Wisconsin’s Unique Solution to Lead Poisoning Prevention

An Innovative Model to Fight Childhood Lead Poisoning, Increase Screening Rates, & Improve Health Outcomes: Medicaid Managed Care Organizations Team Up with WIC to Provide Three-Minute Blood-Lead Testing in Wisconsin WIC Clinics

In 2010, the WIC-based testing program identified 139 children with previously undetected lead poisoning versus 36 in each of the prior two years!

**Abstract:**
In 2010, state and local WIC agencies, Medicaid, and Medicaid managed care organizations collaborated to launch a program integrating rapid blood-lead testing in Wisconsin WIC clinics, as recommended by the CDC. This initiative contributed to a 41% increase in WIC children tested for lead in the Milwaukee region. Importantly, the number of WIC children identified with elevated blood-lead levels increased by nearly 300%, which is both a testament to the need for the WIC-based program and to the success of its design and execution. This poster provides a practical, step-by-step guide to implementing a sustainable lead-testing program that furthers WIC’s nutrition mission, while dramatically improving blood-lead testing rates of at-risk children.

**How Does Blood-Lead Testing Fit within WIC’s Core Mission?**

“Lead poisoning is a persistent, but entirely preventable, public health problem in the United States. It is most common in children but can occur in other groups as well. Blood lead levels have been declining in the U.S. population as a whole in recent years, but children remain at risk. Children absorb lead more readily than adults and children’s developing nervous systems are particularly vulnerable to lead’s effects. In pregnant women lead crosses the placenta and can have a detrimental impact on a developing fetus. Adequate intake of calories, calcium, magnesium, iron, zinc, and various vitamins (e.g., thiamin, ascorbic acid, and vitamin E) decreases the absorption of lead in adults and the susceptibility of children to the toxic effects of lead...

Individuals exposed to lead who participate in WIC may benefit from referrals to lead treatment programs, guidance on how to reduce exposure to lead, supplemental food, and the importance of diet in minimizing absorption. Iron deficiency and lead poisoning often coexist.”


**Conclusions**

**Patient need:** WIC clients are at greater risk for lead poisoning and are missed through routine healthcare and traditional lab-based testing methods that are burdensome for families

**Workflow:** iron and lead testing are complementary

- Three-minute results enable immediate referrals for kids who need services
- Plus, rapid blood-lead testing offers a unique opportunity to educate & empower parents to protect their children from future lead poisoning

**2010 results:** WIC clinics are ideal places to test those children most at risk for lead poisoning; the program has fulfilled an important unmet need

- The program increased testing rates at Milwaukee region WIC clinics by 43%
- Most importantly, we identified 300% more children with elevated blood-lead levels that are now receiving follow-up care from a healthcare provider

This sustainable program has proven that blood-lead testing is an ideal complement to WIC’s core services and mission: the program bolsters WIC’s nutrition goals, while dramatically improving blood-lead testing rates – a critical step in eliminating lead poisoning, ensuring a healthy start for WIC children, and allowing Medicaid MCOs to serve their members better.

**WIC Testing Works!**

Even though the prevalence of lead poisoning has decreased since 2006, the program is identifying vastly more children with elevated blood-lead levels.

In 2010, the program identified 139 children – nearly 300% more lead-poisoned kids than they did in the prior two years!
The concept of increasing lead testing rates by testing one- and two-year-old children at WIC clinics came out of a subcommittee of the Wisconsin Childhood Lead Poisoning Elimination Plan in 2007. Approximately 85% of all Wisconsin children seen in WIC clinics are Medicaid eligible. Thus, it is a logical place to reach those most at-risk for lead poisoning. In Milwaukee, 90% of WIC children are Medicaid eligible. Wisconsin requires that children be tested twice; the first blood-lead test at the age of six to 16 months and the second between 17 to 28 months. Despite the good intentions and repeated efforts of health plans and providers to encourage parents to take their children to a reference lab for testing, compliance was very low. For example, in 2009, only 38.6% of Medicaid-eligible children enrolled in WIC received a mandated lead test. Something had to be done!

Four local Medicaid managed care organizations (MCOs) – UnitedHealthcare Community Plan of Wisconsin, Children’s Community Health Plan, Health Partners, and Molina Healthcare Community Plan of Wisconsin – teamed up with state and local WIC agencies and BadgerCare+ to expand lead testing to all at-risk children. Additional start-up requirements included granting WIC staff access to the state’s electronic reporting system, and developing a robust, workable follow-up care process to ensure that children with elevated blood-lead levels receive all necessary referrals.

The program launched in 2010 with the donation of 10 LeadCare II analyzers and 20 test kits by three of the Medicaid MCOs (UnitedHealthcare, Children’s Community, and Managed Health Services). The success at the original sites allowed the program to expand to eight WIC clinics, where LeadCare II testing has become an integral part of the regular workflow of WIC sites. WIC children are able to receive two rapid tests – iron (man- dated as part of the WIC protocol) and blood-lead – using one fingertip. Beyond improving screening rates significantly and identifying children that need important follow-up care, the program helps to empower parents to prevent future lead poisoning.

Parents receive the results of their children’s tests before they leave the clinic. At the same time, they are educated on what they can do with the children’s test to help their children thrive.

The state WIC program reports a 41% increase in testing of WIC children in the Milwaukee region over 2009. Importantly, 139 were identified with lead poisoning – a 300% increase over the previous year. Additionally, 139 children have had their blood lead levels tracked and results reported. The increase in testing led to a 30% increase in the number of children identified with lead poisoning.

It is expected that screening rates will continue to improve in 2011 with the planned addition of more WIC sites. This sustainable program has proven that blood-lead testing is an ideal complement to WIC’s core services and mission. The program bolsters WIC’s nutrition goals, while dramatically improving lead testing rates – a critical step in eliminating lead poisoning. Providing a healthy start for WIC children, and allowing Medicaid MCOs to serve their members better.

* HEDIS (Healthcare Effectiveness Data and Information Set) is a tool used by more than 90 percent of America’s health plans to measure performance on important dimensions of care and service. All together, HEDIS consists of 73 measures across eight areas of care. Blood-lead testing became a permanent quality measure in 2009. Because so many plans collect HEDIS data, and because the measures are so specifically defined, HEDIS makes it possible for policy makers, employers, and consumers to compare the performance of health plans on an ‘apples-to-apples’ basis. Health plans also use HEDIS results to see where they need to focus their improvement efforts.
