Time to Re-evaluate WIC Blood Test Requirements!

Needed: Scientific Review of the WIC Blood Test Requirements

The timing is excellent for the U.S. Department of Agriculture (USDA) Food and Nutrition Services (FNS) to sponsor an investigation into the current research and medical practice related to biochemical assessment and testing in the Women, Infants and Children (WIC) Supplemental Nutrition Program. Similar to the work commissioned by USDA/FNS on dietary risk assessment and on updating the food packages, such an investigation has the potential to bring positive benefits to the program as it enters its fourth decade of successful operation.

Background

In the past decade, FNS has successfully updated the standards for anthropometric assessment, standardized the clinical and dietary risks that qualify applicants to participate in the WIC program, established standards and best practices for the nutrition and breastfeeding services offered to participants, refocused WIC nutrition education on childhood obesity prevention, and — most recently and significantly — updated the food benefits to align with U.S. Dietary Guidelines. Now it's time to update WIC's biochemical assessment rules to align with current research and public health practice.

Biochemical Assessment in WIC

At the time of WIC's inception in the early 1970s, iron-deficiency anemia was a critical public health nutrition issue facing low-income women and children in the United States. Numerous studies have since confirmed the success of public health initiatives, including the WIC program, in significantly reducing the prevalence of this condition.[1,2,3] Structural changes in American society that contributed to this success include WIC nutrition education and breastfeeding support for low-income families;[4] WIC-provided iron-fortified infant formula and cereals, which led to these products being commonly available even to families not participating in WIC; and efforts by the health care provider community to screen for the condition and treat with iron supplements when needed.[1]

In the 1990s, several national committees and task forces were convened to examine the evidence and make recommendations regarding the frequency and type of screening appropriate for iron deficiency. In addition to the Centers for Disease Control and Prevention (CDC), the Institutes of Medicine (IOM), the American Academy of Pediatrics (AAP), and the U.S. Preventive Services Task Force (USPSTF), among others, prepared updated guidelines.

Among these reviews, CDC's recommendations are the most expansive. For example, whereas the USPSTF recommends screening for *pregnant women and high-risk infants only,* CDC's recommendations include screening for *high-risk populations* of infants, preschool children, pregnant women and non-pregnant women of childbearing age [emphasis added].

In response to these various investigations, USDA/FNS revised federal regulations to bring WIC requirements related to blood tests in line with the CDC guidelines. The 1998 revision tried to strike a balance between the expense of conducting screening in the WIC office and the challenges of obtaining

results from an off-site health care provider by relaxing the screening requirements considerably. Nonetheless, the revised USDA regulations still assume that iron-deficiency anemia is a critical public health nutrition issue, and they require states to commit significant WIC resources to obtaining and documenting test results.

Changes in Public Health Nutrition Issues Since 1998

Since the last federal revision of WIC bloodwork rules, new questions related to biochemical testing have arisen. A voluminous body of research — and the federal government's own priorities — have been increasingly focused on the issues of childhood overweight, obesity, and the added risks for gestational and childhood-onset diabetes. The data suggest that scarce WIC resources would be better focused on addressing this public health epidemic, based on facts such as the following:

- The prevalence of iron-deficiency anemia (IDA) in the United States has dropped significantly in infants and children, particularly for infants not exclusively breastfed.[1]
- One five-state, cross-sectional study showed decreases of up to 75% in IDA from the early 1980s to the mid-1990s.[2]
- Nationally, the prevalence of IDA is about 10% for 3- to 5-year-olds.[3] In contrast, *one-third* of all children are overweight or at risk of overweight (greater than 85th percentile BMI)[3] and about *two-thirds* of women of childbearing age are overweight or obese.[4]
- WIC data from 2006 show that 9.9% of program participants reported IDA at certification, an increase of only 0.4% from 2004. But 23.6% of participants reported high weight-for-height, an increase of almost 2% since 2007.

There is no question that WIC has a role to play in screening for and educating about prevention of iron deficiency. But it is time to ask: What is the suitable WIC role, and what level of screening is appropriate given the current public health challenges facing our population? The substantial cost of WIC anemia screening is eroding already inadequate Nutrition Services funds. These funds would be better used by local programs to harness the WIC program's full capacity to address the obesity epidemic.

Recommendation

The USDA is urged to rethink priorities and expenditures relating to biochemical testing:

Report language should be included in the upcoming Child Nutrition and WIC Reauthorization bill requiring USDA to commission a comprehensive scientific review of WIC biochemical assessment and testing regulations.

Questions Related to Biochemical Testing/Screening and WIC Priorities

The following questions are just some of those that need to be researched and that might be explored:

- What is an appropriate amount of blood testing for iron-deficiency anemia to be performed/ obtained by WIC staff?
- On what basis could a more precise definition of "high-risk" for anemia than "all low-income women and children" be developed?
- What is the research-based justification for obtaining a blood test for anemia in the early postpartum period?
- Given that virtually all non-breastfed infants in the U.S. receive iron-fortified infant formula, what is the risk for iron-deficiency anemia in the first year of life for an infant WIC participant? For a child WIC participant? For a child WIC participant who was not on WIC in infancy?
- Given the disparity between the prevalence of iron-deficiency anemia and of overweight, what should WIC's priorities be in screening for and intervening in these conditions?
- Is it feasible to revise WIC screening for iron-deficiency anemia to be in line with the screening currently done for elevated blood lead levels, immunizations up-to-date, and at-risk for overweight?
- What is the risk that blood tests for iron-deficiency anemia will not be performed at all if WIC does not perform these tests? If WIC does not refer for these tests?
- To what extent might iron-deficiency anemia go unidentified if WIC staff does not perform blood tests? If WIC does not refer for blood tests?
- To what extent do blood tests performed in WIC clinics duplicate tests performed by health care providers?

References

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[3] CDC, 2005 Pediatric Nutrition Surveillance, Summary of Health Indicators, Children Aged < 5 Years.

[4] Altucher K, Rasmussen KM, Barden E, Habicht, J. Predictors of improvement in hemoglobin concentration among toddlers enrolled in the Massachusetts WIC program. *Journal of the American Dietetic Association,* Vol. 105, No. 5, May 2005.

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