

## The Missouri WIC Developmental Milestones Program: Promoting Early Identification and Intervention for Developmental Delays

### IN BRIEF

Early identification and intervention is critical for improving the quality of life for children with developmental delays or disabilities. Recognizing this, the University of Missouri partnered with the Missouri Department of Health and Senior Services (MDHSS) to implement the Missouri WIC Developmental Milestones Program. Through this program, nutritionists in 69 local Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) agencies across the state now incorporate developmental checklists, parent education, and referrals for further follow-up as a standard part of their appointments. As a result, more young children with potential developmental delays are connecting with physicians early to determine if they need additional services such as speech and language services or counseling and training for the family.

In April 2018, ASTHO interviewed MDHSS Nutrition Services Manager Kathy Mertzluft to learn more about the key components of the Missouri WIC Developmental Milestones Program. Mertzluft shared recommendations for other states and territories that want to incorporate similar developmental checklists and education into WIC procedures.

### BACKGROUND AND GOALS

According to [CDC](#), 1 in 6 children aged 3-17 years have a developmental delay or disability, and children from families with low incomes, such as those served by the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), are at even greater risk. Early intervention before a child enters school is key: it can improve a child's ability to learn new skills and reduce the need for costly interventions over time.<sup>1</sup> Recognizing the importance of early identification and intervention and the unique opportunity to reach families served through local WIC agencies, the University of Missouri (MU) and the Missouri Department of Health and Senior Services (MDHSS) are partnering to implement the Missouri WIC Developmental Milestones Program in local WIC agencies across the state.

Based on CDC's "[Learn the Signs. Act Early.](#)" (LTSAE) public health campaign, the Missouri WIC Developmental Milestones Program uses a set of age-appropriate developmental checklists and colorful, family-friendly wall and floor graphics to increase parents' awareness about

#### CDC's "Learn the Signs. Act Early." Program

Launched in 2004, CDC's "[Learn the Signs. Act Early.](#)" program aims to "improv[e] early identification of children with developmental delays and disabilities by promoting parent-engaged developmental monitoring and facilitating early action on concerns."

The program offers free checklists and other tools, such as a milestone tracker mobile app, a tip sheet to help parents when there is a developmental concern, and online training for early care and education providers.

developmental milestones and to promote early identification of potential developmental delays. When developmental concerns arise, WIC nutritionists refer children to their healthcare providers for screening and further assessment.

The Missouri WIC Developmental Milestones Program aims to educate parents about healthy child development, help WIC staff understand when and how to refer children with potential developmental delays, use processes that fit easily into the WIC clinic flow, and evaluate the program's impact on parents, children, and WIC staff.<sup>2</sup> According to Kathy Mertzluft, MDHSS Nutrition Services Manager, WIC professionals are uniquely positioned to deliver these services. WIC nutritionists have an ongoing relationship with underserved families and children at risk for developmental delays, and they are a trusted source of information for families. Moreover, LTSAE is closely aligned with, and a natural extension of, the promotion and referral services that WIC nutritionists already provide families. WIC uses nutritional risk and income eligibility standards to provide health screening, risk assessments, nutrition education, and counseling services and referrals to pregnant women, new moms, infants, and children 5 and under.<sup>3</sup> "Monitoring children's health is very relevant to WIC, so it's easy to tie nutrition and food into development and growth," Mertzluft says.

## TARGET POPULATION

Since its inception in 2010, the Missouri WIC Developmental Milestones Program has focused on delivering child development-related information and materials to underserved families enrolled in the WIC program. Initially, the program focused on families served by WIC agencies in St. Louis, but over time, a partnership with the MDHSS led to the expansion of the program to agencies across the state. In a [presentation](#) at the Association of University Centers on Disabilities, the project's principal investigator, Janet Farmer, PhD, identified a secondary audience of healthcare and childcare providers. To raise awareness among these individuals, program partners distributed LTSAE information and American Academy of Pediatrics' (AAP) developmental screening guidelines to healthcare providers.

## IMPLEMENTATION PROCESS

As described below, MU developed and refined the Missouri WIC Developmental Milestones Program through various implementation phases, first alone and later in conjunction with MDHSS.

### **Phase 1 (2010-2012): University of Missouri Pilots Developmental Milestones Initiative in St. Louis**

In 2010, CDC partnered with HRSA to fund the Thompson Center for Autism and Neurodevelopmental Disorders at MU to develop strategies to implement LTSAE. Between 2010 and 2012, MU partnered with the St. Louis WIC program—which serves approximately 19,000 low-income individuals and families—to develop and implement the Missouri WIC Developmental Milestones Program in 11 local WIC agencies. By the end of the pilot phase, MU had established solid relationships with state and local WIC staff and developed core materials and implementation procedures.<sup>4</sup> These materials included age-specific developmental checklists, adapted from LTSAE materials, graphics for posting in WIC offices, and an envelope that staff members use to refer children to their doctors for further assessment. During this initial program phase, WIC staff shared approximately 8,600 LTSAE checklists with parents to help them learn about their children's development.

### **Phase 2 (2013-2016): University of Missouri Expands Pilot to Neighboring Counties**

Based on the pilot's early successes, MU received additional CDC funding in 2013 to replicate the model in nine WIC clinics in four counties around St. Louis. During this second phase of the program, in addition to expanding and replicating the model, MU aimed to assess the program's feasibility, impact, and sustainability.<sup>5</sup> During this time, WIC staff shared approximately 6,000 checklists with families and referred an estimated 400 children to their physicians for additional screening and further assessment.

### **Phase 3 (2016-Present): The Program Expands Statewide Through a University-State Health Agency Partnership**

In 2016, University of Missouri received CDC funding to partner with MDHSS to develop, implement, and evaluate a statewide version of the Missouri WIC Developmental Milestones Program. MDHSS' maternal and child health program successfully applied for funding through the [Title V Maternal and Child Health Services Block Grant Program](#) (MCH) to support printing materials for statewide implementation. USDA, the federal program that funds WIC, was not a viable option to fund this expense, since its funding only supports food and nutrition services. The cross-agency collaboration between MDHSS and MCH filled this funding gap and helped both agencies achieve their goals of promoting children's healthy development.

In consultation with MDHSS, MU used CDC funding to develop the Missouri WIC Developmental Milestones Program script, training video, and training guide, and partnered with MDHSS to disseminate toolkits and other resources, enroll WIC agencies, and train and support agency staff. To facilitate the program's statewide expansion, partners delivered presentations at six WIC district meetings and a statewide conference, developed articles in the state's WIC e-newsletter and offered technical assistance to local agencies.

On the [Missouri WIC Developmental Milestones Program website](#), WIC agencies can find an [introductory video](#) about the program and its impacts and the four-step process for enrolling in the program. As of May 2018, 69 of the state's 117 WIC agencies are now enrolled in the program, representing all of the state's six WIC districts. Local WIC agencies enroll in the Missouri WIC Developmental Milestones Program by completing an [online application](#), printing the program's [implementation manual](#), viewing a [training video](#), and completing a form to request the free WIC developmental milestones program kit and materials.

## **NEXT STEPS**

### **Gain and Maintain Provider Buy-In**

Program partners, including MDHSS and MU, raise awareness of and disseminate information about the program in various ways, including through in-person meetings and online updates and implementation guidance. To raise awareness about the program and its benefits, partners invited guest speakers to meetings with local WIC agencies in the state's five public health districts. Janet Farmer, the project's principal investigator at MU, and Lee Falk, program director at MU, have presented at meetings with local WIC providers about LTSAE and about the Missouri WIC Developmental Milestones Program. Despite some WIC providers' initial reservations about adding more content to the WIC visit, Mertzluft says that partners could point to promising [findings](#) that emerged from the program's 2010-2012 St. Louis pilot: in addition to showing that the milestones program added just a few minutes to the WIC

visit, program partners have been able to highlight positive outcomes, such as children being referred to important services earlier.<sup>6</sup> Being able to show WIC providers that the process was simple and resulted in better child outcomes “made people much more willing to implement” the program, Mertzlufft says. A MDHSS WIC district nutritionist supports the state program and provides technical assistance to local WIC staff. “The program is so simple that most local agencies have adopted it without special assistance,” Mertzlufft says.

### **Build on “Learn the Signs. Act Early.” Program Successes**

After learning about Georgia’s [Talk With Me Baby initiative](#), which incorporates language nutrition into WIC visits, MDHSS and MU are collaborating to incorporate [language nutrition](#) into WIC visits through the [Talking is Teaching](#) model. Through this initiative, paraprofessionals in Missouri WIC agencies will model interactive and responsive communication and share related materials with families. MDHSS will share information on this initiative at an upcoming statewide WIC conference. In addition, Mertzlufft says that Missouri WIC Developmental Milestones partners will raise healthcare provider awareness of this new facet of the program by sharing information with the Missouri Hospital Association and the Missouri chapters of the American College of Obstetricians and Gynecologists and the American Academy of Pediatrics. Mertzlufft anticipates that paraprofessionals will embrace the new role. “They have the time and they have the desire to connect with families,” she said.

## **PROGRESS AND OUTCOMES**

Missouri WIC Developmental Milestones Program evaluations show positive outcomes for parents, children, and WIC staff.<sup>7</sup> MU studied each phase of the program to measure parental awareness and behavior changes, referral outcomes, and staff feedback.<sup>8</sup> The following findings come from Phase II of the program.

- **Parent Surveys:** Of the parents who completed a pre- and post-implementation survey, 99 percent said they spent time looking at the wall and floor graphics that illustrate developmental milestones, and 97 percent said that the graphics helped them learn about their child’s development. Just over 40 percent of parents said that they filled out a milestones checklist; of those, 98 percent talked with WIC staff about the checklist.
- **Referral Outcomes:** In the first six months of the pilot, 122 children between the ages of 12 and 48 months were referred to a physician for developmental assessment. Parents of 84 children completed a referral outcome tracking form; of those children, 61 percent saw a doctor because of the WIC referral.
- **Staff Survey:** Almost all—95 percent—of WIC staff respondents reported that families were willing to complete a checklist and the same percentage said they referred one or more children to a physician. A high percentage—80 percent—said that use of the checklist took less than five minutes to complete.

### **Other Findings**

Program leaders have continually evaluated the Missouri WIC Developmental Milestones Program and found positive results. For example, at the end of December 2017, participating WIC staff members were surveyed on the ease of integrating checklists into the appointment process and how much time the checklists added to appointments.<sup>9</sup> Eighty-three percent of respondents said that the checklist

added fewer than five minutes to the appointment. At least 95 percent of staff respondents reported that families were willing to complete the checklists, that it was easy for them to do so, and that they spent time looking at the graphics. Greater than 90 percent of staff respondents said that the checklists helped parents learn about development, and 98 percent said that the program promoted healthy development.

In addition to Missouri's studies, CDC evaluations have [identified](#) positive results from the LTSAE public health campaign. For example, an analysis of parent survey results found that after the campaign was launched, more parents reported that they looked for the developmental milestones their children should reach, and pediatricians were significantly more confident discussing cognitive development with parents.

## REPLICATION AND SCALING

After an initial pilot in St. Louis, MU refined the milestones program and replicated it in two additional phases—first in a four-county area, and then statewide. Starting small helped partners test and refine the process and products and adapt them as needed before expanding to more WIC settings, Mertzlufft says. CDC's LTSAE resources and the Missouri WIC Developmental Milestones Program resources—including the implementation manual, checklists, and clinic graphics—can be adapted for other states. According to [CDC](#), national, state, and local programs can add LTSAE materials to their parent resources and programs can tailor CDC materials with their own contact information and disseminate them to the populations they serve.<sup>10</sup>

## RECOMMENDATIONS AND KEYS TO SUCCESS

During ASTHO's research and key informant interview, Mertzlufft discussed the following recommendations and keys to success from the Missouri WIC Developmental Milestones Program success emerged from ASTHO's research and key informant interview.

### Work with WIC Staff to Design and Refine Procedures

Mertzlufft underscored the importance of developing a simple and streamlined process that does not add significant time or administrative burden to WIC nutritionists' already-busy case load. WIC clinics are not required to adopt the Developmental Milestones Program, so "selling" the program to WIC staff members is key, Mertzlufft says.

### Evaluate Process and Impact Along the Way

Partners evaluated the program from the beginning through onsite monitoring and surveys with WIC staff to assess how often staff members used a checklist during their appointments, how long the checklist took to administer, and what barriers might make it difficult to implement the program. In addition, researchers administered parent surveys to measure changes in awareness about child development milestones. Program leaders shared the results of the initial monitoring and surveys with WIC partners and adapted the program based on staff feedback.

### Keep It Simple

According to Mertzlufft, recruiting local agencies to enroll in the program can be a challenge, as WIC agencies may be experiencing funding and staffing constraints and demanding workloads. Mertzlufft explained that “asking them to do one more thing can seem overwhelming.” Partners recognized that a simple, fast, and effective process that fits easily within the flow of a WIC appointment was key to the project’s success. The program implementation manual intends to simplify the process by suggesting methods that agencies can use to organize and disseminate materials. Mertzlufft says that it was important to have a “good balance of monitoring and referral, and not make it too burdensome on WIC staff or participants.”

### Partnerships facilitate implementation and sustainability

Strong partnerships between MDHSS’ WIC and Maternal and Child Health Block grant programs, as well as those between MDHSS and the MU team, have paved the way for implementing the Missouri WIC Developmental Milestones Program statewide. According to Mertzlufft, MDHSS leaders have encouraged collaboration across the agency to achieve shared outcomes, and partners have leveraged their expertise and resources to support expansion. Further, Mertzlufft says, the floor graphics are expensive, but essential: “They bring attention to the program and engage parents, setting the stage for a conversation with WIC staff about their children’s development,” Mertzlufft explained. WIC’s partnership with MU and the Title V program helped to identify funding and bring child development expertise and research capacity to the table. Missouri’s MCH program incorporated LTSAE into its Title V block grant plan and identified expansion to more WIC agencies as a strategy in its [2018 Title V Block Grant application](#).

#### Key Resources

For more information about Missouri’s WIC Developmental Milestones Program, see the following resources:

- [WIC Developmental Milestones Program Web Page](#)
- Executive Summary: [“Learn the Signs. Act Early. Phase 2: Promising Results from the WIC Developmental Milestones Program”](#)

<sup>1</sup> Mertzlufft K, Farmer J. “Learn the Signs. Act Early: Statewide Expansion of the WIC Developmental Milestones Program.” Presented at the National WIC Association Annual Education and Training Conference. 2018. Available at <https://s3.amazonaws.com/aws.upl/nwica.org/042418-400p-gbs2-mertzlufft.pdf>. Accessed 5-19-2018.

<sup>2</sup> Ibid.

<sup>3</sup> Missouri Department of Health and Senior Services. “Welcome to WIC.” Available at <https://health.mo.gov/living/families/wic/>. Accessed 5-8-2018.

<sup>4</sup> Farmer J. “Learn the Signs. Act Early. Promoting Parental Awareness of Developmental Milestones Through WIC Partnerships.” Presented at the Association of University Centers on Disabilities. 2012. Available at <https://www.aucd.org/meetings/168/11768/Creative%20Partnerships%20with%20the%20%20LSTAE%20Campaign.pdf>. Accessed 5-8-2018.

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<sup>5</sup> Department of Health and Senior Services. “Learn the Signs. Act Early—Phase II: Promising Results from the WIC Developmental Milestones Program.” Available at <https://health.mo.gov/living/families/wic/wiclwp/wicdevelopmentalmilestonesprogram/pdf/wic-developmental-milestones-executive-summary.pdf>. Accessed 5-8-2018.

<sup>6</sup> Mertzlufft K, Farmer J. “Learn the Signs. Act Early: Statewide Expansion of the WIC Developmental Milestones Program.” Presented at the National WIC Association Annual Education and Training Conference. 2018. Available at <https://s3.amazonaws.com/aws.upl/nwica.org/042418-400p-gbs2-mertzlufft.pdf>. Accessed 5-19-2018.

<sup>7</sup> Ibid.

<sup>8</sup> Ibid.

<sup>9</sup> Ibid.

<sup>10</sup> CDC. “Health Education Campaign.” 2017. Available at <https://www.cdc.gov/ncbddd/actearly/about-health.html>. Accessed 5-9-2018.