DATE: December 14, 2016
TO: WIC Coordinators & CPAs
FROM: Valerie Haack, WIC Training Coordinator
SUBJECT: Iron Deficiency Anemia – Topic of the Month

For a thorough review, we suggest the [MN WIC Iron Deficiency Anemia Training Module](#)

**Anemia Data for MN WIC**

WIC plays a critical role in preventing anemia, and in identifying and helping resolve anemia when it occurs. Careful diet assessment and counseling to improve overall dietary quality and iron absorption, will help in both preventing and resolving anemia.

WIC 2015 data showed 12.9% of 1-5 year olds had low hemoglobin levels, indicating anemia. These rates have not shown recent improvement. For details on anemia rates for specific areas of MN, refer to [2015 WIC Health Indicators Summaries by County, CHB and City](#).

Preliminary analysis of anemia data for those 1-5 year olds indicates that 60% of those children identified with anemia had a normal hemoglobin level within one year.

**Nutrition Assessment**

A thorough nutrition assessment will help identify possible causes for low hemoglobin values and contributing factors to Iron Deficiency Anemia. Assessing the overall diet quality is also important because other nutrients play a role in iron metabolism and contribute to red blood cell formation. These include zinc, copper, and vitamins B6 and B12. The assessment will also identify diet and/or behavioral factors which could be a focus for nutrition counseling. For 1-5 year olds, consider:

- **Is the toddler or child “picky”?** Eats lots of “junk food”? Avoids eating meat or only eats processed meats like hotdogs? Limited variety of foods?
- **How much milk is being consumed?** Is milk consumption > 24 oz? Is the child weaned from the bottle? Is milk replacing other foods? Does mom know how much milk is appropriate?
- **Is the parent a vegetarian/vegan?** Do they feed the toddler meat? What non-meat sources of iron do they eat?
- **Does the family have food insecurity?** This can contribute to Iron Deficiency Anemia. Is a referral needed?
- **Does the child drink large amounts of sweetened beverages?** Impacting overall diet quality?
- **Has a vitamin with iron been recommended by the health care provider?** Do they have them? Do they take them, and if so, how often?
- **Have lead levels been tested?** Normal?
- **Other medications or health concerns?**
- **Growth pattern?**
- **Behavioral concerns?**
Anemia Counseling Tips:

Once a thorough nutrition assessment has been completed, utilize PCS skills to open a conversation about anemia, taking into consideration the parent’s knowledge, interest and motivation.

Explore: What does the participant know about anemia?

Offer: Information about anemia based on the participant’s interest and knowledge. Keep it simple. For parents of young children, share facts that may motivate change, like anemia can:
- make a child tired and cranky;
- lower the ability to fight off infections, causing the child to get sick more often;
- affect the ability to concentrate and learn.

Explore: What they think about the information provided (listen for change talk, and motivation to resolve the anemia).

Offer: Education based on the nutrition assessment and considering what the participant already knows and would like to learn about anemia. Concentrate on easy, doable tips to increase iron intake and absorption as well as overall diet quality. This might include talking about:

- **Foods high in iron.** Point out WIC foods that are high in iron, and discuss other foods that are good iron sources. Heme iron -- the type found in animal products such as red meat, fish and chicken -- is much better absorbed by the body, compared to non-heme iron (the type in plants). Small quantities of meat in the diet can make a large contribution to important nutrients including iron, if accepted by the participant. **Explore:** What high iron foods the participant typically eats, and those they might consider trying, or eating more often. See List of Foods High in Iron

- **Minimizing foods that interfere with iron absorption.** If the assessment identified large intake of foods that may adversely affect iron absorption such as coffee, tea and milk, explore whether the participant might be open to decreasing the quantity consumed and/or consuming these between meals.

- **Tips for increasing iron absorption:** Iron containing food + Vitamin C food combos. Offer simple doable tips such as eating WIC cereal as a snack with a small glass of WIC juice or a citrus fruit. Or eating a bean burrito with tomatoes for lunch. See List of Foods High in Vit. C

- **Overcoming barriers to taking iron supplements.** Often multivitamins or iron supplements are recommended by health care providers. WIC can serve an important role in helping participants work through the barriers that may exist to taking the supplements consistently. **Explore:**
  - **Hesitations to giving child a supplement**
    - Perceived side effects, such as constipation or increased appetite.
    - Avoiding ingredients that may be in a tablet, such as gelatin, gluten or dyes.
    - “Baby doesn’t like it” challenge, such as with iron drops.
    - Confusion in choosing an over the counter multi-vitamin with iron (most gummies do not contain iron)
    - Cost (may be covered by insurance, with a prescription)
  - **Ideas for remembering to give the child the iron supplement**
    - Place it in a visible place, but inaccessible to toddlers (can be poisonous)
    - Set a recurring alarm on their phone
Want More Info on Iron Deficiency Anemia and its effect on growth and development?

Attend the **MN WIC Conference May 3-5 2017**. A physician who conducts research in this area will be speaking about emerging research on iron and its effects on development. Also, next Topic of the Month will focus on **Prenatal Vitamins and anemia during pregnancy**.

**Training Resources and References:**

- MN WIC Iron Deficiency Anemia Training Module
- MN WIC Nutrition Education Card--Iron
- 2015 MN WIC Health Indicators Summaries by County, CHB and City
- Iron – NIH Fact Sheet
- AAP Clinical Report Diagnosis and Prevention of Iron Deficiency Anemia
- CDC Recommendations to Prevent and Control Iron Deficiency Anemia
- Iron Absorption Mechanisms--Harvard