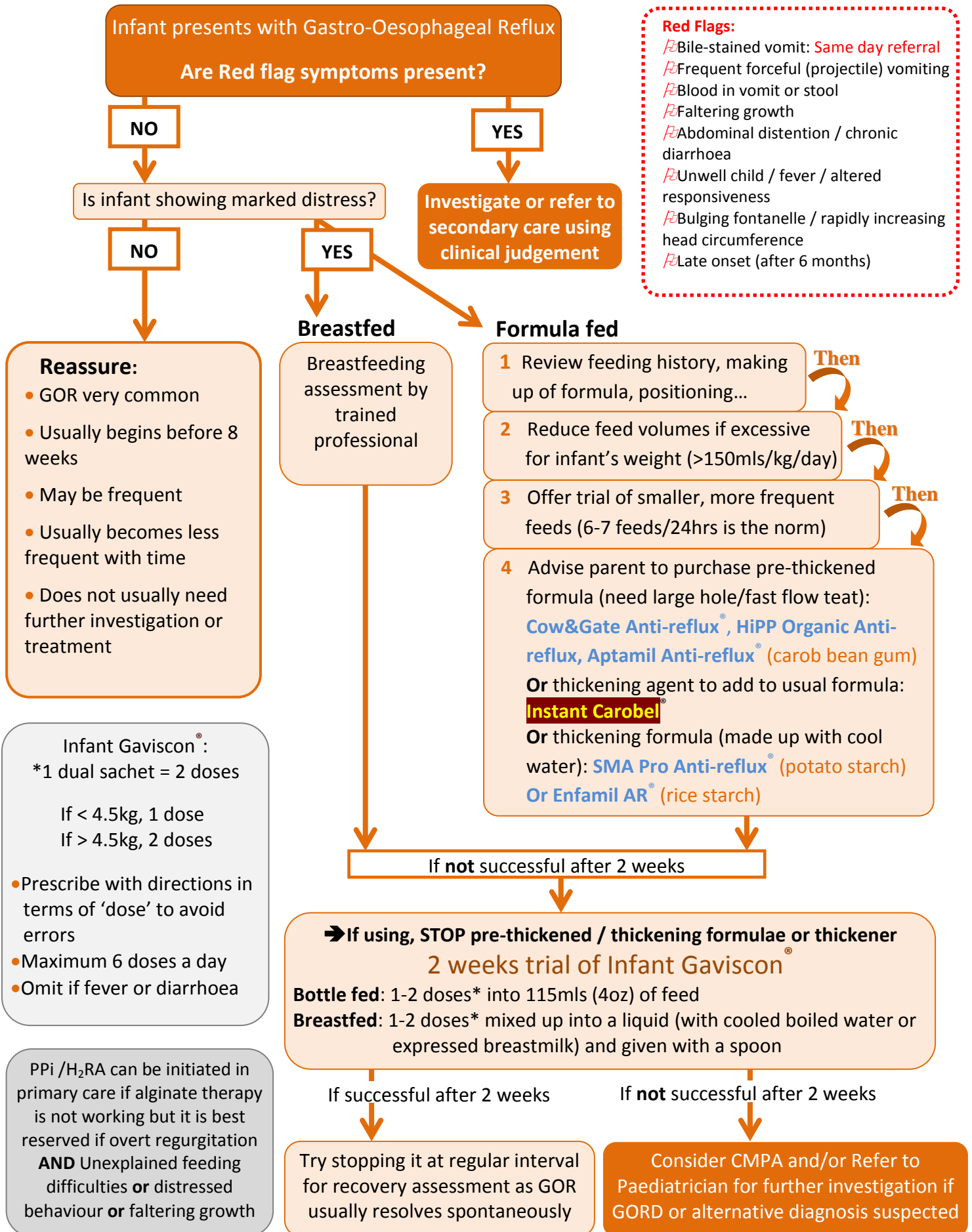


# NICE NG1: Flow Chart for managing GASTRO-OESOPHAGEAL REFLUX (GOR) and GORD



# GOR and GORD additional notes

Full NICE guidance: [www.nice.org.uk/guidance/ng1](http://www.nice.org.uk/guidance/ng1)

## Background

- Passive regurgitation of stomach contents into the oesophagus is a **normal** finding in infancy. Most is swallowed back into the stomach but occasionally it appears in the mouth or comes out as non forceful regurgitation. At least 40% of infants will have symptoms of reflux at some time.
- Reflux will often improve by 6-8 months but it is not unusual for an otherwise well child to continue to have intermittent effortless regurgitation up to 18 months.
- Parents/carers should seek urgent medical attention if :
  - regurgitation becomes persistently projectile
  - There is bile-stained (green or yellow-green) or blood in vomit
  - There are new concerns (marked distressed, feeding difficulties, faltering growth)
- Possible complications of GOR are:
  - Reflux oesophagitis
  - Recurrent aspiration pneumonia
  - Frequent otitis media

**GORD** (Gastro-Oesophageal Reflux Disease) is a diagnosis reserved for those infants who present with significant symptoms and/or faltering growth.

- Prematurity, neurodisability, family history of heartburn, hiatus hernia, congenital oesophageal atresia are associated with an increased prevalence of GORD.
- Forceful vomiting should not be ascribed to reflux without closer review of the child's symptoms. Biliary (green) vomiting is always pathological and warrant urgent same day medical attention.
- GORD can sometimes be a sign of CMPA. The presence of atopic dermatitis, a family history of allergy / atopy and additional gastrointestinal symptoms should prompt consideration of a cow's milk protein allergy. CMPA can occur in breastfed infants (see [CMPA](#) section).
- Consider UTI especially if faltering growth or late onset, or frequent regurgitation + marked distress.
- Do not routinely treat or investigate for GORD in infant with or without overt regurgitation if they only exhibit **one** of the following: distressed behaviour / unexplained feeding difficulties / faltering growth / chronic cough / hoarseness / single episode of pneumonia.

## Onward referrals

Referrals	Indications
<b>Same day to Secondary Care</b>	Worsening or forceful vomiting in infant <2months Unexplained bile-stained vomiting Haematemesis or Malaena or Dysphagia
<b>Secondary Care</b>	No improvement in regurgitation >1year old Persistent faltering growth secondary to regurgitation, Feeding aversion + regurgitation, Suspected recurrent aspiration pneumonia, Frequent otitis media, Suspected Sandifer's syndrome Unexplained apnoea, Unexplained non-epileptic seizure-like events, Unexplained upper airway inflammation If thought necessary to ensure acid suppression

## Management of GORD

- Sleeping infants should be placed on their back but bed can be raised at an angle.
- Starch-based thickeners (Thick&Easy<sup>®</sup>, Nutilis<sup>®</sup>, Resource thicken up<sup>®</sup> ...) are not suitable for children under 1 year (unless faltering growth/recommended by Paediatric specialist).
- Pro-motility agents such as domperidone should not be initiated in primary care. There is no evidence of benefit when treating infantile GOR. They can cause paradoxical vomiting and have been associated with a risk of cardiac side effects.

## Products available

<b>Instant thickener</b>	<b>Not to be used with thickening formula or Infant Gaviscon<sup>®</sup></b>	
Carobel Instant - Add to specialised formula (or expressed breastmilk) if anti-reflux formula not practical or possible	From birth £2.91 per 135g	Contains carob seed flour <i>May cause loose stools</i>
<b>OTC pre-thickened formulae</b>	<b>Not to be used with thickener or Infant Gaviscon<sup>®</sup></b>	
Cow & Gate <sup>®</sup> Anti-reflux (Danone)	Birth to 1 year	Contains carob gum
Aptamil <sup>®</sup> Anti-reflux (Danone)	Birth to 1 year	
HiPP Organic Anti-reflux (HiPP)	Birth to 1 year	
<b>OTC thickening formulae</b>	<b>Not to be used with thickener or Infant Gaviscon<sup>®</sup> or PPIs/H2 antagonists</b>	
SMA Pro Anti-reflux <sup>®</sup> (SMA )	Birth to 18 months	Contains potato starch
Enfamil AR <sup>®</sup> (Mead Johnson)	Birth to 18 months	Contains rice starch

- Over the counter thickeners / thickened formulae contain carob gum. This produces a thickened formula and will require the use of a large hole (fast-flow) teat.
- Thickening formulae react with stomach acids, thickening in the stomach rather than the bottle so there is no need to use a large hole (fast-flow) teat. However thickening formula need to be prepared with **cooled** pre-boiled water, which is **against** recommendation of using boiled water cooled to 70°C. There is therefore an **increased risk** of bacteria being present in the milk. This risk should be assessed by a medical practitioner.
- **Thickening formulae should not be used in conjunction with separate thickeners or with medication** such as antacids (e.g. Infant Gaviscon<sup>®</sup>), H<sub>2</sub> antagonists (e.g. Ranitidine), or with proton pump inhibitors (e.g. Omeprazole).

## Gaviscon

May cause a change in the baby's stool, and commonly constipation.

## Resources for parents and health professionals

- NICE guidelines [NG1](#): GORD in children and young people. January 2015
- Living with reflux website: [www.livingwithreflux.org/](http://www.livingwithreflux.org/) includes a Facebook support page
- For breastfeeding and bottle feeding advice, visit the UNICEF baby friendly pages: <https://www.unicef.org.uk/babyfriendly/baby-friendly-resources/>
  - Bottle feeding leaflet [www.unicef.org.uk/BabyFriendly/Parents/Resources/Resources-for-parents/Department-of-Health-bottle-feeding-leaflet/](http://www.unicef.org.uk/BabyFriendly/Parents/Resources/Resources-for-parents/Department-of-Health-bottle-feeding-leaflet/)
  - Breastfeeding leaflet [www.unicef.org.uk/Documents/Baby\\_Friendly/Leaflets/otbs\\_leaflet.pdf](http://www.unicef.org.uk/Documents/Baby_Friendly/Leaflets/otbs_leaflet.pdf)
    - Breastfeeding counsellors directory provided by the NCT, or Southern Health NHS Foundation Trust: [www.nct.org.uk/branches](http://www.nct.org.uk/branches) or [www.southernhealth.nhs.uk/services/childrens-services/breastfeeding-service/](http://www.southernhealth.nhs.uk/services/childrens-services/breastfeeding-service/)