LANCASHIRE AND SOUTH CUMBRIA MATERNITY AND NEWBORN ALLIANCE
DIAGNOSIS AND MANAGEMENT OF MILK ALLERGY AND INTOLERANCE GUIDELINE

This guidance is a section of the Lancashire and South Cumbria
Infant Feeding Network
Infant Feeding and Relationship Building Policy
and Associated Guidelines Version 3.2, February 2025

1.0 INTRODUCTION

The purpose of this guidance is to outline recommendations for the prescribing of specialist infant formula within primary care in Lancashire & South Cumbria.

Lancashire & South Cumbria promotes breastfeeding as the best form of nutrition for infants and this should be promoted, supported and protected wherever possible.

Most of the infant formulas prescribed in primary care are used to treat Cows' Milk Protein Allergy (CMPA) therefore this document focuses on these infant formula. There is a separate summary table for other specialist infant formulas – See figure 4 of this guideline.

1.1 Exclusion criteria

Secondary and tertiary care will continue to lead on the prescribing of other specialist infant formulas for the following groups of patients; these are outside the scope of this guideline:

- Preterm and low birth weight infants who may also require iron and vitamin supplementation
- Disease specific conditions e.g. inherited disorders of metabolism, renal disease, liver disease, cardiac disease, cystic fibrosis, oncology
- Complex / multiple food allergies and intolerance
- Faltering growth
- Complex medical cases e.g. infants requiring enteral tube feeding or a ketogenic diet

All such prescribing should be initiated by secondary care. Once stabilised the GP will be informed (and given clear instructions on the indication, goals and length of treatment, as required) and should take over the prescribing.

1.2 Background

Cows' milk protein allergy is an immune-mediated allergic response to the proteins in milk. It can be immediate in onset following consumption, referred to as IgE mediated, or a non-IgE mediated reaction when the presentation is delayed by hours or even days following exposure.

Food allergy should not be confused with food intolerance, which is a non-immunological reaction that can be caused by enzyme deficiencies, pharmacological agents and naturally occurring substances.

Lactose intolerance occurs when there is reduced or absence of the enzyme lactase. Primary lactose intolerance is extremely rare. Secondary lactose intolerance (e.g. following untreated CMPA or gastroenteritis) is more likely, but should resolve if the underlying cause is treated. Symptoms of secondary lactose intolerance would include loose, watery acidic stools that burn the skin.

Symptoms presenting in infants with feeding difficulties are often non-specific and conditions can overlap**. The majority of unsettled infants with colic and reflux do not have CMPA.** The symptoms of CMPA, colic and reflux can be very distressing for the baby and parent. It is important for the parent to feel validated; parents of an infant should be offered reassurance and advice on managing common and natural problems like colic, constipation, reflux, lactose intolerance or overload.

Specialist formulas should only be considered when there is truly a clinical need and after thorough assessment. An allergy focused history should be completed which considers; the severity and time of onset of symptoms, the source and quantity of ingested cows' milk, and the presence of any family history of atopy. This will facilitate an accurate assessment of symptoms and provide a working diagnosis. If this leads to one of non-IgE CMPA it should result in a 2-4 week trial of a prescribed specialist formula.

Labelling normal infant symptoms as a possible allergy may promote CMPA overdiagnosis.

Between 2006 and 2016, prescriptions of specialist formula for infants with CMPA increased by nearly 500% from 105,029 to over 600,000 a year, while NHS spending on these products increased by nearly 700% from £8.1m to over £60m annually (Northwest Paediatric Allergy Network)

Most infants with CMPA develop symptoms before 6 months of age, and often within one week of introduction of a whole cows' milk protein infant formula.

This guidance covers all infants; those who breastfeed, those who are formula fed or those who are combination fed.

1.3 Key messages

1. Breastfeeding and food allergy:

As stated throughout this guideline the aim must be to optimise breastfeeding. The evidence base suggests that a small proportion of breastfed infants react to cows' milk protein via the maternal diet. However, there are a lack of studies exploring cows' milk allergy in breastfed infants.

It is imperative to take a full allergy focused history to identify whether symptoms have developed in response to exposure to infant formula in way of a 'top up feed'. The mother

should be reassured that the quantity of cows' milk protein transferred to breastmilk is minimal "100,000 times lower than in cows' milk" (BFN 2024) and supported to exclusively breastfeed. Extensively hydrolysed formula which may be referred to as "hypoallergenic formula" are based on cows' milk broken into smaller peptides which are less likely to create an immune response (FSNT 2024). The optimal diet for an infant with a cows' milk protein allergy is breastmilk with, if necessary, a maternal diet excluding dairy – however, in many cases **infants who have been sensitive to cows' milk protein in formula do not react to dairy in their mother's diet**.

Anecdotally many mothers report an improvement in their infants' symptoms when excluding foods from their own diet. Providing non-judgemental support is imperative in this scenario, supporting these foods being re-introduced safely, when possible, into the child's diet.

2. Breastfeeding is the best form of nutrition for infants, and this should be promoted, supported, and protected wherever possible. Combination fed infants who are likely to have reacted to the introduction of formula, should be supported to continue to receive as much breastmilk as possible (achieving exclusive breastfeeding where possible).

3. Where infants are combination fed, changing first stage formula for extensively hydrolysed formula is likely to eliminate the need for a maternal dietary exclusion of cows' milk protein. First stage formula and extensively hydrolysed formula are composed of cows' milk protein but in extensively hydrolysed formula the proteins have been processed so that they will not trigger an allergic reaction in the majority of infants with cows' milk protein allergy.

4. If infants are not receiving breastmilk, they should receive a recognised Advisory Committee on Borderline Substances (ACBS) approved infant formula (not homemade).

5. All infants with suspected IgE-mediated allergy should be referred to a paediatric consultant/ dietitian for specialist advice.

6. Infants suspected of non-IgE Cows' Milk Protein Allergy, in the absence of severe symptoms such as persistent blood (approximately 4 weeks break – *See figure 1 on page 7.* for first stage infant formula) in the stool or faltering growth should be advised to have a re-challenge by ingesting cows' milk protein (either via maternal diet if breastfeeding or standard formula if formula fed) to confirm their diagnosis.

7. Prescribing of specialist infant formula can be initiated in primary care in the short-term whilst waiting for specialist referral. If longer-term use is required, the dietitian/specialist opinion must be sought, and there should be a clear plan for weaning and discontinuation included in the care plan. In the absence of care plan instructions to the contrary, the

recommended maximum age of 1 year should be applied. Specialist formula may need to be prescribed for an additional month whilst the re-introduction phase is in place.

8. Extensively Hydrolysed Formula (EHF) is the appropriate **first choice** for the vast majority of infants with Cows' Milk Protein Allergy where human milk is not available.

9. Immediate need to prescribe Amino Acid Formula (AAF) happens rarely. Only prescribe AAF when an infant has a history of anaphylaxis, and/or has very severe symptoms (see symptoms later in guideline – See figure 1 on page 7).

10. **Soy infant formula should not be given to an infant below the age of 6 months.** Soya infant formula should only be prescribed on specialist advice e.g. for galactosaemia.

11. Soya products should not be universally recommended for purchase for potentially allergic babies unless advised by a paediatric consultant or dietitian due to the increased incidence of sensitivity in infants intolerant of cows' milk protein.

12. Infants of vegan mothers who choose not to breast feed should **not** receive prescription soya infant formulas, as products are available to purchase.

13. Specialist infant formula is not required after the age of 12 months, unless directed by a dietitian. Infants should then be transitioned to a recommended **shop bought cows' milk protein free alternative** if cows' milk is not yet tolerated e.g. calcium & iodine enriched soya, oat or coconut milk. **Rice milk is not recommended** for children under 4.5 years of age because of natural arsenic, low protein, energy and calorie content. **Nut milks are not routinely recommended** due to their low energy and protein content.

14. Other animal milks (goat, sheep etc.) are not recommended because children who are unable to tolerate cows' milk are at increased risk of allergic reactions to other animal milks.

15. **Do not initiate** prescribing of specialist infant formula in children **over 1 year old.**

16. For infants using formula who suffer constipation, the first step would be to ensure correct preparation of formula by checking parents understanding. Clinicians should not recommend adding more water to the formula mixture. NHS choices recommend that formula fed babies under 6 months of age may need small sips of cooled boiled water during hot weather as well as their usual milk feeds.

17. A very small percentage of exclusively breastfed infants present with CMPA symptoms which are usually mild to moderate**. If symptoms of CMPA occur for breastfed infants, parents should be advised to continue breastfeeding and follow the advice detailed in the flowchart** – See Figure 1.

1.4 Guideline objective

The objective of this guidance is to:

- Maintain awareness that breastmilk is considered best for babies, so not initiating a change from breast to formula milk if the mother is happy to continue breast feeding.
- Aid diagnosis and improve rapid access to specialist infant formula where needed, minimising distress of the baby and anxiety to the parents/carers.
- Provide guidance on the nature, prescribing and cost-effective supply of milk substitutes for babies in primary care.
- Provide advice on suitable quantities for prescribing, duration of supply and guidance on stopping prescribing.
- Avoid over, inappropriate and prolonged prescribing. Prescribed Formula should discontinue at 12 months. (e.g. Amino Acid Formula (AAF) rather than Extensively Hydrolysed Formula (EHF) as first line)

This guidance should be used in conjunction with NICE Clinical Guideline 116 Food allergy in under 19's: assessment and diagnosis. NICE Clinical Knowledge summaries - Cows' milk protein allergy in children (June 2015)

2.0 DIAGNOSIS of COWS' MILK PROTEIN ALLERGY (CMPA)

The North West Paediatric Allergy Network provides information on the range of clinical presentations and management of both IgE and non-IgE mediated Cows' milk protein allergy.

The symptoms are listed in figure 1 overleaf:

- **Immediate reactions.** 50% of infants have symptoms that begin straight away.
- **Delayed reactions** These occur hours or up to a day or two after eating the food.

OVERLEAF: SYMPTOMS FLOWCHART

Figure 1. SYMPTOMS FLOWCHART (adapted from North West Paediatric Allergy website) (https://allergynorthwest.nhs.uk/resources/allergy-pathways/infant-milk-allergy-or-feeding-problem-management-tool/infant-milk-allergy-or-feeding-problem-management-tool-symptoms/infant-cows-milk-allergy-patients-needing-referral-to-a-hospital-paediatrici)

The flowchart below (figure 1) provides direction for only the INFANT RECEIVING INFANT FORMULA – exclusively or in combination with breastfeeding.

<table>
<tr><th colspan="2">IMMEDIATE REACTION:
symptoms typically occur within minutes to 1 hour of consuming cows' milk dairy products</th><th>DELAYED REACTION ONLY:
symptoms occur up to 48 hours after consuming cows' milk or dairy</th><th>NO IMMEDIATE OR DELAYED SYMPTOMS listed in the boxes to the left</th></tr>
<tr>
<td>If one or more immediate symptoms of ANAPHYLAXIS have occurred:
breathing difficulty (dyspnoea)
harsh noise when breathing in (stridor)
wheezy when breathing out / hoarse voice
loss of consciousness
floppy, limp, unresponsive
↓
and if the infant or child has any of the following:
history of anaphylaxis (breathing problems or faintness) to cows' milk or dairy
multiple food exclusions (if child has started to wean)
↓
1. Infant should avoid cows' milk, other dairy products and sheep's & goats' milk
2. Prescribe amino acid formula (e.g. SMA Alfamino, Neocate LCP or Nutramigen AA)
3. Prescribe an antihistamine
4.Provide CMPA Information Leaflet
5. Refer to a Paediatrician with an interest in allergy, and a Dietitian
6. Parents should not reintroduce cows' milk formula or other dairy products until advised by Paediatrician.</td>
<td>If there were no symptoms of anaphylaxis but the following immediate symptoms:
hives (urticaria)
swelling (angioedema)
vomiting
↓
and if the infant or child has:
no history of anaphylaxis (breathing problems or faintness) to cows' milk
no multiple food exclusions (if child has started to wean)
↓
1. Infant should avoid cows' milk, other dairy products, and sheep's and goats' milk
2. Prescribe max. 4-week trial of eHF - extensively hydrolysed formula (e.g. Aptamil Pepti, SMA Althera or Nutramigen)
3. Consider prescription of an antihistamine
4. Provide CMPA Information Leaflet
5. Arrange telephone consultation in 2 weeks to assess response: without full symptom resolution, consider a 2-week prescription of amino acid formula. If full resolution, continue eHF & refer to Dietitian/ Paediatrician according to local process</td>
<td>if NO immediate symptoms, but a combination of the following:
eczema flare / pruritus
colic / unsettled with feeds
constipation or diarrhoea (incl. with blood)
↓
If the infant or child ONLY HAS DELAYED SYMPTOMS and
has NO immediate symptoms
NO multiple food exclusions (if child has started to wean)
↓
1. Infant should avoid cows' milk, other dairy products, and sheep's and goats' milk
2. Prescribe max. 4-week trial of extensively hydrolysed formula (Aptamil Pepti, SMA Althera, Nutramigen)
3. Provide CMPA Information Leaflet
4. Arrange telephone consultation for 2 weeks' time to assess response and carry out re-challenge (as below) to confirm or exclude diagnosis.</td>
<td>↓
CONSIDER OTHER DIAGNOSES AS THIS IS UNLIKELY TO BE AN ALLERGY</td>
</tr>
<tr><td colspan="4">For next steps – see additional information on following page</td></tr>
</table>

2.1 Re-challenge for formula fed infant after delayed reaction:

- Day 1 – 30mLs of first stage formula in first bottle of the day
- Increase by 30mLs in this bottle daily until a full feed is achieved – this will vary dependent of infant's usual feed size.
- Increase by 1 bottle per day thereafter until full 24-hour feed volume achieved with standard infant milk.
- The infant reaching full feeds (a 'successful re-challenge') with standard infant formula with no reoccurrence of symptoms does not require any further prescribed formula as a cows' milk protein allergy has not been diagnosed.
- If you diagnose cows' milk allergy, refer to a dietitian for delayed reaction.

2.2 Re-challenge for an exclusively breastfed infant:

- If CMPA is suspected, breastfeeding should be preserved if this is the mother's wish: **do not recommend cessation of breastfeeding** or introduction of specialist infant formula. Diagnosis of CMPA would be made by full removal of cows' milk protein (dairy-containing food and drinks) from the maternal diet for 2-4 weeks, leading to resolution of symptoms, and symptoms returning after retrial. Follow up telephone consultation should be scheduled to discuss re-challenge.
- If you diagnose cows' milk allergy, refer to a dietitian for delayed reaction.

2.3 Re-challenge for breastfed infants after delayed reaction:

- Mother should re introduce cows' milk protein (dairy-containing foods and drinks) into her diet in line with her previous normal diet; consider a discussion around timing this for early in the day initially, and volumes re-introduced, as appropriate.
- If symptoms stopped after exclusion but do not re-occur upon re-introduction, then a cows' milk protein allergy has not been diagnosed.
- If you diagnose cows' milk allergy, refer to a dietitian for delayed reaction.

3.0 A guide to infant formula choice for the management of CMPA

- "Follow-on formula is unnecessary (WHO, 2013). The NHS is clear that follow-on formula should never be fed to babies under 6 months and that there are no benefits to switching to follow-on formula after 6 months, with infant formula recommended throughout the first year." (FSNT 2020)
- First Steps Nutrition Trust (2020) *Follow on formula* Available at: Follow on-Formula March2020.pdf Accessed [12/11/24]

3.1 Extensively Hydrolysed Infant Formula (EHF)

- EHF formula is appropriate for the majority (approximately 90%) of infants with CMPA.
- EHF SHOULD NOT be prescribed if there is a history of severe symptoms or anaphylaxis.

3.2 Amino Acid formulas (AAF)

- These products are almost 3 times more expensive than EHF. Only a small proportion of infants with suspected CMPA need to be started on an AAF (10%)

AAF formulas are suitable when: -

- There is evidence of severe allergy / anaphylaxis
- An EHF does not fully resolve symptoms but CMPA is still suspected.

*Products are Halal, kosher vegan approved, column ticked for lactose free or pre/probiotic & safe preparation – See figure 2 (overleaf)

IMPORTANT NOTE for Figure 2: Nutramigen LGG 1 & 2 and Neocate Syneo are lactose free products which contain a probiotic (live bacteria) which has been reported to accelerate tolerance to cows' milk protein. These products are not recommended for premature or immunocompromised infants. To offer the benefit of the probiotic these formulas are reconstituted differently to standard WHO/DOH guidance, so families using these products should be advised to refer to the product's reconstitution details, but those prescribing these items should be aware that they are not able to be reconstituted with water at 70° which reduces food safety risk and denatures probiotics.

FIGURE ON FOLLOWING PAGE:
Products currently available for management of CMPA

Figure 2 - Advisory Committee on Borderline Substances (ACBS) – Products currently available for CMPA management

Product name	Manufacturer	Age suitable from			Reconstituted to food standard agency guidance	Suitable for			
			Lactose	Probiotics		Vegetarian	Vegan	Halal	Kosher
Extensively Hydrolysed Formulas									
Aptamil Pepti 1	Danone Nutricia	Birth	✓	X	✓	X	X	X	UK Kosher notes Aptamil Pepti 1, 2 & Syneo are made using pork trypsin enzyme, which is not present in the final product.
Aptamil Pepti 2	Danone Nutricia	6 months	✓	X	✓	X	X	X	
Aptamil Pepti Syneo	Danone Nutricia		✓	Not suitable for premature or immunocompromised infants. Not recommended for infants with central venous catheter or short bowel syndrome without full consideration of all the risks and benefits by a healthcare professional & careful monitoring.	X	X	X	X	
SMA Althera	Nestle Health Science	Birth.	✓	X	✓	✓	X	✓	X
Nutramigen 1 with LGG	Mead Johnson Nutrition	Birth	X	Lactobacillus rhamnosus (LGG®) not recommended for premature and immunocompromised	X	X	X	X	X
Nutramigen 2 with LGG	Mead Johnson Nutrition	6 to 12 months of age as part of a varied diet.	X		X	X	X	X	X

Product name	Manufacturer	Age suitable from			Reconstituted to food standard agency guidance	Suitable for			
			Lactose	Probiotics		Vegetarian	Vegan	Halal	Kosher
Nutramigen 3 with LGG	Mead Johnson Nutrition	1 year onwards as part of a varied diet.	X	infants unless directed and supervised by a healthcare professional.	X	X	X	X	X
Amino Acid based Formulas									
Puramino	Mead Johnson Nutrition	Birth up to 6 months of age or as part of a mixed diet for older infants and children.	X	X	✓	X	X	✓	✓
Neocate LCP	Nutricia	Birth. Suitable as a sole source of nutrition for infants under one year of age.	X	X	X	✓	X	✓	✓
Neocate Syneo	Nutricia	Birth. Suitable as a sole source of nutrition for infants under one year of age.	X	✓ Bifidobacterium breve M-16V. Not suitable for premature or immunocompromised infants. Not recommended for infants with central venous catheter or short bowel	X	✓	X	✓	✓

Product name	Manufacturer	Age suitable from			Reconstituted to food standard agency guidance	Suitable for			
			Lactose	Probiotics		Vegetarian	Vegan	Halal	Kosher
				syndrome without full consideration of all the risks and benefits by a healthcare professional and careful monitoring.					
Neocate Junior	Nutricia	Suitable as a sole source of nutrition from 1-10 years, or as a supplement to the diet from 1 year onwards.	X	X	X	✓	X	✓	✓
SMA Alfamino	Nestle Health Science	Birth	X	X	✓	✓	X	✓	X

Indicative cost range/average as at July 2024: Extensively hydrolysed formula for infants up to 12 months of age - £9.86 to £11.84 for 400g / Amino acid formula ££22.98 to £25.73; some of the post 12 months products are more expensive, e.g. Neocate Junior, at £37.44 for 400g. Information in this table was taken from 'Specialised milk marketed for infants with allergies in the UK' (June 2024), by First Steps Nutrition Trust and from manufacturer information.

4.0 Re-Introduction with milk and dairy products

Children on EHF or AAF should be re-introduced to cows' milk protein to establish if they have acquired tolerance to cows' milk protein. Two thirds of children outgrow their CMPA by 2 years of age. By three years of age only 10-15% of diagnosed children remain allergic to cows' milk protein. This is often referred to as a milk ladder under dietetic guidance.

4.1 Recommendations for challenging

It is recommended that infants are re-challenged after a period of 6 months.
For those with a history of anaphylaxis or severe symptoms, re-challenging should be directed by a specialist and is usually undertaken in the hospital environment. Reintroduction of cows' milk protein should take place under dietetic guidance.

- For exclusively breastfed infants who have been asymptomatic for the last 6 months, consider reintroducing milk via maternal diet.
- For formula only and mixed breast and formula fed children (who have been asymptomatic for last 6 months) challenge should be around age 9-12 months once established on milk free weaning diet.
- Initially children should be exposed to low levels of processed milk as it has lower allergic risk (e.g. in baked goods containing milk i.e. biscuits). Milk products are then gradually introduced and increased in a staged way depending on tolerance.

5.0 PRESCRIBING GUIDELINES

- When prescribing specialist infant formula use the table below. This offers a guide only based on average feed volumes. Some infants may require more, and this would be guided by the paediatrician or dietitian.
- To avoid waste, initially prescribe a 2-week supply of formula until tolerance and compliance is established. If clinical improvement is noted provide ongoing monthly prescriptions.

5.1 Figure 3. Quantities to prescribe

Age of child	Number of tins required for 28 days complete nutrition	Comments
Under 6 months	10 - 12 x 400g tins	Exclusively formula fed based on 150mls/kg/day of a normal concentration formula
6 – 9 months	8 -10 x 400g tins	Less formula required as quantity of weaning diet increases
9 – 12 months	6-8 x 400g/400g tins	
Over 12 months if indicated see below	6 x 400g tins	Requiring maximum 600ml of milk substitute per day, but formula use could be quickly replaced by fortified plant-based milks.

5.2 Prescription management

- Endorse prescriptions as Advisory Committee on Borderline Substances (ACBS) listed.
- Do not initiate formula in children aged over 1 year
- Ensure formula prescribing is monitored. If no robust monitoring in place do not prescribe formulas on repeat template. If applicable, add review date to prescription.
- Review regularly against quantities and type of formula prescribed and child's increasing age. Ensure infant's growth is monitored and recorded.
- Review against recent correspondence from specialist, if applicable (e.g. children with higher nutritional requirements or multiple allergies may need more formula for a longer period).

5.3 Review and discontinuation of specialist formulas

If the child is in receipt of a specialist infant formula on prescription, please continue to prescribe this until a standard infant formula is tolerated or until the age of 1 year. After the age of 1 year the infant can be transferred to cows'' milk (if tolerated) or a dairy free alternative if dairy is not yet tolerated.

6.0 Figure 4. OTHER SPECIALIST INFANT FORMULA

Use the table below for information and advice on other specialist infant formula and when it is appropriate to prescribe.

Product Type	**Name / manufacturer**	**General comments**	**Provision**
High Energy Infant formulas	Similac High Energy* (Abbott) SMA High Energy* (SMA) Infatrini (Nutricia) Infatrini Peptisorb (Nutricia)	Suitable from birth. Used in the management of infants who have faltering growth or who have their nutrition provided via an enteral tube feeding device. These formulae are not suitable as a sole source of nutrition for infants over 8kg or 18 months of age.	Prescribe as directed by secondary and tertiary care.
Post discharge nutrient enriched formulas for preterm infants	Nutriprem 2 (Cow & Gate) SMA Pro Gold Prem 2 (SMA) Cow & Gate Nutriprem Human Milk Fortifier (Nutricia) *	These formulas should only be prescribed on request from secondary or tertiary care for those preterm infants who have been identified as being at 'high nutritional risk' on discharge from the NNU. They are only suitable for infants born before 34 weeks gestation, weighing less than 2kg at birth who are not breast fed and should not be used to promote weight gain in other infants.	Prescribe as directed by secondary and tertiary care. Only prescribe the powdered varieties.

		Infants will have regular review and the product should be stopped as soon as catch-up growth is achieved. These formulas should not be prescribed beyond the age of 6 months corrected (EDD + 6 months) unless an infant has ongoing nutritional concerns as advised by secondary or tertiary care where the child remains under specialist care.	
Soya Infant formulas	SMA soya *	Not suitable as a first-line alternative for the management of Cows' allergy in infants under six months of age. Can be used from birth for the management of the inborn error of metabolism galactosaemia.	If parents choose this formula for their infant, it should be purchased over the counter. Formula should be prescribed and endorsed ACBS for the management of galactosaemia.

*Products are halal approved at time of publication – please check prior to prescribing/purchase

FIGURE ON FOLLOWING PAGE: Lactose Intolerance Care Plan

7.0 LACTOSE INTOLERANCE

7.1 CARE PLAN TO SUPPORT IDENTIFICATION AND MANAGEMENT OF lactose intolerance in a baby under 1 yr

INTENDED OUTCOME/GOALS	ACTION PLAN
Protect any breastfeeding Early detection of potential lactose intolerance and implementation of a diagnostic management plan can alleviate baby's symptoms, support optimal feeding, and improve overall feeding experience. **Diversity and Inclusion** All support should be inclusive of a family's particular need and be adapted to match specific learning and language needs. Our language should also reflect the diverse groups we support	Lactose intolerance occurs when the body cannot digest lactose, a natural sugar found in milk. **Lactose intolerance is NOT the same as a Cows' Milk Protein Allergy.** There are 4 clinical classifications of lactose intolerance as outlined below. This care plan refers only to secondary lactose intolerance. Equally it does not refer to galactosaemia which is a serious rare inborn error of metabolism and requires lifelong avoidance of galactose (therefore avoidance of lactose as this is broken down into galactose and glucose). 1) Secondary lactose intolerance: may occur because of small bowel injury due to conditions such as gastro-enteritis, Giardiasis, non-IgE cows' milk enteropathy, coeliac disease or Crohn's disease. 2) Developmental lactase deficiency: observed in premature infants less than 34 weeks gestation due to temporary lactase deficiency which improves with time. 3) Congenital lactase deficiency: a rare and severe autosomal recessive disorder presenting in newborns infants with severe osmotic diarrhoea at commencement of breastfeeding with small intestinal lactase activity completely absent leading to failure to thrive, and may lead to life-threatening dehydration or electrolyte imbalances, 4) Lactase non- persistence: occurs in 70% of the global population generally not before 5 years of age whereby there is a physiological gradual decline of lactase activity but small amounts of lactose is tolerated **Symptoms of secondary lactose intolerance can include:** ✓ Diarrhoea (often green and frothy) ✓ Abdominal pain ✓ flatulence X Vomiting and reflux is NOT a common symptom of lactose intolerance. **Actions to complete when Lactose Intolerance is suspected:** ✓ complete a feeding history, ✓ support responsive feeding day and night, ✓ support mum to optimise baby's position and attachment at the breast, support mum to access local infant feeding/breast peer support groups,

ensuring families feel accepted.	✓ if baby is bottle-fed, reiterate paced responsive bottle-feeding. ✓ if using formula ensure correct preparation of first stage formula ✓ Build mums confidence by providing follow up support and sign posting to infant feeding groups within Health Visiting service and parental support groups and breastfeeding peer support when appropriate. **Treatment -** ✓ If breastfeeding – support mum to continue to breastfeed, provide reassurance her milk will support the gut to repair. ✓ Mum does not need to restrict dairy from her diet, as this is not an allergy to Cows' milk. ✓ If formula feeding/combined feeding support mum to maximise her breastmilk supply and recommend a lactose free formula is purchased (from supermarket / pharmacist. ✓ Secondary lactose intolerance usually resolves within 1-2 months depending on the underlying gut disorder- if formula feeding then re-try with standard formula after 2-4 weeks. If due to celiac disease, cows' milk protein allergy (CMPA) or other small intestinal pathology lactose restriction may be required until the underlying condition has resolved or adequately treated. ✓ If no improvement refer to GP/Paediatrician according to local pathway ✓ Support mum to access local infant feeding/breast peer support groups via Health Visitors

FIGURE 5: Lactose Intolerance

8.0 ACKNOWLEDGEMENTS

- Pan-Mersey Prescribing Guidelines for Specialist Infant Formula Feeds in Lactose Intolerance and Cows' Milk Protein Allergy (2016)
- PrescQIPP bulletin Nov 2016 – Appropriate prescribing of specialist infant formulae (foods for special medical purpose)
- The North West Paediatric Allergy Network
- Bristol Royal Hospital for Children
- CMPA sub-group with members from organisations across ICB including Paediatric Dietitians, with colleagues from Baby Friendly/Infant Feeding teams, Medicines Management, Women, Children, Young People & Maternity Team and Community Services
- First Steps Nutrition Trust

9.0 REFERENCES

Allergy UK, iMap Guideline 2017 https://www.allergyuk.org/health-professionals/mapguideline

Antonio Bognanni. et al. 2024, World Allergy Organization (WAO) Diagnosis and Rationale for Action against Cows' Milk Allergy (DRACMA) guideline update – XII – Recommendations on milk formula supplements with and without probiotics for infants and toddlers with CMA. World Allergy Organ J, Volume 17, Issue 4, 1000888 accessed online https://www.worldallergyorganizationjournal.org/article/S1939-4551(24)00019-X/fulltext

BSACI guidelines 2014, Cows' milk Allergy, Clinical & Experimental Allergy. Volume 44 Issue 5, May 2024, pages 642-672

British Dietetic Association Food Fact sheet - Suitable milks for children with cows' milk allergy August 2017 https://www.bda.uk.com/foodfacts/CowsMilkAllergyChildren.pdf

First Steps Nutrition Trust (2024) 'Specialised milk marketed for infants with allergies in the UK' [Accessed: 27.12.24]

Food allergy in children and young people. Diagnosis and assessment of food allergy in children and young people in primary care and community setting (CG 116). NICE 2011.

Hilary I. Allen. et al. 2020, Detection and management of milk allergy: Delphi consensus study. Clin Exp Allergy 2022; 52: 848-858

Hilary I Allen. et al. 2024, Prevalence and risk factors for milk allergy overdiagnosis in the BEEP trial cohort. Allergy. Accessed online https://doi.org/10.1111/all.16203

https://maternityresourcehub.com/our-priorities/prevention/infant-feeding/

National Institute for Health and Care Excellence (NICE) (2021) Cows' Milk Allergy in Children Clinical Knowledge Summary https://cks.nice.org.uk/topics/cows-milk-allergy-in-children/

North West Allergy and Immunology Network, http://www.allergynorthwest.nhs.uk/

Ralf G. Heine. Et al. 2017, Lactose intolerance and gastrointestinal cows' milk allergy in infants and children- common misconceptions revisited. World Allergy Organ J, Volume 10 (1): 41 accessed online https://doi.org/10.1186%2Fs40413-017-0173-0

Shirya Metha. et al. 2022, Trends in use of specialized formula for managing cows' milk allergy in young children. Clinical & Experimental Allergy. 52: 839-847

Venter. et al. Clin Transl Allergy (2017) Better recognition, diagnosis and management of non-IgE-mediated Cows' milk allergy in infancy: iMAP—an international interpretation of the MAP (Milk Allergy in Primary Care) guidelines

World Health Organisation. International Code of Marketing of Breast-milk Substitutes. 1981

Yilmaz et al 2021. The relationship between dietary elimination and maternal psychopathology in breastfeeding mothers of infants with food allergy. Paediatric Allergy Immunology. 33:e13670. https://doi.org/10.1111/pai.13670