Reducing Iron Deficiency Anemia in Young Children

May 4, 2010
MCAH Program
Sonoma County
Objectives for today:

- Review local prevalence data on IDA
- Identify key factors contributing to IDA in young children
- Reach consensus on the strongest contributors to IDA in Sonoma County
- Begin consideration of interventions to reduce IDA over the next 5 years.
Healthy People 2010 Goal

Reduce the incidence of Iron Deficiency Anemia in the United States to < 5%
Pediatric Nutrition Surveillance Data (PedNSS)

Anemia Rates Sonoma County Compared to California

14.8 14.7 14.7 14.8 14.9
22.5 22.1 21.7 20.2 19.3

Sonoma Cty
CA

1-2 year olds
Anemia Rates 2004 & 2008 in RCHC Counties

<table>
<thead>
<tr>
<th>County</th>
<th>2004</th>
<th>2008</th>
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</thead>
<tbody>
<tr>
<td>Sonoma</td>
<td>18.60%</td>
<td>18.40%</td>
</tr>
<tr>
<td>Marin</td>
<td>8.00%</td>
<td>10.70%</td>
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<tr>
<td>Napa</td>
<td>22.00%</td>
<td>26.00%</td>
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<tr>
<td>Yolo</td>
<td>12.80%</td>
<td>14.50%</td>
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<tr>
<td>California</td>
<td>14.00%</td>
<td>14.30%</td>
</tr>
<tr>
<td>U.S.</td>
<td>12.80%</td>
<td>15.00%</td>
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Anemia Rates in Sonoma County (%)
Who is affected?

- Premature infants
- Adolescents
- Pregnant women
- Picky eaters
- Overweight children
- Families with poor access to healthy foods
Individual Factors Associated with IDA

- Low preconception maternal iron stores
- Uncorrected iron status during pregnancy
- ↑ demand for fetal iron: chronic fetal hypoxia
  (IUGR, uncontrolled maternal hyperglycemia)
- Early umbilical cord clamping
- Preterm & low-birth weight infants
- Infant feeding practices
  - Breast/formula combo feeding
  - Delayed intro solids & high intake of milk replacing Fe-rich foods
Family & Institutional Factors

- Household
- Economic
- Education
- Health care provider
- Community
Societal & Policy Factors Associated with IDA

- Economic
- Health care
- Environmental
Some of the Strategies Implemented to ↓IDA

In Health Care Settings:
- Updating well-baby visit forms
- Staff training on IDA including health education
- Development of patient education materials
- Distribution of multivitamins w/ Iron to high-risk toddlers

In the Community:
- Consultation to child care providers, preschools & schools
- Promatorese- *Raising Healthy, Active Kids*
- Improving access to healthy foods with *Megan Furth Harvest Mobile Food Pantry*
New WIC Food Package

IOM Recommendations

- Consistent with Current Dietary Guidance for Infants
  - Complementary foods provided beginning at age 6 months, rather than at four months of age.
  - Juice eliminated in favor of baby food fruits and vegetables to promote healthy eating patterns.
  - Baby food meats provided to fully breast-fed infants after 6 months of age to provide iron and zinc in forms that are easily absorbed and utilized by the body.
Other Potential Interventions?

• Promote delayed cord clamping (2-3 minutes) with obstetrical providers
• Infants born <33wks or birth wt <1800 g supplement iron at 4 weeks of age
• Increase monitoring of anemia in women of childbearing age
• Increase awareness of the decreased absorption of iron with combo feeding