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For Medical Providers, Health Care Professionals

As a critical public health partner, Oregon WIC is sharing the following information impacting our shared patients.

Guidance for Navigating the Formula Shortage

The formula shortage continues across the United States. In early May 2022 a Washington Post article estimated a 41 – 43% shortage of infant formula across the country. This varies state to state. The same article listed Oregon having an estimated 31% shortage of infant formula as of May 6th.

Families look to public health professionals for reliable information to keep their babies safe, healthy, and growing. Oregon WIC has been at the forefront of this issue from the beginning. This document provides information about formulas overall and alternative strategies you may hear from families who are struggling to feed babies. We are sharing these talking points and information with you as to assist the families you support. These are some of the most common topics and strategies available.

Recommended strategies

Use different formula brands

Most babies, especially older infants, can switch brands of similar types of infant formulas without trouble. Those whose infants can have the most common formula have

many options. For example, an infant who typically uses *Similac Advance*, will likely tolerate formulas from the other 3 major manufacturers: *Enfamil, Gerber, and Perrigo.*

Some families are hesitant to change brands because they are afraid it will be hard on their baby. The good news you can share is store-brand formulas are made by the same manufacturer, Perrigo. This includes national and regional retailers like Walmart, Target, Costco, Kroger (which includes Fred Meyer, QFC, Food 4 Less, Frys and many more), CVS, Walgreens, and Safeway. If a participant says they cannot find a store-brand formula, such as Target's *Up & Up Gentle*, they can use Walmart's *Parent's Choice Complete Comfort* or Safeway/Albertson's *Signature Gentle Care* in its place and know their infant is getting the same formula.

Infants on specialty formulas such as *Alimentum. NeoSure, Elecare, PurAmino, or Neocate* should talk with their medical provider about appropriate substitutions for their baby. Infants with medical conditions that require specialized formulas not available in the stores should work with their medical provider. Encourage providers to include all medically acceptable formulas on the *WIC Medical Documentation Form* as a way of avoiding back and forth communication when formulas need to be changed due to availability. A resource has been developed to assist in this process.

A resource for formula alternatives is available here (English and Spanish) This document is useful for anyone who needs assistance understanding the variety of names and brands for similar products, though it is written for WIC participants.

Re-starting breast feeding

Re-starting breastfeeding is an option for some families. People who are using both breast milk and formula can contact a lactation consultant to learn how to increase breast milk production. Some may have stopped breastfeeding and now want to re-start. Parents will need support from an International Board Certified Lactation Consultant (IBCLC) who has experience with induced or re-lactation.

Donated Breast Milk

Another option is using human breast milk to replace formula. The quality of breast milk varies based on the person from whom the milk is donated. Things to consider are medication use, infectious diseases, and safe handling of the breast milk. Best practice is to use breast milk that has been medically screened and tested. We do **not** recommend internet-based breast milk sharing.

Donated breast milk is typically used by hospitals for infants in the NICU. Some hospitals are making breast milk available to the public with a physician's prescription. For information about how to donate breast milk or obtain donated breast milk contact www.donatemilk.org.

Encourage families to talk with their doctor

Encourage families to reach out to their child's health care provider if they use a specialized formula. Their provider can offer ideas for alternative formulas. Providers are also able to make an urgent request by contacting Abbott directly for specialized formulas that are difficult to find by calling 1-800-881-0876 or submitting a product request form available online (https://abbottnutrition.com/metabolics).

Alternatives that are *not* recommended

Do not dilute formula

Families might be tempted to dilute formula to stretch what they have. Diluting infant formula can be dangerous and even life threatening for infants. Some consequences of diluting formula include water toxicity and nutrient deficiencies. Please see water toxicity and Vitamin deficiencies in the ***Potential red flags for complications*** section.

Do not use homemade formula

Families may be tempted to create their own infant formula. These homemade formulas are lacking in nutrients, depending on the type of formula. Common deficiencies in homemade formulas include protein, Calcium, Vitamin D, Vitamin E, and Iron. Homemade formulas may also include too much water, creating the risk of water toxicity.

Homemade formulas are based on a milk source such as goat's milk, whole milk, evaporated milk, and condensed milk. Some are made with plant-based milks such as soy, oat, rice, and hemp. Plant-based milks are often lower in fat, reducing the overall calories provided by the formula putting infants at risk for poor growth or failure to thrive.

Goat milk is a popular milk alternative for homemade or customized infant formula. Goat milk is often not pasteurized and may contain harmful bacteria such as E. coli, Listeria, and Salmonella. This is also true for any animal milk that is not pasteurized such as sheep and cow's milk.

The most common concerns for homemade formulas include:

- Not enough or too much iron, Vitamin D, Vitamin C, and Vitamin A
- Heavy renal solute load for developing kidneys
- Food safety due to poor food handling practices
- Food safety due to lack of pasteurization
- Changing the timing of food introduction which increases risks for infants with food allergies

Check the ***Potential red flags for complications*** section for red flags for each of these concerns.

Avoid whole milk for babies under 12-months

Whole cow's milk is not recommended until a **baby is eating more than 50% of the needed caloric intake from jarred or table food, especially iron-rich foods.** Babies typically don't meet that requirement until they are a year old. Parents should talk with the baby's medical provider to learn if this is an option.

Whole cow's milk is lower in some nutrients including iron, Vitamin E, and linoleic acid. It also provides too much protein, sodium and potassium for the infant's developing organs (kidney and liver) to process. See the ***Potential red flags for complications*** section for more information.

There are no safe alternatives to breastmilk or FDA-approved formula. The American Academy of Pediatrics (AAP) has families can use cow's milk for infants over 6 months for no more than a week. This should be an option only if families have done everything

they can to find formula and are unsuccessful because of the formula shortage. This is not an option for older infants using specialized formulas, have food allergies, or special health care needs. If you are in a position in which you need to offer a small amount of cow's milk to your older infant, please talk to your pediatrician.

Do not use toddler formulas for infants

Toddler formulas are formulated similarly to cow's milk. That means a toddler formula will also provide more protein, calcium, Phosphorus and Potassium. These excesses may increase the renal solute. If the infant is not also eating a significant amount of table food, this may be troublesome over time. Toddler formulas may be lacking in iron and Vitamin D. See the section on Vitamin D in the ***Potential red flags for complications*** section for red flags.

Potential Red flags for complications from using alternative infant formulas

This section lists the various red flags for complications that can develop when using unrecommended formula alternatives. Seek medical attention and if an infant is experiencing these symptoms and the family is using an unapproved formula listed above. Encourage and offer assistance to families using unapproved alternatives to use appropriate formula.

Water toxicity

Infants' kidneys are still forming in the first year of life and are unable to break down extra water. This can lead to water toxicity. The brain is the organ most vulnerable to water toxicity. Water toxicity is a specific concern when formula is diluted and homemade infant formulas, especially those made with plant-based milks.

Signs of water toxicity

- Confusion
- Lethargy
- Inattention
- Poor coordination

- Nausea
- Vomiting
- Seizure

What to do

If you notice these changes in an infant, encourage them to consult their health care provider. Encourage the use of approved formula.

Too little protein

Protein is key for an infant's growth in the first year of life. The type and amount of protein is important. Too much protein is hard for developing kidneys. Too little protein will result in poor growth. Too little protein is a risk for diluted formula and plant-based homemade infant formulas. Too much protein is a risk for infants receiving whole milk who are not also eating 50% of their calories from any combination of jarred baby food and table foods.

Signs of too little protein

- Poor growth rate or a slowing of growth
- Slow wound healing
- Bone or joint pain
- Decreased muscle development
- Fatigue
- Hunger
- Lower immunity

What to do

If you notice these changes in an infant, encourage them to consult their health care provider. Encourage the use of approved formula.

Low iron

Iron is an essential nutrient for babies. It is deficient in most unapproved formula options including whole milk, goat's milk, plant-based milks, diluted formula, and toddler milk.

Signs of low iron

- Anemia
- Changes in stooling such as blood loss through stools
- Irritability
- Lethargy

What to do

Babies with these symptoms should be seen by their health care provider. Encourage use of approved formula.

Low calcium

Calcium is essential for developing strong bones and teeth in infants. Calcium also is a key electrolyte and plays a role in the heart, nerves, muscles and other body systems. Low calcium is a risk for those using diluted formula, homemade infant formula, and plant-basted milks.

Signs of low calcium

- increased fussiness
- vomiting
- seam weak or floppy
- tremors
- seizures
- weak nails
- slow hair growth
- thin skin
- muscle cramps

What to do

Babies with these symptoms should be seen by their health care provider. Encourage use of approved formula.

Low Vitamin D

Vitamin D works in partnership with calcium to build strong bones and teeth. Low Vitamin D is a risk for those using diluted formula, homemade infant formula, and plant-based milks.

Signs of low Vitamin D

- Delayed walking
- Poor growth (particularly in height)
- Irritability
- Rickets
- lethargy

What to do

Babies with these symptoms should be seen by their health care provider for evaluation. Encourage use of approved formula.

Low Vitamin E

Vitamin E plays an important role in brain development for infants. Infants are born with a low reserve of Vitamin E making it an important nutrient. Low Vitamin E is a risk for those using diluted formula, whole milk, plant-based milks, and homemade infant formula.

Signs of low Vitamin E

- Change in reflexes
- Change in spatial awareness
- Change in feeling in arms and legs.

What to do

Babies with these symptoms should be seen by their health care provider for evaluation. Encourage use of approved formula.

Risk of harmful bacteria

There is a risk of food-borne illness with any feeding solution other than directly breastfeeding. Food handling and food storage methods are important for keeping food safe for infants. Use of unpasteurized animal milk for infants increases the risk of exposure to harmful bacteria such as Listeria, E. coli, and Salmonella.

Red flags for food-borne illness

- Vomiting
- Diarrhea
- Flu-like symptoms such as fever, headache, and body ache

What to do

Babies with these symptoms should be seen by their health care provider for evaluation. Encourage use of approved formula and review food safety guidelines.

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Thank you for your partnership and working together to keep Oregonians safe and healthy.

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