

# Suspected Cow's Milk Protein Allergy (CMPA) Algorithm



**Inclusion Criteria:** NICU patients presenting with symptoms noted below.

## IgE

- Reaction within 2 minutes up to 2 hours (early onset after consumption)

## Non-IgE

- Reactions within 2 – 72 hours up to 1 week (usually occurs in the 1<sup>st</sup> month of life)

## Symptoms

### GI:

Colic  
Emesis  
Diarrhea  
Bloody stool  
Feeding aversion

### Clinical:

Eczema  
Atopic Dermatitis  
Poor weight gain  
Stridor  
Rhinoirrhoea

## Extensively Hydrolyzed (EH) Formulas

- Nutramigen
- Alimentum
- Gerber Extensive HA
- Pepticate

## Elemental Formulas

- Neocate Infant
- Elecare Infant
- Alfamino Infants
- Puramino Infant

## Maternal Education

- See Patient & Family Education handout "Cow's Milk Protein Allergy"

## Inpatient Workup

- ☐ Family history of food allergy
- ☐ Diet history
- ☐ Routine labs (CBC, CRP, electrolytes)
- ☐ Stool occult test not routinely recommended unless indicated by clinical presentation
- ☐ Physical / Anal exam
- ☐ Abdominal x-ray and/or abdominal ultrasound
- ☐ Registered Dietitian (RD) & Lactation consults (LC)
- ☐ GI Consult prior to discharge (for outpatient follow-up)

## Discharge Considerations

- Arrange formula for home if going home on EH or Elemental formula (rarely covered by private insurance)
- WIC prescription to be completed for EH or Elemental formula if applicable

## Severity of Symptoms

### Mild/Moderate Presentation

- Symptoms above +/- any of the following:
  - Streaks of small volume blood in stool (infrequent)
  - Frequent spit ups/discomfort with feeding (including significant reflux)

**Follow:** Mild/Moderate CMPA Algorithm

### Severe Presentation

- Symptoms above +/- any of the following:
  - Frequent/frank/large volume bloody or liquid stool
  - Low hemoglobin
  - Dehydration/hypovolemia

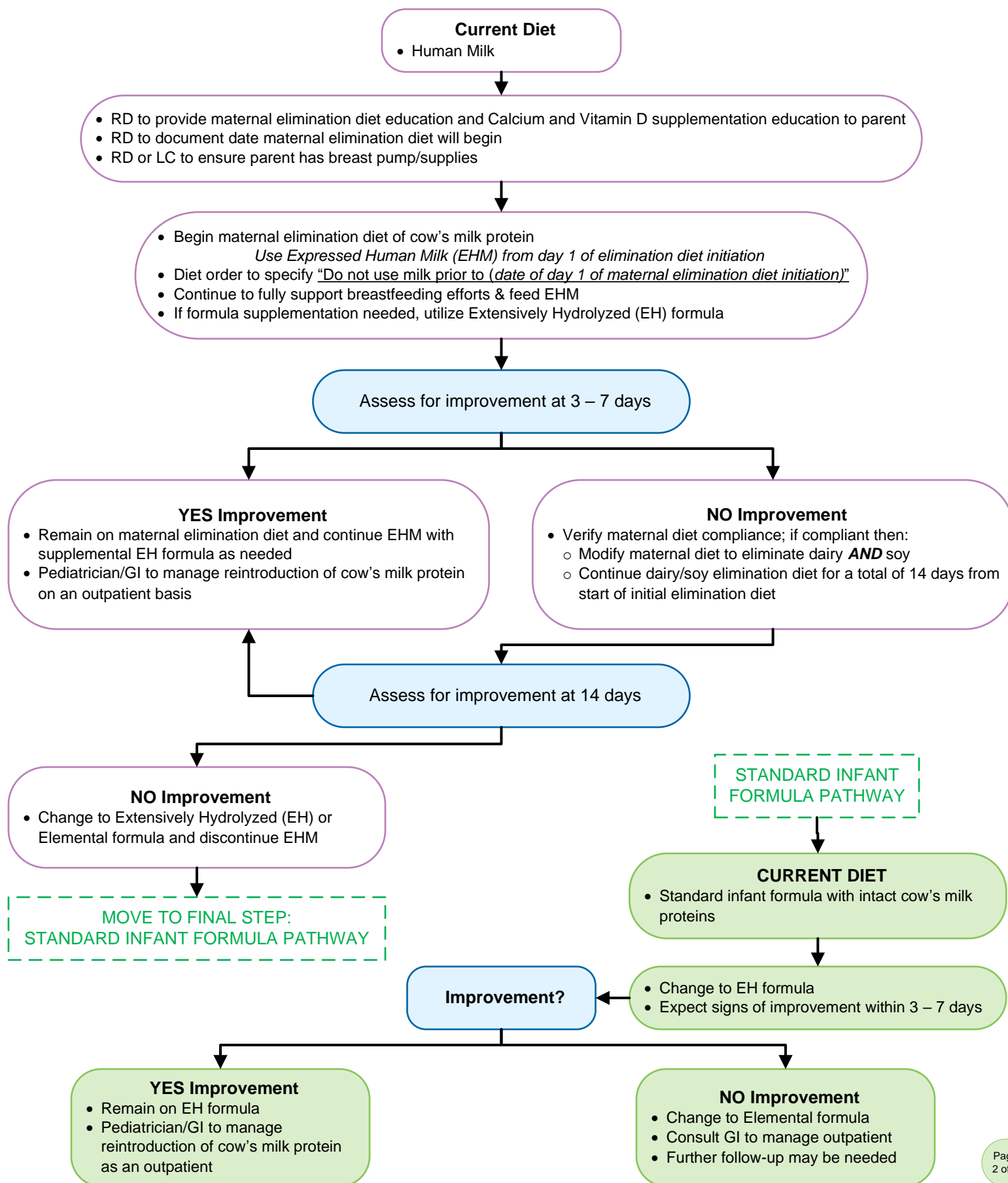
**Consult** GI and Surgery

**Follow:** Severe CMPA Algorithm

# Cow's Milk Protein Allergy (CMPA) Algorithm



## Mild/Moderate



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## Severe

- Diet order: NPO
  - Length of NPO per provider/GI/Surgery
  - GI & Surgery consults
  - Monitor daily exams and bloody stools
  - MOPs per NICU team
  - TPN if NPO expected > 3 days

Upon reintroduction of feeds:  
Feeds per Surgical Guidelines

### CURRENT DIET

- Human Milk

### CURRENT DIET

- Standard infant formula or Extensive Hydrolyzed (EH) formula

- Elemental formula
- Pediatrician/GI to manage on outpatient basis

- RD to provide maternal elimination diet education and Calcium and Vitamin D supplementation education to parent
- RD to document date maternal elimination diet will begin
- RN or LC to ensure parent has breast pump/supplies

- Begin maternal elimination diet of cow's milk protein (consider soy per MD/RD discretion)
- Start Elemental formula until able to reintroduce Expressed Human Milk (EHM) after washout period of 7 days
- Continue to fully support lactation efforts

- After 7 days of maternal elimination diet, start gradual reintroduction with up to 50% EHM of feeding volume and increase % EHM every 2-3 days as tolerated
- Diet order to specify "Do not use milk until (date of post 7 days of maternal elimination diet)"

Assess for improvement 3 - 7 days after reaching 100% EHM

### YES Improvement

- If remains stable upon reintroduction of EHM:
  - Parent to remain on maternal elimination diet
  - Continue EHM
  - Pediatrician/GI to manage reintroduction of cow's milk protein on outpatient basis

### NO Improvement

- Verify maternal diet compliance
- Re-evaluate initial "Inpatient Workup"
- Consider other food elimination
  - If continues with symptoms:*
  - Discontinue use of EHM
  - Change to Elemental formula
  - Pediatrician/GI to manage reintroduction of cow's milk protein on outpatient basis

# Cow's Milk Protein Allergy (CMPA) Algorithm



## *Cow's Milk Protein Allergy (CMPA) References*

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