

# Gastro-oesophageal reflux in children and young people

Quality standard

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This standard is based on NG1.

This standard should be read in conjunction with QS98, QS96, QS64, QS44, QS38, QS37, QS36 and QS19.

## Introduction

This quality standard covers managing symptoms of gastro-oesophageal reflux (GOR) and recognising, diagnosing and managing gastro-oesophageal reflux disease (GORD) in children and young people under 18. It does not cover dyspepsia and GORD in adults. This is covered in NICE quality standard 96 ([Dyspepsia and gastro-oesophageal reflux disease in adults: investigation and management](#) [2015]). For more information see the [topic overview](#).

### *Why this quality standard is needed*

GOR is a normal physiological process that usually happens after eating in healthy infants, children, young people and adults. In contrast, GORD starts when symptoms of reflux become severe and need medical treatment. GOR is more common in infants than in older children and young people, and presents as effortless regurgitation of feeds.

GOR and GORD affect many children and families in the UK, who commonly seek medical advice. In clinical practice, it may be difficult to differentiate between GOR and GORD, and both terms are used by healthcare professionals and families. There is no simple, reliable and accurate diagnostic test to confirm whether the condition is GOR or GORD, and this affects research and clinical decisions. Furthermore, the term GORD covers a number of specific conditions that have different effects and present in different ways. This makes it difficult to identify GORD and to estimate its real prevalence.

The quality standard is expected to contribute to improvements in the following outcomes:

- Health-related quality of life.
- Change in symptoms and signs, for example:
  - volume or frequency of regurgitation
  - crying and distress

- - nutritional status.
- Investigative findings, including healing of erosive oesophagitis.
- Adverse events of interventions (diagnostic or treatment).
- Unnecessary prescribing.

### *How this quality standard supports delivery of outcome frameworks*

NICE quality standards are a concise set of prioritised statements designed to drive measurable improvements in the 3 dimensions of quality – patient safety, patient experience and clinical effectiveness – for a particular area of health or care. They are derived from high-quality guidance, such as that from NICE or other sources accredited by NICE. This quality standard, in conjunction with the guidance on which it is based, should contribute to the improvements outlined in the following 2 outcomes frameworks published by the Department of Health:

- [NHS Outcomes Framework 2015–16](#)
- [Public Health Outcomes Framework 2013–16](#).

Tables 1 and 2 show the outcomes, overarching indicators and improvement areas from the frameworks that the quality standard could contribute to achieving.

**Table 1 [NHS Outcomes Framework 2015–16](#)**

| Domain                                                           | Overarching indicators and improvement areas                                                                                                                                                                                                                                                                                                                       |
|------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2 Enhancing quality of life for people with long-term conditions | <p><b><i>Improvement areas</i></b></p> <p><b>Reducing time spent in hospital by people with long-term conditions</b></p> <p><b>Ensuring people feel supported to manage their condition</b></p> <p>2.1 Proportion of people feeling supported to manage their condition</p> <p>2.3i Unplanned hospitalisation for chronic ambulatory care sensitive conditions</p> |

|                                                                             |                                                                                                               |
|-----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| 3 Helping people to recover from episodes of ill health or following injury | <p><b>Improvement areas</b></p> <p>3.1i Total health gain as assessed by patients for elective procedures</p> |
|-----------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|

**Table 2** Public health outcomes framework for England, 2013–16

| Domain                                                        | Objectives and indicators                                                                                                                                                                                                                |
|---------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2 Health improvement                                          | <p><b>Objective</b></p> <p>People are helped to live healthy lifestyles, make healthy choices and reduce health inequalities</p> <p><b>Indicators</b></p> <p>2.2 Breastfeeding</p> <p>2.5 Child development at 2–2½ years</p>            |
| 4 Healthcare public health and preventing premature mortality | <p><b>Objective</b></p> <p>Reduced numbers of people living with preventable ill health and people dying prematurely, whilst reducing the gap between communities</p> <p><b>Indicators</b></p> <p>4.2 Tooth decay in children aged 5</p> |

### *Coordinated services*

The quality standard for GORD in children and young people specifies that services should be commissioned from and coordinated across all relevant agencies encompassing the whole care pathway for children and young people with reflux and GORD. A person-centred, integrated approach to providing services is fundamental to delivering high-quality care to children and young people with reflux and GORD.

The Health and Social Care Act 2012 sets out a clear expectation that the care system should consider NICE quality standards in planning and delivering services, as part of a general duty to secure continuous improvement in quality. Commissioners and providers of health and social care should refer to the library of NICE quality standards when designing high-quality services. Other quality standards that should also be considered when choosing, commissioning or providing a high-quality reflux and GORD service are listed in [related quality standards](#).

## **Training and competencies**

The quality standard should be read in the context of national and local guidelines on training and competencies. All health and public health practitioners involved in assessing, caring for and treating children and young people with GOR and GORD should have sufficient and appropriate training and competencies to deliver the actions and interventions described in the quality standard. Quality statements on staff training and competency are not usually included in quality standards. However, recommendations in the development source on specific types of training for the topic that exceed standard professional training are considered during quality statement development.

## **Role of families and carers**

Quality standards recognise the important role families and carers have in supporting children and young people with GOR and GORD. Quality standards also recognise the anxiety parents and carers feel when children and young people experience the symptoms. Healthcare professionals should ensure that parents and carers are reassured and, when appropriate, involved in the decision-making process on ways to improve the symptoms of GOR and GORD.

## List of quality statements

Statement 1. Parents and carers attending postnatal appointments are given information about gastro-oesophageal reflux (GOR) in infants.

Statement 2. Breast-fed infants with frequent regurgitation associated with marked distress have their feeding assessed.

Statement 3. Formula-fed infants with frequent regurgitation associated with marked distress have their symptoms managed using a stepped-care approach.

Statement 4. Infants with frequent regurgitation associated with marked distress have a trial of alginate therapy if first-line management is unsuccessful.

Statement 5. Infants and children are not investigated or treated for gastro-oesophageal reflux disease (GORD) if they have no visible regurgitation and only 1 associated symptom.

Statement 6. Infants and children are not prescribed acid-suppressing drugs if visible regurgitation is an isolated symptom.

Statement 7. Infants, children and young people do not have an upper gastrointestinal (GI) contrast study to diagnose or assess the severity of gastro-oesophageal reflux disease (GORD).

Statement 8. Infants, children and young people are not prescribed domperidone, metoclopramide or erythromycin to manage gastro-oesophageal reflux (GOR) or gastro-oesophageal reflux disease (GORD) without specialist paediatric advice.

Statement 9. Infants, children and young people with vomiting or regurgitation and any 'red flag' symptoms are referred to specialist care with investigations as appropriate.

## Quality statement 1: Information about gastro-oesophageal reflux (GOR) in infants

### *Quality statement*

Parents and carers attending postnatal appointments are given information about gastro-oesophageal reflux (GOR) in infants.

### *Rationale*

Regurgitation of feeds in infants can cause anxiety for parents and carers. Providing information about GOR can reassure parents and carers that, in well infants, effortless regurgitation of feeds is a common and normal occurrence that affects at least 40% of infants and is likely to resolve before the infant is 1.

### *Quality measures*

#### **Structure**

Evidence of local arrangements to ensure that parents and carers attending postnatal appointments are given information about GOR in infants.

*Data source:* Local data collection.

#### **Process**

Proportion of infants aged 8 weeks and under whose parents or carers received information about GOR during 1 of the postnatal appointments.

Numerator – the number in the denominator whose parents received information about GOR during 1 of the postnatal appointments.

Denominator – the number of infants aged 8 weeks and under who had at least 1 postnatal appointment.

*Data source:* Local data collection.

## Outcome

a) Parental anxiety around infant GOR.

*Data source:* Local data collection.

b) GP visits regarding GOR.

*Data source:* Local data collection.

### *What the quality statement means for service providers, healthcare professionals and commissioners*

Service providers (community care trusts, secondary care trusts, specialised women's/maternity providers) ensure that postnatal appointments include providing information about GOR in infants.

Healthcare professionals (health visitors, midwives, paediatric nurses or GPs) give information to parents and carers attending postnatal appointments about GOR in infants.

Commissioners (clinical commissioning groups, local authorities) ensure that postnatal appointments are commissioned to provide information about GOR in infants.

### *What the quality statement means for parents and carers attending antenatal and postnatal appointments*

Parents and carers attending postnatal appointments receive information about reflux (regurgitating, bringing up or vomiting feeds) in babies.

## Source guidance

- [Gastro-oesophageal reflux disease in children and young people](#) (2015) NICE guideline NG1, recommendation 1.1.3 (key priority for implementation) and 1.1.4

## Definitions of terms used in this quality statement

### Gastro-oesophageal reflux (GOR)

GOR is the passage of gastric contents into the oesophagus. It is a common physiological event that can happen at all ages from infancy to old age, and is often asymptomatic. It occurs more frequently

after feeds/meals. In many infants, reflux is associated with a tendency to 'overt regurgitation' – the visible regurgitation of feeds.

[[Gastro-oesophageal reflux disease in children and young people \(2015\) NICE guideline NG1](#)]

## Information for people attending postnatal appointments

Information should explain that in well infants, effortless regurgitation of feeds:

- is very common (it affects at least 40% of infants)
- usually begins before the infant is 8 weeks old
- may be frequent (5% of infants affected have 6 or more episodes each day)
- usually becomes less frequent with time (it resolves in 90% of affected infants before they are 1 year old)
- does not usually need further investigation or treatment.

[[Gastro-oesophageal reflux disease in children and young people \(2015\) NICE guideline NG1](#), recommendation 1.1.3 (key priority for implementation) and 1.1.4]

## *Equality and diversity considerations*

This statement relies on parents and carers understanding the information given to them. Healthcare professionals may need to provide support for people who have difficulties understanding the information.

## Quality statement 2: Breast-fed infants – feeding assessment

### *Quality statement*

Breast-fed infants with frequent regurgitation associated with marked distress have their feeding assessed.

### *Rationale*

A breastfeeding assessment should be the first step in supporting parents and carers with managing frequent regurgitation of feeds associated with marked distress. Correcting the breastfeeding technique for breast-fed infants (for example, positioning and attachment) can improve or eliminate the symptoms.

### *Quality measures*

#### **Structure**

Evidence of local arrangements to ensure that breast-fed infants with frequent regurgitation associated with marked distress have their feeding assessed before other treatments are offered.

*Data source:* Local data collection.

#### **Process**

Proportion of breast-fed infants with frequent regurgitation associated with marked distress who have a breastfeeding assessment.

Numerator – number in the denominator who have a breastfeeding assessment.

Denominator – number of breast-fed infants presenting with frequent regurgitation associated with marked distress.

*Data source:* Local data collection.

#### **Outcome**

Breast-fed infants with frequent regurgitation associated with marked distress presenting in healthcare settings.

*Data source:* Local data collection.

### *What the quality statement means for service providers, healthcare professionals and commissioners*

**Service providers** (community care providers, secondary care, women's trusts) ensure that healthcare professionals carry out a breastfeeding assessment and offer advice if breast-fed infants have frequent regurgitation associated with marked distress, before other treatments are offered.

**Healthcare professionals** (health visitors, midwives, paediatric nurses or GPs) carry out a breastfeeding assessment and offer advice if breast-fed infants have frequent regurgitation associated with marked distress, before they offer any other treatments.

**Commissioners** (clinical commissioning groups, local authorities) ensure that services they commission support parents and carers with guidance and assessments on infant feeding technique.

### *What the quality statement means for breastfeeding mothers*

**Breastfeeding mothers** receive support and advice about correct breastfeeding techniques for breast-fed babies with reflux (regurgitating, bringing up or vomiting feeds) who are very distressed, for example, if they cry inconsolably and seem to be in pain.

### *Source guidance*

- [Gastro-oesophageal reflux disease in children and young people \(2015\) NICE guideline NG1, recommendation 1.2.2](#)

### *Definitions of terms used in this quality statement*

#### **Breastfeeding assessment**

Breastfeeding assessments should be carried out by a health professional with appropriate expertise and training, for example a midwife, health visitor, breastfeeding specialist or paediatric nurse.

[[Gastro-oesophageal reflux disease in children and young people \(2015\) NICE guideline NG1, recommendation 1.2.2](#)]

## Marked distress

There is very limited evidence, and no objective or widely accepted clinical definition, for what constitutes 'marked distress' in infants and children who are unable to adequately communicate (expressively) their sensory emotions. [NICE guideline NG1](#) describes 'marked distress' as an outward demonstration of pain or unhappiness that is outside what is considered to be the normal range by an appropriately trained, competent healthcare professional, based on a thorough assessment. This assessment should include a careful analysis of the description offered by the parents or carers in the clinical context of the individual child.

[[Gastro-oesophageal reflux disease in children and young people \(2015\) NICE guideline NG1](#)]

## Regurgitation

The voluntary or involuntary movement of part or all of the stomach contents up the oesophagus at least as far as the mouth, and often emerging from the mouth. Regurgitation is, in principle, clinically observable, so is an overt phenomenon, although lesser degrees of regurgitation into the mouth might be overlooked.

[[Gastro-oesophageal reflux disease in children and young people \(2015\) NICE full guideline NG1](#)]

## *Equality and diversity considerations*

Breastfeeding assessments should be carried out in a culturally appropriate manner and any messages communicated in a sensitive way.

## Quality statement 3: Formula-fed infants – stepped-care approach

### *Quality statement*

Formula-fed infants with frequent regurgitation associated with marked distress have their symptoms managed using a stepped-care approach.

### *Rationale*

A stepped-care approach enables parents and carers of formula-fed infants to try a sequence of easy modifications to the feeding practice that can help them manage frequent regurgitation with marked distress.

### *Quality measures*

#### **Structure**

Evidence of local arrangements to ensure that formula-fed infants with frequent regurgitation associated with marked distress have their symptoms managed using a stepped-care approach.

*Data source:* Local data collection.

#### **Process**

a) Proportion of formula-fed infants with frequent regurgitation associated with marked distress that have their feeding history reviewed.

Numerator – number in the denominator who have their feeding history reviewed.

Denominator – number of formula-fed infants presenting with frequent regurgitation associated with marked distress.

*Data source:* Local data collection.

b) Proportion of formula-fed infants with frequent regurgitation associated with marked distress that had excessive feed volumes reduced.

Numerator – number in the denominator whose excessive feed volumes were reduced.

Denominator – number of formula-fed infants presenting with frequent regurgitation associated with marked distress who receive excessive feed volumes.

*Data source:* Local data collection.

a) Proportion of formula-fed infants with frequent regurgitation associated with marked distress who received a trial of smaller and more frequent feeds.

Numerator – number in the denominator who received a trial of smaller and more frequent feeds.

Denominator – number of formula-fed infants presenting with frequent regurgitation associated with marked distress receiving appropriate total daily amount of milk.

*Data source:* Local data collection.

b) Proportion of formula-fed infants with frequent regurgitation associated with marked distress given a trial of thickened formula.

Numerator – number in the denominator given a trial of thickened formula.

Denominator – number of formula-fed infants with frequent regurgitation associated with marked distress receiving appropriate total daily amount of milk and receiving trial of small and frequent feeds.

*Data source:* Local data collection.

## Outcome

Infants with frequent regurgitation associated with marked distress presenting in healthcare settings.

*Data source:* Local data collection.

## *What the quality statement means for service providers, healthcare professionals and commissioners*

Service providers (community care providers, secondary care and specialised women's trusts) ensure that healthcare professionals offer a stepped-care approach to managing frequent

regurgitation associated with marked distress for formula-fed infants.

**Healthcare professionals** (health visitors, midwives, paediatric nurses or GPs) use a stepped-care approach to manage frequent regurgitation associated with marked distress for formula-fed infants.

**Commissioners** (clinical commissioning groups, local authorities, NHS England) ensure that the services they commission use a stepped-care approach to managing frequent regurgitation associated with marked distress for formula-fed infants.

### *What the quality statement means for parents and carers*

**Parents and carers** of formula-fed babies with reflux (regurgitating, bringing up or vomiting feeds) who are very distressed, for example, if they cry inconsolably and seem to be in pain, are told about small changes they can make to feeding that are likely to improve their baby's symptoms, such as reducing the amount or frequency of feeds.

### *Source guidance*

- [Gastro-oesophageal reflux disease in children and young people \(2015\) NICE guideline NG1, recommendations 1.2.3](#)

### *Definitions of terms used in this quality statement*

#### **Stepped-care approach**

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

- review the feeding history, then
- reduce the feed volumes only if excessive for the infant's weight, then
- offer a trial of smaller, more frequent feeds (while maintaining an appropriate total daily amount of milk) unless the feeds are already small and frequent, then
- offer a trial of thickened formula (for example, containing rice starch, cornstarch, locust bean gum or carob bean gum).

[[Gastro-oesophageal reflux disease in children and young people \(2015\) NICE guideline NG1,](#)

- recommendation 1.2.3]

## Quality statement 4: Alginate therapy

### *Quality statement*

Infants with frequent regurgitation associated with marked distress have a trial of alginate therapy if first-line management is unsuccessful.

### *Rationale*

By reacting with acidic gastric contents, the alginate forms a viscous gel that stabilises stomach activity, which can be effective in reducing gastro-oesophageal reflux (GOR) in some infants. Alginate therapy should only be tried if first-line management (feeding assessment and advice for breast-fed infants or a stepped-care approach for formula-fed infants) is unsuccessful. In formula-fed infants, thickened formula should be stopped before alginate therapy is offered.

### *Quality measures*

#### Structure

Evidence of local arrangements to ensure that infants with frequent regurgitation associated with marked distress have a trial of alginate therapy if first-line management is unsuccessful.

**Data source:** Local data collection.

#### Process

a) Proportion of breast-fed infants with frequent regurgitation associated with marked distress that continues despite a feeding assessment and advice who have a trial of alginate therapy.

Numerator – number in the denominator who have a trial of alginate therapy.

Denominator – number of breast-fed infants presenting with frequent regurgitation associated with marked distress that continues despite a feeding assessment and advice.

**Data source:** Local data collection.

b) Proportion of formula-fed infants with frequent regurgitation associated with marked distress that continues despite a feeding assessment and advice who have a trial of alginate therapy.

Numerator – number in the denominator who have a trial of alginate therapy.

Denominator – number of formula-fed infants with frequent regurgitation associated with marked distress that continues despite a stepped-care approach.

*Data source:* Local data collection.

## Outcome

Infants with frequent regurgitation associated with marked distress presenting in healthcare settings.

*Data source:* Local data collection.

### *What the quality statement means for service providers, healthcare professionals and commissioners*

**Service providers** (community care providers, secondary care and specialised women's trusts) ensure that healthcare professionals offer a trial of alginate therapy for infants with frequent regurgitation associated with marked distress if first-line management is unsuccessful.

**Healthcare professionals** (health visitors, midwives, paediatric nurses or GPs) offer a trial of alginate therapy for infants with frequent regurgitation associated with marked distress if first-line management is unsuccessful.

**Commissioners** (clinical commissioning groups, local authorities, NHS England) ensure that the services they commission offer a trial of alginate therapy for infants with frequent regurgitation associated with marked distress if first-line management is unsuccessful.

### *What the quality statement means for parents and carers*

**Parents and carers** who have had support and advice about correct breastfeeding techniques (for breast-fed babies) or tried using smaller and more frequent feeds followed by thickened formula (for formula-fed babies), but whose baby's symptoms haven't improved are offered a medicine called an alginate for a trial period of 1 to 2 weeks. Alginates may help to reduce reflux.

## Source guidance

- [Gastro-oesophageal reflux disease in children and young people \(2015\) NICE guideline NG1](#), recommendations 1.2.3, 1.2.4 and 1.2.5 (key priority for implementation)

## Definitions of terms used in this quality statement

### Trial of alginate therapy

By reacting with acidic gastric contents the alginate forms a viscous gel that stabilises stomach activity which results in reducing the incidence of GOR.

Infants have alginate therapy for a period of 1–2 weeks to assess if GOR improves. After the trial period, the approach needs to be reviewed by the healthcare professional.

[[Gastro-oesophageal reflux disease in children and young people \(2015\) NICE full guideline NG1](#) and expert opinion]

### First-line management

In breast-fed infants with frequent regurgitation associated with marked distress, first-line management is a breastfeeding assessment carried out by a person with appropriate expertise and training.

In formula-fed infants with frequent regurgitation associated with marked distress, first-line management is a stepped-care approach, as follows:

- review the feeding history, then
- reduce the feed volumes only if excessive for the infant's weight, then
- offer a trial of smaller, more frequent feeds (while maintaining an appropriate total daily amount of milk) unless the feeds are already small and frequent, then
- offer a trial of thickened formula (for example, containing rice starch, cornstarch, locust bean gum or carob bean gum).

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

[Adapted from [gastro-oesophageal reflux disease in children and young people \(2015\) NICE guideline NG1](#), recommendations 1.2.2, 1.2.3 and 1.2.5 (key priority for implementation)].

## Quality statement 5: Symptoms that do not need investigation or treatment

### *Quality statement*

Infants and children are not investigated or treated for gastro-oesophageal reflux disease (GORD) if they have no visible regurgitation and only 1 associated symptom.

### *Rationale*

Although a combination of symptoms, such as unexplained feeding difficulties (for example, refusing to feed, gagging or choking), distressed behaviour, faltering growth, chronic cough, hoarseness or a single episode of pneumonia can be associated with GORD, having no visible regurgitation and only 1 of these symptoms does not indicate GORD. Unnecessary investigations cause distress for infants and children, as well as costs to the NHS that can be avoided.

### *Quality measures*

#### **Structure**

Evidence of local arrangements to ensure that infants and children are not investigated or treated for GORD if they have no visible regurgitation and only 1 associated symptom.

*Data source:* Local data collection.

#### **Process**

Proportion of infants and children with no visible regurgitation and only 1 associated symptom investigated or treated for GORD.

Numerator – number in the denominator who had no visible regurgitation and only 1 associated symptom.

Denominator – number of infants and children investigated or treated for GORD.

*Data source:* Local data collection.

### *What the quality statement means for service providers, healthcare*

## *professionals and commissioners*

**Service providers** (GP practices, community care providers, secondary care) ensure that there are practice arrangements and written clinical protocols to ensure that infants and children are not investigated or treated for GORD if they have no visible regurgitation and only 1 associated symptom.

**Healthcare professionals** (health visitors, midwives, paediatric nurses or GPs) ensure that they do not investigate or treat infants and children for GORD if they have only 1 associated symptom and no visible regurgitation.

**Commissioners** (clinical commissioning groups, NHS England, local authorities) ensure that the services they commission do not investigate or treat infants and children for GORD if they have only 1 associated symptom and no visible regurgitation.

## *What the quality statement means for infants and children*

Infants and children do not undergo tests or treatments for GORD if they are not regurgitating their feeds and if they only have 1 of the following symptoms: feeding problems such as refusing to feed, gagging or choking, discomfort or pain on a regular basis, poor growth, cough that does not go away, hoarseness or pneumonia.

## *Source guidance*

- [Gastro-oesophageal reflux disease in children and young people \(2015\) NICE guideline NG1, recommendation 1.1.6](#) (key priority for implementation)

## *Definitions of terms used in this quality statement*

### **Symptoms associated with GORD**

Symptoms that infants may present with include:

- unexplained feeding difficulties (for example, refusing to feed, gagging or choking)
- distressed behaviour
- faltering growth
- chronic cough

- hoarseness
- a single episode of pneumonia.

[[Gastro-oesophageal reflux disease in children and young people NICE guideline NG1](#), recommendation 1.1.6 (key priority for implementation)]

## Quality statement 6: Acid-suppressing drugs

### *Quality statement*

Infants and children are not prescribed acid-suppressing drugs if visible regurgitation is an isolated symptom.

### *Rationale*

There is no evidence that acid-suppressing drugs such as proton pump inhibitors (PPIs) or H<sub>2</sub> receptor antagonists (H<sub>2</sub>RAs) are effective in reducing regurgitation in infants and children. They are generally well tolerated but do have potential adverse effects, and unnecessary use should be avoided.

### *Quality measures*

#### **Structure**

Evidence of local arrangements to ensure that infants and children with regurgitation as an isolated symptom are not prescribed acid-suppressing drugs.

*Data source:* Local data collection.

#### **Process**

Proportion of infants and children presenting with regurgitation as an isolated symptom prescribed acid-suppressing drugs.

Numerator – number in the denominator prescribed acid-suppressing drugs.

Denominator – number of infants and children presenting with regurgitation as an isolated symptom.

*Data source:* Local data collection.

#### **Outcome**

PPI and H<sub>2</sub>RA prescribing rates among infants and children.

*Data source:* Local data collection.

### *What the quality statement means for service providers, healthcare professionals and commissioners*

**Service providers** (secondary care, community care providers, GP practices) ensure that there are practice arrangements and written clinical protocols to ensure that infants and children with regurgitation as an isolated symptom are not prescribed acid-suppressing drugs.

**Healthcare professionals** (midwives, paediatric nurses or GPs) do not prescribe acid-suppressing drugs to infants and children with regurgitation as an isolated symptom.

**Commissioners** (clinical commissioning groups and NHS England) ensure that services they commission do not prescribe acid-suppressing drugs to infants and children with regurgitation as an isolated symptom.

### *What the quality statement means for infants and children*

**Infants and children** who regurgitate food but have no other symptoms are not prescribed medicines that reduce acid production in the stomach.

### *Source guidance*

- [Gastro-oesophageal reflux disease in children and young people \(2015\) NICE guideline NG1](#), recommendation 1.3.1 (key priority for implementation)

### *Definitions of terms used in this quality statement*

#### **Acid-suppressing drugs**

Acid-suppressing drugs are a group of medications that reduce gastric acid secretion. They include H<sub>2</sub>RAs and PPIs.

[[Gastro-oesophageal reflux disease in children and young people \(2015\) NICE full guideline NG1](#)]

## Quality statement 7: Upper gastrointestinal (GI) contrast study

### *Quality statement*

Infants, children and young people do not have an upper gastrointestinal (GI) contrast study to diagnose or assess the severity of gastro-oesophageal reflux disease (GORD).

### *Rationale*

Upper GI contrast studies are neither sensitive nor specific enough to diagnose or assess the severity of GORD, and they unnecessarily expose infants, children and young people to radiation.

### *Quality measures*

#### **Structure**

Evidence of local arrangements to ensure that upper GI contrast studies are not used to diagnose or assess the severity of GORD in infants, children and young people.

*Data source:* Local data collection.

#### **Process**

Proportion of infants, children and young people referred for upper GI contrast study to diagnose or assess the severity of GORD.

Numerator – number in the denominator referred to diagnose or assess the severity of GORD.

Denominator – number of infants, children and young people referred for upper GI contrast study.

*Data source:* Local data collection.

### *What the quality statement means for service providers, healthcare professionals and commissioners*

**Service providers** (secondary care providers) ensure that there are practice arrangements to ensure that upper GI contrast studies are not carried out to diagnose or assess the severity of GORD in infants, children and young people.

**Healthcare professionals** (midwives, paediatric nurses or GPs) do not refer infants, children and young people for upper GI contrast studies to diagnose or assess the severity of GORD.

**Commissioners** (clinical commissioning groups) ensure that services they commission have protocols that do not allow healthcare professionals to carry out upper GI contrast studies to diagnose or assess the severity of GORD in infants, children and young people.

### *What the quality statement means for infants, children and young people*

**Infants, children and young people** do not have a type of scan called an upper gastrointestinal contrast study to assess how serious their reflux is.

### *Source guidance*

- [Gastro-oesophageal reflux disease in children and young people \(2015\) NICE guideline NG1, recommendation 1.1.15](#) (key priority for implementation)

## Quality statement 8: Domperidone, metoclopramide and erythromycin

### *Quality statement*

Infants, children and young people are not prescribed domperidone, metoclopramide or erythromycin to manage gastro-oesophageal reflux (GOR) or gastro-oesophageal reflux disease (GORD) without specialist paediatric advice.

### *Rationale*

Prokinetics such as domperidone and metoclopramide are associated with a range of risks such as neurological and cardiac adverse events. Domperidone, metoclopramide and erythromycin (which is used in GOR and GORD for its prokinetic properties) should only be prescribed for infants, children and young people if there is an agreement for its use by a specialist paediatric healthcare professional.

### *Quality measures*

#### **Structure**

Evidence of local arrangements to ensure that infants, children and young people are not prescribed domperidone, metoclopramide or erythromycin to manage GOR or GORD without specialist paediatric advice.

**Data source:** Local data collection.

#### **Process**

Proportion of infants, children and young people prescribed domperidone, metoclopramide or erythromycin to manage GOR or GORD on the basis of specialist paediatric advice.

Numerator – number in the denominator who were prescribed domperidone, metoclopramide or erythromycin on the basis of specialist paediatric advice.

Denominator – number of infants, children and young people prescribed domperidone, metoclopramide or erythromycin to manage GOR or GORD.

**Data source:** Local data collection.

## Outcome

Domperidone, metoclopramide and erythromycin prescribing among infants, children and young people.

*Data source:* Local data collection.

### *What the quality statement means for service providers, healthcare professionals and commissioners*

**Service providers** (secondary care, community care providers, GP practices) ensure that there are practice arrangements and written clinical protocols to ensure that infants, children and young people are not prescribed domperidone, metoclopramide or erythromycin to manage GOR or GORD without specialist paediatric advice.

**Healthcare professionals** (midwives, paediatric nurses or GPs) do not prescribe domperidone, metoclopramide or erythromycin to manage GOR or GORD in infants, children and young people without specialist paediatric advice.

**Commissioners** (clinical commissioning groups and NHS England) ensure that services they commission do not prescribe domperidone, metoclopramide or erythromycin to manage GOR or GORD in infants, children and young people without specialist paediatric advice.

### *What the quality statement means for infants, children and young people*

Infants, children and young people are not prescribed medicines called domperidone, metoclopramide or erythromycin to manage reflux unless a specialist advises it.

## Source guidance

- [Gastro-oesophageal reflux disease in children and young people \(2015\) NICE guideline NG1, recommendation 1.3.7](#) (key priority for implementation)

## Definitions of terms used in this quality statement

### Specialist

Specialist refers to a paediatrician with the skills, experience and competency necessary to deal with the particular clinical concern that has been identified by the referring healthcare

professional. In this guideline this is most likely to be a consultant general paediatrician. Depending on the clinical circumstances, 'specialist' may also refer to a paediatric surgeon, paediatric gastroenterologist or a doctor with the equivalent skills and competency.

[[Gastro-oesophageal reflux disease in children and young people \(2015\) NICE guideline NG1, definitions section](#)]

## Quality statement 9: 'Red flag' symptoms and suggested actions

### Quality statement

Infants, children and young people with vomiting or regurgitation and any 'red flag' symptoms are referred to specialist care with investigations as appropriate.

### Rationale

Some symptoms that are commonly mistaken for gastro-oesophageal reflux disease (GORD) may be 'red flag' symptoms for other problems. These problems need action to be taken, such as further investigations or specialist referral.

### Quality measures

#### Structure

Evidence of local arrangements to ensure that infants, children and young people with vomiting or regurgitation and any 'red flag' symptoms are further investigated or referred to specialist care with investigations as appropriate.

**Data source:** Local data collection.

#### Process

a) Proportion of infants, children and young people with vomiting or regurgitation and any 'red flag' symptoms who had further investigations and specialist referral.

Numerator – number in the denominator who had further investigations and specialist referral.

Denominator – number of infants, children and young people presenting with vomiting or regurgitation and any 'red flag' symptoms.

**Data source:** Local data collection.

b) Proportion of infants, children and young people with vomiting or regurgitation and any 'red flag' symptoms who had appropriate investigations and specialist referral.

Numerator – number in the denominator who had appropriate investigations and specialist

referral.

Denominator – number of infants, children and young people with vomiting or regurgitation and any 'red flag' symptoms who had further investigations and specialist referral.

*Data source:* Local data collection.

### *What the quality statement means for service providers, healthcare professionals and commissioners*

**Service providers** ensure that there are practice arrangements and written clinical protocols to ensure that healthcare professionals look out for 'red flag' symptoms in infants, children and young people with vomiting or regurgitation, and carry out further investigations or arrange specialist referrals depending on the symptoms.

**Healthcare professionals** (midwives, paediatric nurses or GPs) look out for 'red flag' symptoms in infants, children and young people with vomiting or regurgitation and carry out further investigations or arrange specialist referrals depending on the symptoms.

**Commissioners** (clinical commissioning groups and NHS England) ensure that services they commission have pathways for healthcare professionals to carry out further investigations or arrange specialist referrals for infants, children and young people with vomiting or regurgitation and 'red flag' symptoms.

### *What the quality statement means for infants, children and young people*

Infants, children and young people have tests or are referred to a specialist if their symptoms show that they might have another problem than reflux.

### *Source guidance*

- [Gastro-oesophageal reflux disease in children and young people](#) (2015) NICE guideline NG1, recommendation 1.1.5 (key priority for implementation)

### *Definitions of terms used in this quality statement*

#### **'Red flag' symptoms and suggested actions**

| Symptoms and signs                                                                                                                                                          | Possible diagnostic implications                                                                                                                                                                                             | Suggested actions                                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| <b>Gastrointestinal</b>                                                                                                                                                     |                                                                                                                                                                                                                              |                                                         |
| Frequent, forceful (projectile) vomiting                                                                                                                                    | May suggest hypertrophic pyloric stenosis in infants up to 2 months old                                                                                                                                                      | Paediatric surgery referral                             |
| Bile-stained (green or yellow-green) vomit                                                                                                                                  | May suggest intestinal obstruction                                                                                                                                                                                           | Paediatric surgery referral                             |
| Haematemesis (blood in vomit) with the exception of swallowed blood, for example, following a nose bleed or ingested blood from a cracked nipple in some breast-fed infants | May suggest an important and potentially serious bleed from the oesophagus, stomach or upper gut                                                                                                                             | Specialist referral                                     |
| Onset of regurgitation and/or vomiting after 6 months or persisting after 1 year                                                                                            | Late onset suggests a cause other than reflux, for example a urinary tract infection (also see the NICE guideline on <a href="#">urinary tract infection in under 16s</a> )<br>Persistence suggests an alternative diagnosis | Urine microbiology investigation<br>Specialist referral |
| Blood in stool                                                                                                                                                              | May suggest a variety of conditions, including bacterial gastroenteritis, infant cows' milk protein allergy (also see the NICE guideline on <a href="#">food allergy in under 19s</a> ) or an acute surgical condition       | Stool microbiology investigation<br>Specialist referral |
| Abdominal distension, tenderness or palpable mass                                                                                                                           | May suggest intestinal obstruction or another acute surgical condition                                                                                                                                                       | Paediatric surgery referral                             |
| Chronic diarrhoea                                                                                                                                                           | May suggest cows' milk protein allergy (also see the NICE guideline on <a href="#">food allergy in under 19s</a> )                                                                                                           | Specialist referral                                     |
| <b>Systemic</b>                                                                                                                                                             |                                                                                                                                                                                                                              |                                                         |

|                                                                                                                                              |                                                                                                                                                                                                    |                                                                                            |
|----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| <p>Appearing unwell</p> <p>Fever</p>                                                                                                         | <p>May suggest infection (also see the NICE guideline on <a href="#">fever in under 5s</a>)</p>                                                                                                    | <p>Clinical assessment and urine microbiology investigation</p> <p>Specialist referral</p> |
| <p>Dysuria</p>                                                                                                                               | <p>May suggest urinary tract infection (also see the NICE guideline on <a href="#">urinary tract infection in under 16s</a>)</p>                                                                   | <p>Clinical assessment and urine microbiology investigation</p> <p>Specialist referral</p> |
| <p>Bulging fontanelle</p>                                                                                                                    | <p>May suggest raised intracranial pressure, for example, due to meningitis (also see the NICE guideline on <a href="#">meningitis (bacterial) and meningococcal septicaemia in under 16s</a>)</p> | <p>Specialist referral</p>                                                                 |
| <p>Rapidly increasing head circumference (more than 1 cm per week)</p> <p>Persistent morning headache, and vomiting worse in the morning</p> | <p>May suggest raised intracranial pressure, for example, due to hydrocephalus or a brain tumour</p>                                                                                               | <p>Specialist referral</p>                                                                 |
| <p>Altered responsiveness, for example, lethargy or irritability</p>                                                                         | <p>May suggest an illness such as meningitis (also see the NICE guideline on <a href="#">meningitis (bacterial) and meningococcal septicaemia in under 16s</a>)</p>                                | <p>Specialist referral</p>                                                                 |
| <p>Infants and children with, or at high risk of, atopy</p>                                                                                  | <p>May suggest cows' milk protein allergy (also see the NICE guideline on <a href="#">food allergy in under 19s</a>)</p>                                                                           | <p>Specialist referral</p>                                                                 |

## Using the quality standard

### *Quality measures*

The quality measures accompanying the quality statements aim to improve the structure, process and outcomes of care in areas identified as needing quality improvement. They are not a new set of targets or mandatory indicators for performance management.

We have indicated if current national indicators exist that could be used to measure the quality statements. These include indicators developed by the Health and Social Care Information Centre through its [Indicators for Quality Improvement Programme](#). If there is no national indicator that could be used to measure a quality statement, the quality measure should form the basis for audit criteria developed and used locally.

See NICE's [what makes up a NICE quality standard?](#) for further information, including advice on using quality measures.

### *Levels of achievement*

Expected levels of achievement for quality measures are not specified. Quality standards are intended to drive up the quality of care, and so achievement levels of 100% should be aspired to (or 0% if the quality statement states that something should not be done). However, NICE recognises that this may not always be appropriate in practice, taking account of safety, choice and professional judgement, and therefore desired levels of achievement should be defined locally.

NICE's [quality standard service improvement template](#) helps providers to make an initial assessment of their service compared with a selection of quality statements. It includes assessing current practice, recording an action plan and monitoring quality improvement.

## Diversity, equality and language

During the development of this quality standard, equality issues have been considered and [equality assessments](#) are available.

Good communication between healthcare practitioners and children and young people with gastro-oesophageal reflux (disease), and their parents or carers (if appropriate), is essential. Treatment, care and support, and the information given about it, should be both age-appropriate and culturally appropriate. It should also be accessible to people with additional needs such as physical, sensory or learning disabilities, and to people who do not speak or read English. Children and young people with gastro-oesophageal reflux (disease) and their parents or carers (if appropriate) should have access to an interpreter or advocate if needed.

Commissioners and providers should aim to achieve the quality standard in their local context, in light of their duties to have due regard to the need to eliminate unlawful discrimination, advance equality of opportunity and foster good relations. Nothing in this quality standard should be interpreted in a way that would be inconsistent with compliance with those duties.

## Development sources

Further explanation of the methodology used can be found in the quality standards [process guide](#).

## *Evidence sources*

The documents below contain recommendations from NICE guidance or other NICE-accredited recommendations that were used by the Quality Standards Advisory Committee to develop the quality standard statements and measures:

- [Gastro-oesophageal reflux disease in children and young people \(2015\) NICE guideline NG1](#)

## *Policy context*

It is important that the quality standard is considered alongside current policy documents, including:

- Department of Health and Public Health England (2014) [Framework for personalised care and population health](#)
- Department of Health and Public Health England (2013) [Nursing and midwifery actions at the three levels of public health practice](#)
- Department of Health (2012) [National diet and nutrition survey: headline results from years 1, 2 and 3 \(combined\) of the Rolling Programme 2008/09–2010/11](#)
- Department of Health (2009) [Healthy child programme: pregnancy and the first 5 years of life](#)

## *Definitions and data sources for the quality measures*

- [Gastro-oesophageal reflux disease in children and young people \(2015\) NICE guideline NG1](#)

## Related NICE quality standards

### *Published*

- [Maternal and child nutrition](#) (2015) NICE quality standard 98
- [Dyspepsia and gastro-oesophageal reflux disease in adults](#) (2015) NICE quality standard 96
- [Fever in under 5s](#) (2014) NICE quality standard 64
- [Atopic eczema in under 12s](#) (2013) NICE quality standard 44
- [Acute upper gastrointestinal bleeding in adults](#) (2013) NICE quality standard 38
- [Postnatal care](#) (2013) NICE quality standard 37
- [Urinary tract infection in children and young people](#) (2013) NICE quality standard 36
- [Meningitis \(bacterial\) and meningococcal septicaemia in children and young people](#) (2012) NICE quality standard 19

### *Future quality standards*

This quality standard will be developed in the context of all quality standards referred to NICE, including the following quality standards scheduled for future development:

- Eating disorders (including children)
- Failure to thrive
- Oesophagogastric cancers
- Premature birth
- Medicine optimisation

The full list of quality standard topics referred to NICE is available from the [quality standards topic library](#) on the NICE website.

## Quality Standards Advisory Committee and NICE project team

This quality standard has been developed by Quality Standards Advisory Committee 3. Membership of this committee is as follows:

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## About this quality standard

NICE quality standards describe high-priority areas for quality improvement in a defined care or service area. Each standard consists of a prioritised set of specific, concise and measurable statements. NICE quality standards draw on existing NICE or NICE-accredited guidance that provides an underpinning, comprehensive set of recommendations, and are designed to support the measurement of improvement.

The methods and processes for developing NICE quality standards are described in the [quality standards process guide](#).

This quality standard has been incorporated into the NICE pathway on [dyspepsia and gastro-oesophageal reflux disease](#).

NICE produces guidance, standards and information on commissioning and providing high-quality healthcare, social care, and public health services. We have agreements to provide certain NICE services to Wales, Scotland and Northern Ireland. Decisions on how NICE guidance and other products apply in those countries are made by ministers in the Welsh government, Scottish government, and Northern Ireland Executive. NICE guidance or other products may include references to organisations or people responsible for commissioning or providing care that may be relevant only to England.

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### *Endorsing organisation*

This quality standard has been endorsed by NHS England, as required by the Health and Social Care Act (2012)

## *Supporting organisation*

Many organisations share NICE's commitment to quality improvement using evidence-based guidance. The following supporting organisations have recognised the benefit of the quality standard in improving care for patients, carers, service users and members of the public. They have agreed to work with NICE to ensure that those commissioning or providing services are made aware of and encouraged to use the quality standard.

- Royal College of Paediatrics and Child Health