph decides to try 5-ASA treatment because he does not wish to undergo surgery. He understands that 5-ASA is less effective than conventional glucocorticosteroids or budesonide for inducing remission of a flare-up, but has fewer side effects than a conventional glucocorticosteroid. Joseph hopes that his disease will be controlled without sleep disturbance.

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<td>In people who decline, cannot tolerate or in whom glucocorticosteroid treatment is contraindicated, consider 5-aminosalicylate (5-ASA) treatment for a first presentation or a single inflammatory exacerbation in a 12-month period. Explain that 5-ASA is less effective than a conventional glucocorticosteroid or budesonide but may have fewer side effects than a conventional glucocorticosteroid. [1.2.4]</td>
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<table>
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<tr>
<th>Supporting information – implications of 5ASA treatment</th>
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<tbody>
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</table>
Next steps for management

Joseph is worried about the amount of time he has been having off work. Many companies are not sympathetic to employees with a chronic disease and do not support frequent attendance at hospital or GP surgeries during working hours. Joseph is aware that his company has a disciplinary policy related to sickness, which could lead to his dismissal.

3.3 Question

What support could Joseph be offered?
3.3 Answer

Ensure that Joseph has the contact details of the IBD nurse. Remind him about patient support groups such as Crohn’s and Colitis UK. Offer to send letters of support to his work’s management/occupational health team (with his knowledge and consent) so that flexible working arrangements, temporary job alterations, etc. can be explored.

Advise Joseph to seek support from his occupational health department and from his union representative to deal with any work issues.

**Supporting information – resources to help with work issues**

Give people links to support groups such as Crohn's and Colitis UK

[http://www.crohnsandcolitis.org.uk/content/groups.asp](http://www.crohnsandcolitis.org.uk/content/groups.asp)

Information sheet – Employment and IBD: a guide for employees


Information sheet – Employment and IBD: a guide for employers

Clinical case scenarios for maintaining remission

Case scenario 4: Jana

Learning objectives
At the end of this case scenario the learner will be able to:

- explain management options for a person with Crohn’s disease who is in remission
- describe 2 ways to support a person with Crohn’s disease who chooses not to have maintenance treatment
- describe how information needs relating to fertility and pregnancy can be met.

Presentation
Jana had a recent flare up of her Crohn’s disease, which was treated with glucocorticosteroids. The steroids have now been tapered effectively and her disease is in remission. Jana wants to discuss maintenance treatment.

Medical history
Jana is a 33-year-old woman who smokes. She has distal ileal disease. Before the recent flare-up her condition had been stable for 3 years.

On examination
On examination there are no abnormalities.

4.1 Question
What options for treatment and support should Jana be offered to maintain remission of her Crohn’s disease?
**4.1 Answer**

Treatment to maintain remission (azathioprine, mercaptopurine).

No treatment.

**Related recommendations from the NICE Crohn’s guideline**

Discuss with people with Crohn's disease, and/or their parents or carers if appropriate, options for managing their disease when they are in remission, including both no treatment and treatment. The discussion should include the risk of inflammatory exacerbations (with and without drug treatment) and the potential side effects of drug treatment. Record the person’s views in their notes. [1.3.1]

Do not offer a conventional glucocorticosteroid or budesonide to maintain remission. [1.3.7]

**Next steps for management**

Jana decides not to take any drug treatment to maintain remission.

**4.2 Question**

What advice should Jana be offered to support her in her decision not to take maintenance treatment?
4.2 Answer

When people choose not to receive maintenance treatment:

- discuss and agree with them, and/or their parents or carers if appropriate, plans for follow-up, including the frequency of follow-up and who they should see
- ensure they know which symptoms may suggest a relapse and should prompt a consultation with their healthcare professional (most frequently, unintended weight loss, abdominal pain, diarrhoea, general ill health)
- ensure they know how to access the healthcare system if they experience a relapse
- discuss the importance of not smoking. [1.3.3]

Related recommendations from the NICE Crohn’s guideline

As per recommendation [1.3.3] above

- Discuss with people with Crohn’s disease, and/or their parents or carers if appropriate, options for managing their disease when they are in remission, including both no treatment and treatment. The discussion should include the risk of inflammatory exacerbations (with and without drug treatment) and the potential side effects of drug treatment. Record the person’s views in their notes. [1.3.1]

Supporting information – information about smoking cessation

There appears to be clinical benefit from stopping smoking with a reduced rate of disease recurrence (see section 1.4.3 full guideline). The importance of stopping smoking should be emphasised to people with Crohn’s disease. Refer to NICE guidance; Smoking cessation services (NICE public health guidance 10; 2008) and Varenicline for smoking cessation (NICE technology appraisal guidance 123; 2007).
**Next steps for management**

Jana wants advice on starting a family and how this might affect her Crohn’s disease. She is concerned that pregnancy may cause a flare-up of her condition and is worried that her child may also develop Crohn’s disease. She is anxious to know if there is anything she can do to prevent this.

**4.3 Question**

What advice and support should Jana be offered?
4.3 Answer

Reassure Jana that she can have a normal pregnancy without an increased risk of relapse. Explain that the risk of a flare-up during pregnancy is no higher than at any other time.

She should be:

- advised that she can have a normal pregnancy without an increased risk of relapse. The risk of a flare up during pregnancy is the same as if the person is not pregnant – approximately 34% at 1 year.
- encouraged to become pregnant while well – many of the drugs used to treat people with Crohn’s disease are unlicensed, and not proven to be safe during pregnancy or breastfeeding. Clinicians should be guided by the BNF. Note methotrexate should be avoided. Drugs should be used if their potential benefit outweighs their risk. The use of any medication in pregnancy should only follow a careful and documented discussion between the person with Crohn’s disease and their doctor. It should balance the risk of disease flare-ups against the potential known risks of the relevant medication in pregnancy. The discussion should acknowledge that there is always a risk of miscarriage and of birth abnormalities in all pregnancies.
- encouraged to stop smoking because of the risks of smoking to an unborn child, and because smoking is associated with a higher relapse rate in Crohn’s disease.
- informed that genetic factors are involved in Crohn’s disease, and family members (including children) may have an increased risk of developing the disease.

Rationale for decision

Information should be given to all women of child-bearing potential, not only those who are actively considering pregnancy or those who are already pregnant. Women with Crohn’s disease usually don’t see the obstetrician before conception, so it is important that the gastroenterologist can provide this information.
Related recommendations from the NICE Crohn’s guideline

Give people with Crohn’s disease, and/or their parents or carers if appropriate, additional information on the following when appropriate:

- possible delay of growth and puberty in children
- diet and nutrition
- fertility and sexual relationships
- prognosis
- side effects of their treatment
- cancer risk
- surgery
- care of young people in transition between paediatric and adult services
- contact details for support groups. [1.1.5]

Give information about the possible effects of Crohn’s disease on pregnancy, including the potential risks and benefits of medical treatment and the possible effects of Crohn’s disease on fertility. [1.7.1]

Ensure effective communication and information-sharing across specialties (for example, primary care, obstetrics and gastroenterology) in the care of pregnant women with Crohn’s disease. [1.7.2]
Supporting information – implications of Crohn’s disease for fertility and pregnancy

Information sheet – Fertility and IBD

Pregnant women with Crohn’s disease are at higher risk regardless of whether the disease is in remission because:

- a third of women with Crohn’s disease are likely to have a flare-up during the pregnancy
- there is a higher risk of delivering a baby with a low birth weight, preterm labour and having small for gestational age babies
- GPs cannot access biological treatments and many do not use azathioprine or mercaptoprine
- there may be risks associated with some of the drugs used. The benefits and potential risks need to be assessed and discussed.

Therefore shared care is an optimal strategy for caring for pregnant women with Crohn’s disease, including a gastroenterologist, obstetrician, GP and midwife.
Case scenario 5: Max

Learning objectives
At the end of this case scenario the learner will be able to:

- describe treatment options for people with severe active Crohn’s disease
- explain what support should be offered to people with severe active Crohn’s disease
- describe the place of surgery in the management of distal ileal Crohn’s disease
- outline treatment option after surgery.

Medical history
Max is a 40-year-old married man who wants to start a family. He has Crohn’s disease limited to the distal ileum. He has had several exacerbations of his Crohn’s disease over the past year. He recently had conventional glucocorticosteroid (prednisolone) and azathioprine to induce remission after another recent flare-up and has continued to take azathioprine to maintain remission.

Crohn’s disease is causing some narrowing of his bowel. The exacerbations are inflammatory and the inflammation is causing the bowel to swell, narrowing the calibre. The narrowing is causing symptoms of partial blockage.

Max has a small business and has lost some time from work owing to the exacerbations.

On examination
There is still some tenderness in the right side of the abdomen low down, with a feeling of thickening of the tissues deep to the skin and muscle. His symptoms are starting to worsen again.
Next steps for management

There are two options. The first is to wait and see whether medical treatment reduces the inflammation. The second is to remove the narrow part of the bowel surgically.

The advantages and disadvantages of these two options are discussed fully with Max. Medical treatment might be successful but it will take some time before it is clear whether it is working. If it does work, then Max may spend a long period in good health. If it does not work, then he will continue to feel ill and his social life and business may suffer.

The narrow part of the bowel can be removed by keyhole surgery. This will have an immediate beneficial effect. Max is likely to recover well from the surgery and return to normal activity quickly, but the Crohn’s disease is likely to recur and cause further narrowing. After 5–10 years there is a 30–50% chance that Max will need another operation.

The decision to have surgery will be based on three factors: the features of the disease, Max's feelings, and social and life factors such as family life and earning capacity.

5.1 Question

If Max chooses to continue with medical treatment, what are his treatment options?
5.1 Answer

Azathioprine and a conventional glucocorticosteroid (prednisolone).

Infliximab or adalimumab (biological treatments).

Rationale for decision

With another exacerbation occurring so soon, surgery is an option that should be seriously considered. However, Max is strongly against surgery. He can either receive another short course of a conventional glucocorticosteroid (prednisolone) in addition to his azathioprine treatment, or try infliximab or adalimumab (biological treatments) for his severe active Crohn’s disease.

Related recommendations from the NICE Crohn’s guideline

Recommendations 1.2.12 and 1.2.16 are from Infliximab and adalimumab for the treatment of Crohn’s disease (NICE technology appraisal guidance 187) and should be read in conjunction with the other recommendations from the technology appraisal.

Infliximab and adalimumab, within their licensed indications, are recommended as treatment options for adults with severe active Crohn’s disease (see 1.2.18) whose disease has not responded to conventional therapy (including immunosuppressive and/or corticosteroid treatments), or who are intolerant of or have contraindications to conventional therapy. Infliximab or adalimumab should be given as a planned course of treatment until treatment failure (including the need for surgery), or until 12 months after the start of treatment, whichever is shorter. People should then have their disease reassessed (see 1.2.16) to determine whether ongoing treatment is still clinically appropriate. [1.2.12]

When a person with Crohn's disease is starting infliximab or adalimumab (in line with recommendations 1.2.12, 1.2.15, 1.2.17 and 1.2.20), discuss options of:

- monotherapy with one of these drugs or
- combined therapy (either infliximab or adalimumab, combined with an
and tell the person there is uncertainty about the comparative effectiveness and long-term adverse effects of monotherapy and combined therapy. [1.2.14]

Treatment with infliximab or adalimumab (see 1.2.12 and 1.2.15) should only be continued if there is clear evidence of ongoing active disease as determined by clinical symptoms, biological markers and investigation, including endoscopy if necessary. Specialists should discuss the risks and benefits of continued treatment with patients and consider a trial withdrawal from treatment for all patients who are in stable clinical remission. People who continue treatment with infliximab or adalimumab should have their disease reassessed at least every 12 months to determine whether ongoing treatment is still clinically appropriate. People whose disease relapses after treatment is stopped should have the option to start treatment again. [1.2.16]

Take into account the following factors when assessing options for managing a stricture:

- whether medical treatment has been optimised
- the number and extent of previous resections
- the rapidity of past recurrence (if appropriate)
- the potential for further resections
- the consequence of short bowel syndrome
- the person’s preference, and how their lifestyle and cultural background might affect management. [1.5.5]
Supporting information – implications of biological treatments

Biological treatments are given intravenously, usually at 8-weekly intervals, or subcutaneously every 2 weeks. They suppress immunity and should not be given where an abscess is present. In people who need repeated injections to control the disease and who have a stricture or a fistula (intestinal contents leaking through the skin of the abdomen), surgery is advisable. Biological treatment is expensive.

For the purposes of this guidance, severe active Crohn’s disease is defined as very poor general health and one or more symptoms such as weight loss, fever, severe abdominal pain and usually frequent (3–4 or more) diarrhoeal stools daily. People with severe active Crohn’s disease may or may not develop new fistulae or have extra-intestinal manifestations of the disease. This clinical definition normally, but not exclusively, corresponds to a Crohn’s Disease Activity Index (CDAI) score of 300 or more, or a Harvey-Bradshaw score of 8 to 9 or above. [1.2.18]

Recommendation 1.2.18 is from Infliximab and adalimumab for the treatment of Crohn’s disease (NICE technology appraisal guidance 187) and should be read in conjunction with the other recommendations from the technology appraisal.

Next steps for management

Max chooses to start infliximab treatment, but unfortunately his symptoms get worse over the next 6 months. Investigations show that the disease is still confined to the distal ileum.

5.2 Question

What are Max’s treatment options now?
5.2 Answer

Surgery.

Balloon dilation.

Rationale for decision

If medical treatment is not maintaining Max’s condition, then surgery would be the most effective way of bringing the disease under control with improvement in quality of life and return to normal function. The treatment options should be discussed with the person with Crohn’s disease and within a multidisciplinary team.

Medical treatment has not been successful in controlling the disease. The distal ileum is significantly narrowed by a stricture. Treatment of the stricture is needed. This could include removal of the stricture and joining the bowel together (resection). Alternatively, if the stricture is only a few centimetres long, then an operation to widen the channel down the middle of the bowel (strictureplasty) may be possible. Occasionally the stricture is so short that stretching it with a balloon at the time of colonoscopy (balloon dilation) may be practicable. This would save an operation but usually the stricture is too long or too inaccessible for this to be possible.

Max decides to have surgery to resolve the symptoms of obstruction, including the effects on nutrition (weight loss, weakness, anaemia, etc.) and on the bowel itself (cramping pains, swelling of the abdomen, disturbance of bowel habit and gurgling noises). Max is referred to a surgeon who discusses the treatment, reasons for surgery and the possibility of a stoma. Max is told about the possible complications and the likely improvement in his symptoms and general health. The surgeon also asks the colorectal/stoma specialist nurses to give Max further information and support.
Related recommendations from the NICE Crohn’s guideline

Consider surgery as an alternative to medical treatment early in the course of the disease for people whose disease is limited to the distal ileum, taking into account the following:

- benefits and risks of medical treatment and surgery
- risk of recurrence after surgery
- individual preferences and any personal or cultural considerations.

Record the person’s views in their notes. [1.5.1]

Consider balloon dilation particularly in people with a single stricture that is short, straight and accessible by colonoscopy. [1.5.3]

Discuss the benefits and risks of balloon dilation and surgical interventions for managing strictures with:

- the person with Crohn's disease and/or their parent or carer if appropriate and
- a surgeon and
- a gastroenterologist. [1.5.4]

Take into account the following factors when assessing options for managing a stricture:

- whether medical treatment has been optimised
- the number and extent of previous resections
- the rapidity of past recurrence (if appropriate)
- the potential for further resections
- the consequence of short bowel syndrome
- the person’s preference, and how their lifestyle and cultural background might affect management. [1.5.5]

Ensure that abdominal surgery is available for managing complications or failure of balloon dilation. [1.5.6]
Supporting information

**Indications for surgery**

People who need surgery are usually those with intestinal narrowing (stricture) or a slow perforation of the intestine resulting in an abscess or fistulation (intestinal contents leaking through the skin of the abdomen). Another indication for surgery is continued ill health despite medical treatment.

**Surgical techniques**

Surgery is performed either by opening the abdomen to gain direct access to the diseased part of the bowel or by a laparoscopic (keyhole) approach. Today about 30% of people have keyhole surgery; this figure is increasing as more surgeons trained in this technique become consultants. Keyhole surgery is less traumatic and recovery is quicker than with open surgery. However, it takes longer and if the disease is severe, open surgery may be the only way of removing the diseased bowel.

Further information can be obtained from:

- Association of Coloproctology of Great Britain and Ireland
  [www.acpgbi.org.uk](http://www.acpgbi.org.uk)
- LAPCO National Training Programme for Laparoscopic Colorectal Surgery
  [www.lapco.nhs.uk](http://www.lapco.nhs.uk)
- Surgery for Crohn’s disease (Crohn’s and Colitis UK)

**Next steps for management**

Max recovers well and is back to normal activity.

**5.3 Question**

What are Max’s options for treatments after his surgery?
5.3 Answer

No treatment.

Azathioprine or mercaptopurine.

5-ASA treatment. 5-ASA refers to both 5-aminosalicylates (mesalazine [including Pentasa MR, Mesren MR, Asacol MR and Octasa MR], olsalazine, balsalazide) and sulfasalazine (Salazopyridine).

Rationale for decision

Some people choose not to receive maintenance treatment. Other people opt for drug treatment during remission. After surgery, azathioprine and mercaptopurine are options that can be considered for people with adverse prognostic factors such as more than one resection or previously complicated or debilitating disease. 5-ASA may also be considered. Budesonide and enteral nutrition are not options for maintaining remission after surgery.

Max has had debilitating disease and because he has taken azathioprine in the past he decides to take it to maintain remission.
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<td>- discuss the importance of not smoking. [1.3.3]</td>
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Consider azathioprine or mercaptopurine to maintain remission after surgery in people with adverse prognostic factors such as:

- more than one resection, or
- previously complicated or debilitating disease (for example, abscess, involvement of adjacent structures, fistulising or penetrating disease). [1.4.1]

Consider 5-ASA treatment to maintain remission after surgery. [1.4.2]

Do not offer budesonide or enteral nutrition to maintain remission after surgery. [1.4.3]
Supporting information

People who have surgery for Crohn’s disease remain at risk of developing recurrent disease. Rates of second surgery are about 30% at 5 years and up to 50% at 10 years after the first intestinal resection.

Although performing surgery will not alter the course of Crohn’s disease, there are additional factors that might be relevant to disease recurrence after surgery (for example, bacterial overgrowth).

Although use is common in UK clinical practice, at the time of publication (October 2012) olsalazine, balsalazide and sulfasalazine did not have UK marketing authorisation for this indication. The prescriber should follow relevant professional guidance, taking full responsibility for the decision. Informed consent should be obtained and documented. See the [GMC's Good practice in prescribing medicines – guidance for doctors](https://www.gmc-uk.org/standards/guidance/prescribing) for further information. Some forms of mesalazine (Octasa MR, Mesren MR, Asacol MR) are licensed for maintaining remission in Crohn’s ileo-colitis.
Other NICE implementation tools

NICE has developed tools to help organisations implement the clinical guideline on Crohn's disease (listed below). These are available on the NICE website (www.nice.org.uk/guidance/CG152).

- Costing statement
- Baseline assessment tool
- Behind the evidence podcasts from a paediatric perspective

A practical guide to implementation, ‘How to put NICE guidance into practice: a guide to implementation for organisations’, is also available (www.nice.org.uk/usingguidance/implementationtools).
Tools from other organisations

Resources from NDR UK

These leaflets (developed by Nutrition and Dietetic Resources (NDR) UK in partnership with the British Dietetic Association Gastroenterology Specialist Group) should be given to patients with the support of a relevant healthcare professional:

- Dietary Advice for Crohn’s Disease – a general leaflet covering key themes of symptoms and foods to eat and avoid during active or remission stages of Crohn’s disease.
- A liquid diet as a treatment for active Crohn’s disease – a leaflet that can be issued by Inflammatory bowel disease teams to support patients considering moving to a liquid diet.
- Liquid Diets for treating Crohn’s disease – liquid diet options and the steps involved in making the change to this dietary option are explained.

Resources from Transition in IBD

- Inflammatory Bowel Disease Transition to Adult Health Care Guidance for Health Professionals
- Inflammatory Bowel Disease Transition to Adult Health Care Guidance for Parents
- Inflammatory Bowel Disease Transition to Adult Health Care Guidance for young people
Acknowledgements

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