NICE National Institute for Health and Care Excellence

Eyes on Evidence

expert commentary on important new evidence

Issue 66 – October 2014

This month in Eyes on Evidence

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Day-patient treatment after short inpatient care versus continued inpatient care in young people with anorexia nervosa
A randomised controlled trial in Germany finds that day-patient treatment after short inpatient care in young people with anorexia nervosa seems no less effective than continued inpatient care for weight gain and maintenance in the 12 months after admission.

Evidence Updates
NICE has recently published Evidence Updates on:

- Infection
- Crohn's disease

Eyes on Evidence survey

NICE is conducting a short online survey of subscribers' views on Eyes on Evidence to help us improve the content of this bulletin. The survey seeks information on how you use the bulletin and your satisfaction with the service, as well as details on your specialty and areas of interest. By filling in this survey, you can help to shape the future of Eyes on Evidence.

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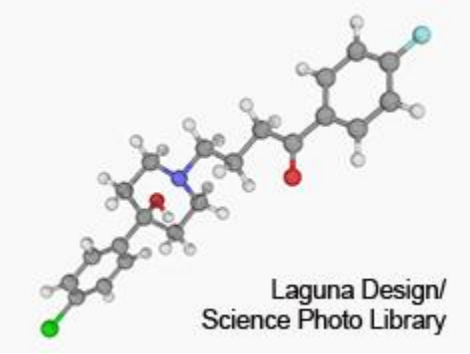
Long-acting injectable paliperidone compared with haloperidol for maintenance treatment of schizophrenia



Overview: Schizophrenia is a psychiatric disorder that typically first presents in adolescence and young adulthood. It is characterised by psychotic symptoms (for example, hallucinations, delusions and thought disorders), negative symptoms (for example, emotional blunting, poor concentration and social withdrawal), and a lack of insight by the person into their condition. With treatment, psychotic symptoms may resolve fully, recur intermittently with periods of remission between, or persist (NICE 2014).

Schizoaffective disorder occurs when, during the same illness, the person experiences a major depressive, manic or mixed episode. This occurs along with the symptoms of schizophrenia. Treatment of schizoaffective disorder is based largely on the treatment of schizophrenia (patient.co.uk 2011).

Current advice: The NICE guideline on psychosis and schizophrenia in adults recommends that clinicians should consider offering depot or long-acting injectable antipsychotic medication to people with psychosis or schizophrenia who would prefer this type of treatment after an acute episode, or where avoiding covert non-adherence (either intentional or unintentional) to antipsychotic medication is a clinical priority within the treatment plan. When initiating depot or long-acting antipsychotics, the service user's preferences and attitudes towards regular intramuscular injections and organisational procedures (for example, home visits or location of clinics) should be taken into account.

The choice of antipsychotic medication should be made by the service user and healthcare professional together, taking into account the views of the carer if the service user agrees. There should be a discussion about the likely benefits and possible side effects of each drug.

The NICE Clinical Knowledge Summary on psychosis and schizophrenia states that in general, second-generation antipsychotics are associated with fewer extrapyramidal symptoms than first-generation antipsychotics. However, second-generation antipsychotics are associated with several other important adverse effects. Choosing the most appropriate drug and formulation for an individual is more important than the drug group (first or second generation).

The NICE Pathway on psychosis and schizophrenia brings together all related NICE guidance and associated products on the condition in a set of interactive topic-based diagrams.

New evidence: The ACLAIMS study (McEvoy et al. 2014) was a US multisite, double-blind, randomised controlled trial that compared the effectiveness of the second-generation long-acting injectable antipsychotic paliperidone palmitate with the older long-acting injectable antipsychotic haloperidol decanoate. The study enrolled people aged 18–65 years with a diagnosis of schizophrenia or schizoaffective disorder who were clinically assessed to be at risk of relapse and likely to benefit from treatment with a long-acting injectable antipsychotic.

Eligible participants (n=311) were randomised to monthly intramuscular injections of either haloperidol

decanoate 25–200 mg (n=154, mean monthly dose range after the first month 67–83 mg) or paliperidone palmitate 39–234 mg (equivalent to 25–150 mg of paliperidone [UK product]; n=157, mean monthly dose range after the first month 129–169 mg) for up to 24 months. Treatment was assessed by efficacy failure (that is, inadequate control of the psychopathology of schizophrenia or schizoaffective disorder), which was indicated by psychiatric hospitalisation, crisis stabilisation, increased frequency of outpatient visits, ongoing need for oral antipsychotic medication, or clinician decision to discontinue treatment because of inadequate therapeutic benefit. Common adverse effects – including changes in weight, lipids and prolactin, as well as the incidence of extrapyramidal symptoms – were also assessed.

There was no statistically significant difference in the rate of efficacy failure in the paliperidone palmitate group (33.8%) compared with the haloperidol decanoate group (32.4%; adjusted hazard ratio=0.98, 95% confidence interval 0.65 to 1.47, p=0.93). The most common reasons for efficacy failure were psychiatric hospitalisation and clinician discontinuation of study medication.

The paliperidone palmitate and haloperidol decanoate groups were similar with respect to treatment discontinuations due to any cause (70.7% compared with 68.7%) and due to unacceptable adverse effects (10.2% compared with 9.5%). The authors suggested that the modest dose of haloperidol decanoate used in the study may account for the better-than-expected comparative tolerability.

The authors concluded that although there was no statistically significant difference between paliperidone palmitate and haloperidol decanoate in efficacy failure, a clinically meaningful difference favouring 1 of the drugs over the other cannot be ruled out because the 95% confidence intervals for the event rates were quite wide. Other limitations included that the study was terminated early, so not all patients were followed up for the planned 24 months.

Commentary: "Treatment of schizophrenia should be individualised to support adherence, promote recovery and prevent relapse. This study provides some further evidence to assist with discussions with service users and carers on available treatment options, as recommended in the current NICE clinical guideline.

"The study confirms that long-acting injectable haloperidol and paliperidone are equally effective, with treatment failure reported in a third of patients in each group, and substantiates the differences in adverse effects. Paliperidone was more likely to cause weight gain and increases in serum prolactin. Haloperidol was associated with increased need to treat akathisia and parkinsonism with medicines.

"The haloperidol doses used were comparable to current recommendations (12.5–75 mg every 4 weeks; Maudsley Prescribing Guidelines in Psychiatry 2012) and caused lower than anticipated rates of abnormal movements, parkinsonism and tardive dyskinesia. However, outside of current recommendations in the UK summary of product characteristics, a second dose of haloperidol was given on day 8, and the first 2 doses were administered in the deltoid rather than the gluteal region.

"Because the study ended sooner than planned, limitations include fewer patients recruited than the 360 proposed and a shorter monitoring period, with some patients being followed up for 12 months rather than the full 2 years. Further studies like this one that compare long-acting antipsychotics would be helpful." ***– Louise Jackson, Chief Pharmacist, North Staffordshire Combined Healthcare NHS Trust***

Study sponsorship: National Institute of Mental Health, USA.

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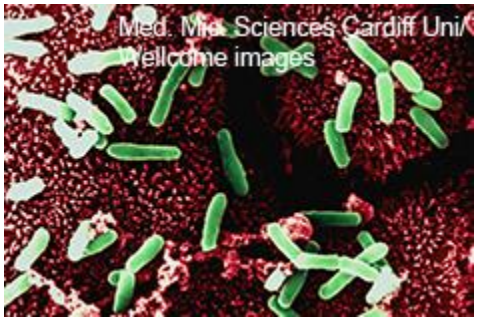
Sources of *Clostridium difficile* infection



Overview: *Clostridium difficile* is present in small numbers in the gut of healthy people. *C difficile* spores can be passed from the body and persist on surfaces for weeks or months. The resilience of the spores means that *C difficile* can be spread by people, animals, and in water or food (Hensgens et al. 2012). Other people who come into contact with infected people or contaminated surfaces can themselves become infected if they ingest these spores (Health Protection Agency, now part of Public Health England).

In people whose gut microbiome has been disturbed by antibiotics, *C difficile* can grow to levels that cause illness. Many cases of *C difficile* infection occur in places where lots of people on antibiotics are in close contact, such as in hospitals and care homes (NHS Choices 2014).

Current advice: NICE guidance on infection control in primary care and community care recommends that everyone involved in providing care should be educated about the standard principles of infection prevention and control and trained in hand decontamination and the use of personal protective equipment. Patients and carers should likewise be educated about:

- the benefits of effective hand decontamination
- the correct techniques and timing of hand decontamination
- when it is appropriate to use liquid soap and water or handrub
- the availability of hand decontamination facilities
- their role in maintaining standards of healthcare workers' hand decontamination.

NICE guidance on prevention and control of healthcare-associated infections in secondary care settings provides recommendations to help organisations prevent and control infections. Key areas of practice that underpin infection prevention and control – such as hand hygiene, antimicrobial stewardship and environmental cleanliness – are covered. Recommendations include prioritising the need for a skilled, knowledgeable and healthy workforce that delivers continuous quality improvement to minimise the risk from infections and ensuring standards of environmental cleanliness are maintained and improved beyond current national guidance.

The NICE Pathway on prevention and control of healthcare-associated infections brings together all related NICE guidance and associated products on the area in a set of interactive topic-based diagrams.

New evidence: Eyre et al. (2013) undertook a gene sequencing study to determine what proportion of *C difficile* infections in hospital patients were the result of transmission from other symptomatic patients and what proportion were caused by infectious spores from alternative sources. Faecal samples from all inpatients with diarrhoea at 4 hospitals in Oxford were tested for *C difficile* infection. Between September 2007 and March 2011, positive samples were cultured, and the cultured isolates underwent whole-genome sequencing. Isolates that differed by more than 2 single-nucleotide variants were judged to be genetically different. Data on hospital admissions, movement through the hospital, home postcode district and GP surgery were used to determine epidemiological relationships between patients whose isolates were genetically similar. Antibiotic use was not measured.

A total of 1223 faecal samples that were positive for *C difficile* infection were successfully sequenced. A comparison of 957 isolates taken from April 2008 to March 2011 with those obtained from September 2007 onwards found that 624 (65%) were not genetically similar. A total of 428 (45% overall) differed by more than 10 single-nucleotide variants, suggesting transmission from a source other than another infected inpatient.

Of the 333 patients (35% overall) whose samples were genetically similar to previous patients, 126 (38%) had ward contact with the related case, 5 (2%) were potentially linked by ward-based

contamination after the discharge or recovery of an infectious patient, 29 (9%) shared time in the same hospital but were never on the same ward, and 21 (6%) had both ward contamination and hospital-wide contact. For the remaining 152 (46%) patients, no hospital-based contact with other symptomatic patients could be established. Around 1 in 5 (21%) of these 152 people used the same general practice or lived in the same postcode district, but 120 patients (36%) had no record of any hospital or community contact with a previous genetically related case. A drop in the incidence of both genetically related and genetically similar cases of *C difficile* infection was observed during the study period, with no significant between-group difference in the reduction.

The authors concluded that many cases of *C difficile* infection arise from sources other than direct hospital or community contact with infected patients. They suggested that cases whose *C difficile* infection differed significantly from other previous cases may have been infected by asymptomatic people or by an environmental reservoir. Patients with genetically related strains who did not have hospital or community contact could also have been exposed to a common source.

Commentary: "The key new finding of this study is that a substantial proportion of new cases of *C difficile* infection do not arise from direct contact with other symptomatic cases in hospital or the community. The study also demonstrated that reductions in the incidence of genetically related *C difficile* infection were similar to reductions in genetically distinct *C difficile* infection, suggesting that interventions targeting the transition from exposure to disease, rather than those targeting just patient-to-patient transmission, likely played a significant role in reducing *C difficile* infection in this population.

"Current UK guidance emphasises the importance of infection control interventions and good antimicrobial stewardship in combination to control *C difficile* infection. This new evidence strengthens the rationale supporting this combined approach, because better antibiotic prescribing reduces the number of patients developing *C difficile* infection regardless of source of acquisition.

"More research is required to determine how cases of *C difficile* infection without direct contact with symptomatic patients acquire their infection. Although the authors speculate on the roles of environmental exposure and asymptomatic carriage, this study did not examine these factors. Finally, this study indicates that using absolute case counts to measure the effectiveness of hospital performance in controlling nosocomial *C difficile* transmission may be misleading." ***– Professor John E Coia, Director of the Scottish* C difficile *Reference Service, Department of Clinical Microbiology, Glasgow Royal Infirmary****. Professor Coia has participated in advisory boards and has delivered educational presentations at non-promotional meetings for Astellas Pharma in the last 12 months. He is currently participating in a multicentre epidemiological study on recurrent* C difficile *infection that is funded by Merck Sharp & Dohme*

Study sponsorship: National Institute for Health Research (NIHR) and the Modernising Medical Microbiology Consortium of the United Kingdom Clinical Research Collaboration (UKCRC).

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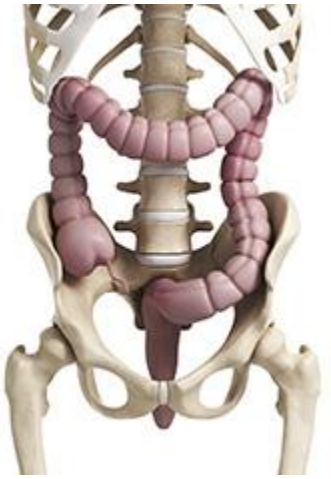
Natural history and management of sigmoid diverticulitis



Overview: Diverticula are pouches in the mucosal lining of the large intestine that push through the muscle wall of the colon (NICE 2013). Formation of diverticula is associated with a low-fibre diet, which lowers stool bulk, slows stool transit times, and increases intraluminal pressure. Increased intraluminal pressure is thought to promote herniation of the mucosa through the relatively weak regions of the colonic wall where blood vessels penetrate. The most common site for diverticula is in the lower part of the large intestine: the sigmoid colon.

Around 75% of people with diverticula do not experience any symptoms, although the pouches can cause intermittent lower abdominal pain (World Gastroenterology Organisation 2007). A single diverticulum or several diverticula can become inflamed and infected in some people, a condition known as diverticulitis. These inflamed pouches cause marked lower abdominal pain that is usually accompanied by fever and general malaise. In complicated cases, the diverticula can develop into an abscess, perforation, or fistula or cause peritonitis or sepsis.

Current advice: The World Gastroenterology Organisation practice guidelines on diverticular disease recommend that people with diverticulitis who have mild abdominal pain or tenderness and no systemic symptoms can be managed with antibiotics and a low-residue diet (a diet that restricts foods that increase bowel activity). The NICE Clinical Knowledge Summary on diverticular disease adds that paracetamol can be prescribed for pain relief, but non-steroidal anti-inflammatory drugs and opioid analgesics should be avoided.

Patients with severe signs and symptoms should be admitted to hospital and treated with intravenous antibiotics and analgesia (preferably pethidine). Some patients with complications or who have had 2 or more episodes of diverticulitis severe enough to cause hospitalisation may need urgent or elective surgical resection of the colon.

New evidence: Morris et al. (2014) conducted a systematic review of studies on the natural history and treatment of sigmoid diverticulitis in adults. Two databases were searched for studies published after 2000 on the pathophysiology, natural history, and medical and surgical management of diverticulitis. Case series with fewer than 30 patients and articles containing primary data included in another selected study were excluded. A total of 80 studies were included in the review.

Among the 25 studies that considered the pathophysiology of sigmoid diverticulitis, a number indicated a role for altered gut motility, increased pressure, and a deranged colonic microenvironment (7 studies). Chronic inflammation similar to that seen in inflammatory bowel disease may also be involved in the aetiology of the disease (5 studies). Two of the 6 studies on the natural history of sigmoid diverticulitis suggested that recurrence is rare, occurring in 13% to 36% of patients with uncomplicated diverticulitis.

A systematic review of 4 poor quality studies suggested that consumption of fibre helped to resolve symptoms of sigmoid diverticulitis. Among the other 13 studies that considered medical management, several prospective studies and systematic reviews indicated that antibiotic treatment has no benefit in the management of acute uncomplicated diverticulitis (10 studies). One study showed that probiotics reduced symptoms of sigmoid diverticulitis but not the rate of recurrence. Anti-inflammatory drugs, such as mesalazine (not licensed for this indication), appeared to reduce symptoms and recurrence of the disease (3 studies).

Two of the 35 studies on surgical treatment suggested that emergency surgery is not necessary in patients with complicated diverticulitis, abscess, free intraperitoneal air, or all 3 factors. Between 5% and 25% of patients who had surgery experienced recurrent or unresolved abdominal symptoms (7 studies). Fewer than 5% of patients whose uncomplicated diverticulitis was managed without surgery had a complicated recurrence (6 studies).

The authors suggested that antibiotic and surgical treatment may not be the best approaches for patients with sigmoid diverticulitis given the low risk of recurrence and poor success rate of surgery. However, much of the evidence analysed was of low quality and did not use standardised terminology to describe aspects of the disease, limiting comparison across studies.

Commentary: "There are few areas in general surgery associated with so many 'old wives tales' and so much unsubstantiated opinion as the management of diverticular disease: from dietary fibre and nuts through to the indications for elective surgery. This review usefully underlines how little we know about both the pathophysiology of the disease and the optimum way to manage this common problem. It should make all surgeons think about the role of surgery in both emergency and elective settings.

"Whether to manage 'acute uncomplicated diverticulitis' with antibiotics or not will remain debatable despite the evidence presented. I suspect the inpatient group being managed by surgeons is different to those seen commonly in general practice, who are often given the diagnosis of acute uncomplicated diverticulitis with reference to their history and symptoms rather than any precise diagnostic tool such as CT.

"The evidence in favour of a more conservative or minimally invasive approach to acute complicated disease is growing, and this strategy will undoubtedly be in the best interests of the patient. The review makes a point of stating how relatively rare recurrence is in order to justify the conservative measures, but it is accepted that the evidence is generally of low quality and rates of 13% to 36% should not really be described as 'rare'." ***– Professor Timothy A Rockall, Consultant Surgeon, Royal Surrey County Hospital NHS Trust, and Director of the Minimal Access Therapy Training Unit (mattu), Guildford***

Study sponsorship: No study funding declared.

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Effects of a patient handover intervention on rates of medical errors and preventable adverse events

Overview: More than 70% of patient safety incidents occur in acute or general hospitals (National Reporting and Learning System 2014). From October 2012 to September 2013, more than a million patient incidents were reported in this setting in England and Wales. The largest category was 'patient accident', accounting for almost a quarter of the incident reports. Incidents relating to 'access, admission, transfer, and discharge (including missing patient)' and 'documentation (including records, identification)' together accounted for 15% of incident reports.

Poor handover between doctors, nurses and multidisciplinary teams is a common cause of error in hospitals and a major preventable cause of patient incidents. Strategies to improve handovers include communication training (Leonard et al. 2004), mnemonics to standardise handovers (Riesenberg et al. 2009), and written or computerised tools (Li et al. 2013).

Current advice: The Department of Health has produced a list of 'never events', which are serious, largely preventable patient safety incidents that should not occur if the available preventative measures have been implemented by healthcare providers (Department of Health 2012). The list comprises 25 'never events' covering aspects of care from administrative procedures, such as misidentification of patients, to surgical errors, including incorrect site or wrong implant used.

In 2010 the National Patient Safety Agency (now part of NHS England) produced 'Medical error' – a guide for junior doctors on what to do if medical errors occur. It noted that 'medical errors are rarely caused by bad individuals, but are more often caused by bad systems'.

New evidence: Starmer et al. (2013) reported on an intervention to improve patient handover between junior doctors in 2 hospital paediatric units in the USA. Pre-intervention data were collected for 3 months (July to September 2009; n=642 admissions) before the intervention was introduced in October

2009. Post-intervention data were then collected for 3 months (November 2009 to January 2010; n=613 admissions). The 84 participating junior doctors were in their first or third year after graduation (interns or residents) and received incentives such as cookies or gift cards.

In the pre-intervention period, verbal handovers were mainly made by intern to intern and by resident to resident. No team-based approach, standardised structure or dedicated location for handovers were used. A printed document with the patient's information and a 'to-do list' was exchanged during handovers, but this document was not integrated with the patient's electronic medical record.

The intervention included a 2-hour training session to introduce the programme and discuss best practice for verbal and written handovers. Verbal handovers were standardised with a mnemonic, conducted in a team with interns and residents present, and were overseen at least once a month by a senior doctor. In 1 of the paediatric units a computerised handover tool linked to electronic medical records was also used; the other unit continued to use the printed document.

Overall medical errors reduced from 33.8 per 100 admissions (95% confidence interval [CI] 27.3 to 40.3) pre-intervention to 18.5 per 100 admissions (95% CI 14.7 to 21.9, p<0.001) after the intervention. This overall score included reductions in preventable adverse events (from 3.3 to 1.5 per 100 admissions, p=0.04), medical errors that had the potential to cause injury but failed to do so ('near misses'; from 7.3 to 3.3 per 100 admissions, p=0.002), errors that had the potential to cause injury but did not reach the patient (from 15.0 to 8.3 per 100 admissions, p<0.001), and errors with little or no potential for harm (from 8.3 to 5.2 per 100 admissions, p=0.04). Non-preventable adverse events did not change significantly (from 1.7 to 1.6 per 100, p=0.91). Drug errors accounted for 77% of all reported errors and adverse events.

After the intervention, doctors spent slightly more time with patients and families. The intervention did not increase the amount of time spent at the computer, on verbal handovers, or on preparing the handover document. The post-intervention handovers were also more likely to occur in a private and quiet location.

The intervention consisted of several evidence-based components that were bundled together, so assessing which part was the most important or whether all components were needed was not possible. The authors noted the possibility of confounding because pre-intervention data were collected in summer and the post-intervention data collection was in winter. The doctors would have gained experience over this time, and patients' characteristics could have differed. Additional limitations were associated with the study design: the observational nature meant the study could not determine causality, the lack of blinding could have introduced bias, and the results may not be generalisable outside the paediatric inpatient setting.

Commentary: "This is a good intervention study addressing an important problem. Altered working hours, shift work and increased sub-specialisation have grown in medical settings throughout the world. The problems of ensuring safe handover of information and patient plans between teams are well known. Starmer et al. (2013) have clearly demonstrated the positive benefits achieved by creating bundles of evidence-based techniques to smooth handover. Fewer errors, more time with patients and better documentation: what's not to like?

"The authors recognise the limitations of the study and call for larger scale trials. Although this recommendation is scientifically pure, this work, coming as it does on the back of other continuous improvement work related to handovers (for example, Catchpole et al. 2007), argues in favour of early adoption of evidence-based bundles across health systems in addition to further study. The adoption of bundles of care has been successful in many areas of patient safety (for example, line infections and pressure ulcers), and even a small reduction in error is worth having if you are a patient. There seems to be little downside to implementation, and certainly little risk.

"Starmer et al. (2013) and several other groups around the world will clearly continue to work on which components of the bundles are most important or perhaps superfluous, and there will undoubtedly be advances associated with both automation and developments in electronic patient records. UK groups will need to look at these bundles and, if necessary, adapt them for UK working conditions. But their introduction would be a simple and practical advance in care." ***– Professor Martin Elliott, Professor of Cardiothoracic Surgery at UCL, Professor of Physic at Gresham College, London and co-Medical Director at The Great Ormond Street Hospital for Children NHS Foundation Trust***

Study sponsorship: The Controlled Risk Insurance Company Risk Management Foundation Grant Program and the Boston Children's Hospital Program for Patient Safety and Quality Research Grant Program.

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Day-patient treatment after short inpatient care versus continued inpatient care in young people with anorexia nervosa

Overview: Anorexia nervosa is a psychiatric disorder where a person maintains a low body weight as a result of a preoccupation with weight (NICE 2009). Clinical features of anorexia nervosa include a weight at least 15% below that expected (in adults usually a BMI of less than 17.5 kg/m^2) and self-avoidance of foods thought to be fattening to achieve weight loss.

Anorexia nervosa is not very common, but the disorder is associated with serious medical morbidity and high mortality. The incidence of anorexia in the UK is estimated to be 13.6 cases per 100,000 population in women and 1.3 cases per 100,000 population in men (Micali et al. 2013). The mortality rate for people with anorexia is estimated to be 5 times higher than in the general population (Arcelus et al. 2011).

Outpatient psychological therapies are usually the first-line treatment for people with anorexia nervosa, coupled with physical monitoring. For more severe cases of anorexia nervosa, inpatient treatment may be needed – but it is expensive. The cost of inpatient care of young people with anorexia nervosa in the UK has been estimated at £34,500 per patient over 2 years (Byford et al. 2007). In 2005-6, the mean cost per day for inpatient child and adolescent psychiatric services was £356 per patient (Royal College of Psychiatrists 2008), with daily inpatient costs thought to have increased since this period. Day-patient treatment is less costly and could ease the transition from hospital to home.

Current advice: The NICE guideline on eating disorders (currently being updated) recommends that most people with anorexia nervosa should be managed on an outpatient basis with psychological treatment (with physical monitoring). Therapies to be considered for the psychological treatment of anorexia nervosa include cognitive analytic therapy, cognitive behaviour therapy, interpersonal psychotherapy, focal psychodynamic therapy and family interventions focused explicitly on eating disorders. Family interventions that directly address the eating disorder should be offered to children and adolescents with anorexia nervosa. Outpatient psychological treatment for anorexia nervosa should normally be of at least 6 months' duration.

If during outpatient psychological treatment there is significant deterioration, or the completion of an adequate course of outpatient psychological treatment does not lead to any significant improvement, more intensive forms of treatment (for example, a move from individual therapy to combined individual and family work; or day-care or inpatient care) should be considered.

The NICE Pathway on eating disorders brings together all related NICE guidance and associated products on the condition in a set of interactive topic-based diagrams.

New evidence: A randomised controlled trial by Herpertz-Dahlmann et al. (2014) assessed the safety and efficacy of day-patient treatment after short inpatient care versus continued inpatient treatment in young people with anorexia nervosa. Female patients aged 11–18 years, with a first hospital admission for anorexia nervosa and a BMI below the 10th percentile, were recruited from 6 centres in Germany. Exclusion criteria were: organic brain disease, psychotic or bipolar disorder, substance dependence or abuse, serious self-harming, an IQ below 85, and living more than 60 minutes from the treating department. All patients first received 3 weeks of inpatient care for observation or stabilisation, and were then randomised to either continued inpatient treatment (n=85) or day-patient care (n=87). The treatment programme (based on weight restoration, nutritional counselling, cognitive-behavioural

therapy, and family therapy) was identical in both groups. Patients were discharged after maintaining their target weight (between the 15th and 20th age-adjusted percentiles) for 2 weeks.

At 12-month follow up, mean BMI in continuing inpatients had increased by 2.7 kg/m² (from 15.1 to 17.8 kg/m²), and among day patients by 3.2 kg/m² (from 14.9 to 18.1 kg/m²). Based on a clinically determined non-inferiority margin for a difference in change in BMI of 0.75 kg/m² at 12 months, day-patient care was not inferior to inpatient treatment (mean difference=0.46 kg/m², 95% confidence interval [CI] –0.11 to 1.02 kg/m², p<0.0001; adjusted for age, duration of illness and baseline BMI). Eight treatment-related serious adverse events occurred in the inpatient group (3 related to suicidal ideation) and 7 in the day-patient group (2 related to suicidal ideation).

The authors concluded that day-patient treatment after short inpatient care in young people with anorexia nervosa seems no less effective than continued inpatient care for weight gain and maintenance in the 12 months after admission. Study limitations included that 16 people assigned to the day-patient group transferred to the inpatient group (either voluntarily or for medical reasons) – although a per-protocol analysis did not considerably alter findings. Additionally, the results may apply to only young people with a first hospital admission for anorexia nervosa rather than those with more chronic illness.

Commentary: "This elegant German study compares day-patient treatment with continued inpatient care in young people with anorexia nervosa, but its findings may have limited applicability to the UK.

"NICE already recommends that patients with anorexia are treated in non-residential settings whenever feasible. Gowers et al. (2007) demonstrated lack of harm and potential benefits of this approach. For adolescent anorexia nervosa, NICE recommends the 'Maudsley model' of family-based treatment (Hughes et al. 2014). Implementation studies of family-based treatment demonstrate better and more economical outcomes than those reported by Herpertz-Dahlmann et al. (2014). In addition, this study measured day-patient treatment against current German treatment as usual, rather than against family-based treatment: the treatment believed to be most effective in this population.

"In flexible UK practice, inpatients often go home at weekends, and day patients attend their own schools or spend variable times in clinic. In this study, the difference between the two groups was spending evenings and overnights at home, in line with UK practice. This approach gave families responsibility for refeeding their child in a naturalistic setting. What a pity the study did not include reflections from patients and carers to provide qualitative feedback on the acceptability of this approach.

"Lastly, this study calculated the economic benefits for providing day-patient treatment, but on sites already containing specialist units. Establishing new sites is costly. Remote and rural areas lack super-specialist staff or minimum patient numbers, and demand excessive travel times." ***– Dr Jane Morris, Consultant Psychiatrist, The Eden Unit, Royal Cornhill Hospital, Aberdeen***

Study sponsorship: German Ministry for Education and Research.

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Evidence Updates

NICE has recently published Evidence Updates on:

- Infection
- Crohn's disease

These Evidence Updates highlight and provide commentary on selected new evidence published since the NICE guidance was issued. For each topic, the evidence was considered by an Evidence Update Advisory Group (EUAG), a panel of experts, most of whom were involved in developing the original NICE guidance.

The Evidence Update on infection was published by NICE in September 2014. It includes commentary from the EUAG on 6 new articles (relevant to NICE clinical guideline 139), covering the following topics:

- Use of personal protective equipment
- Maintenance of catheters and other indwelling devices
- Education of patients, their carers and healthcare workers
- Vascular access device site care
- General principles for management of vascular access devices

The Evidence Update on Crohn's disease was published by NICE in September 2014. It includes commentary from the EUAG on 14 new articles (relevant to NICE clinical guideline 152), covering the following topics:

- Parents' needs for information about tumour necrosis factor (TNF) inhibitors
- Inducing remission in Crohn's disease with infliximab combination therapy and naltrexone
- Adalimumab after failure of infliximab
- Opportunistic infections associated with TNF inhibitors
- Antibodies against TNF inhibitors
- Adverse events associated with thiopurine treatment
- Maintenance treatment with adalimumab and after surgery
- Risk factors for osteoporosis
- Birth outcomes after TNF inhibitor and thiopurine treatment

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Eyes on Evidence helps contextualise important new evidence, highlighting areas that could signal a change in clinical practice. It does not constitute formal NICE guidance. The commentaries included are the opinions of contributors and do not necessarily reflect the views of NICE.

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