



2018 surveillance of diarrhoea and vomiting caused by gastroenteritis in under 5s: diagnosis and management (NICE guideline CG84)

Surveillance report

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Surveillance decision

We will not update the guideline on diarrhoea and vomiting caused by gastroenteritis in under 5s: diagnosis and management (NICE guideline CG84).

Reasons for the decision

New evidence was identified for antidiarrhoeal medication and non-lactose-containing milk; however, it was inconclusive. Evidence identified for anti-emetic medication suggested it may also cause an increase in diarrhoea and is not currently licensed for use in the UK for children with gastroenteritis. Evidence identified for diluted fruit juice for rehydration was limited to 1 type and brand of juice and as such is insufficient to impact the guideline recommendations at this time.

Overview of 2018 surveillance methods

NICE's surveillance team checked whether recommendations in [diarrhoea and vomiting caused by gastroenteritis in under 5s: diagnosis and management](#) (NICE guideline CG84) remain up to date.

The 2018 surveillance followed the static list review process, consisting of:

- Feedback from topic experts via a questionnaire.
- A search for new or updated Cochrane reviews.
- A search for ongoing research.
- Examining related NICE guidance and quality standards and National Institute for Health Research (NIHR) signals.
- Examining the NICE event tracker for relevant ongoing and published events.
- Consideration of evidence from previous surveillance.
- Consulting on the decision with stakeholders.

For further details about the process and the possible update decisions that are available, see [ensuring that published guidelines are current and accurate](#) in developing NICE guidelines: the manual.

Evidence considered in surveillance

Cochrane reviews

Using the static list process, we searched for new Cochrane reviews related to the whole guideline. We found 2 relevant Cochrane reviews published between 1 January 2008 and 1 June 2018.

One Cochrane review ([MacGillivray et al. 2013](#)) found that non-lactose-containing milk reduced the duration of diarrhoea in children with gastroenteritis by approximately 18 hours and reduced treatment failure with oral rehydration solution by around half compared with lactose-containing milk. However, evidence from 3 randomised controlled trials (RCTs) from the full guideline found no statistically significant benefit with non-lactose-containing milk. Because the evidence found is conflicting, this area will be considered again at the next review.

One Cochrane review ([Lazzerini et al. 2016](#)) found evidence relating to oral zinc for the treatment of acute and persistent diarrhoea in children, reducing duration of symptoms by approximately half

a day. A topic expert felt that this represents an additional cost burden to the NHS and as such, further evidence would be needed in this area, particularly regarding the potential for oral zinc to cause an increase in vomiting.

Previous surveillance

Three-year surveillance was carried out in 2012. New evidence was found in the areas of antidiarrhoeal agents and probiotics; however, this was considered insufficient to update at the time. The guideline was added to the static list in 2014.

Related NICE guidance

Since the publication of NICE guideline CG84 in April 2009, there have been related NICE guidelines published, which should be considered for cross-referencing to – these are detailed in the [editorial amendments section](#).

Ongoing research

Five studies were assessed as having the potential to change recommendations; therefore, we plan to check the publication status regularly, and evaluate the impact of the results on current recommendations as quickly as possible. These studies are:

- [Clinical study to evaluate the efficacy of probiotic product Bio-Kult Infantis as concomitant treatment of acute infectious diarrhoea in children](#)
- [Double blind clinical trial, controlled, randomized, phase IV, comparative of the effect of oral serum and racecadotril versus oral serum and placebo in children with acute diarrhoea](#)
- [Oral ondansetron vs domperidone for symptomatic treatment of vomiting during acute gastroenteritis in children: multicentre randomized controlled trial](#)
- [The effect of oral ondansetron on referral rate in children aged 6 months to 6 years attending in primary care out-of-hours service with acute gastroenteritis and vomiting](#)
- [The added effect of oral ondansetron to care-as-usual on persisting vomiting in children aged 6 months to 6 years, presenting at primary care out-of-hours service with acute gastroenteritis and concomitant vomiting](#)

Views of topic experts

We sent questionnaires to 13 topic experts and received 7 responses. The topic experts either:

- participated in the guideline committee who developed the guideline
- were recruited to the NICE Centre for Guidelines Expert Advisers Panel to represent their specialty.

Overall, 4 felt that the guideline should be updated, 3 did not. One topic expert who felt that the guideline should be updated, highlighted a systematic review ([Falszewska et al. 2018](#)) about clinical dehydration assessment scales. The guideline currently uses a list of signs and symptoms to identify dehydration, as such further evidence in this area would be required before a change could be made.

One topic expert suggested that any reference to *Escherichia coli* (*E. coli* O157) should be replaced with verotoxin-producing *E. coli* (VTEC). We consulted with Public Health England (PHE) following limited feedback from stakeholders. PHE highlighted that although *E. coli* O157:H7 is a frequent cause of severe illness, other pathogenic non-O157-shiga toxin-producing *E. coli* (STEC) have been shown to cause the same range of symptoms as *E. coli* O157:H7, ranging from mild, non-bloody diarrhoea to more significant health outcomes, including haemolytic uraemic syndrome and death, especially in the young, the elderly or immunocompromised individuals. We have agreed to revise this recommendation in line with the PHE terminology on this subject.

Two topic experts suggested that ondansetron could be added to the recommendations because no anti-emetics are currently mentioned; however, the evidence found through surveillance continues to find an association between ondansetron and increased diarrhoea. Further evidence in this area is required before an impact on the guideline can be determined.

One topic expert highlighted a systematic review ([Gordon and Akobeng 2016](#)) regarding the effect of racecadotril on acute diarrhoea. A second topic expert highlighted European guidelines ([Guarino et al. 2014](#)), which currently recommend racecadotril. However, another topic expert commented that it represents an additional cost burden to the NHS that is not currently justified in the UK. The evidence found for racecadotril was inconclusive in terms of benefits as a treatment. We are monitoring 1 ongoing trial relating to racecadotril and will consider the results when available.

Views of stakeholders

Stakeholders are consulted on all surveillance decisions except if the whole guideline will be updated and replaced. Because this surveillance decision was to not update the guideline, we consulted on the decision.

Five stakeholders responded to our consultation; of these, 2 represented government

organisations and 3 were professional bodies. One stakeholder agreed with the decision not to update the guideline, 1 disagreed and 3 did not state a response. One stakeholder highlighted the importance of viral diagnostics, which will be addressed by adding a cross-referral from the overview page of NICE guideline CG84 to the NICE diagnostics guidance on [integrated multiplex PCR tests for identifying gastrointestinal pathogens in people with suspected gastroenteritis \(xTAG Gastrointestinal Pathogen Panel, FilmArray GI Panel and Faecal Pathogens B assay\)](#), as detailed in the [editorial amendments section](#).

Other sources of information

An RCT ([Freedman et al. 2016](#)) was identified from the topic issue log, which found that diluted apple juice was non-inferior to electrolyte maintenance solution in children aged 6 to 60 months with mild gastroenteritis and minimal dehydration. Because this RCT only looked at 1 brand/type of fruit juice, further evidence would be required before the recommendations on fruit juice would be amended.

See [appendix A](#) for full details of stakeholders' comments and our responses.

See [ensuring that published guidelines are current and accurate](#) in developing NICE guidelines: the manual for more details on our consultation processes.

Equalities

No equalities issues were identified during the surveillance process.

Editorial amendments

During surveillance of the guideline, we identified the following points in the guideline that should be amended:

- We will add the following cross-referral to the NICE guideline CG84 overview page: NICE has also produced diagnostics guidance on [integrated multiplex PCR tests for identifying gastrointestinal pathogens in people with suspected gastroenteritis \(xTAG Gastrointestinal Pathogen Panel, FilmArray GI Panel and Faecal Pathogens B assay\)](#).
- The section on patient-centred care will be replaced by the 'informed decisions' text box, which states:

People have the right to be involved in discussions and make informed decisions about their care, as described in [your care](#).

[Making decisions using NICE guidelines](#) explains how we use words to show the strength (or certainty) of our recommendations, and has information about professional guidelines, standards and laws (including on consent and mental capacity), and safeguarding.

- Recommendation 1.1.2.6 will be updated to the following: In children with shiga-toxin-producing *Escherichia coli* (STEC) infection, seek specialist advice on monitoring for haemolytic uraemic syndrome.
- Recommendation 1.8.2.1, footnote 6: the link to 'Health Protection Agency (2006) Guidance on Infection Control In Schools and other Child Care Settings' will be removed and replaced with the PHE document on [Health protection in schools and other childcare facilities](#), because this guidance has been updated and the name has changed.

Overall decision

After considering all evidence and other intelligence and the impact on current recommendations, we decided that no update is necessary.

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