

Overview

Almost half the annual birth cohort in the United States participates in the Women, Infants, and Children (WIC) Program, and these children are at risk for being under-immunized. Certain activities in WIC that promote immunizations (WIC-Immunization linkage programs) have been shown to dramatically improve vaccination coverage rates among WIC-enrolled children. Since 1994, the United States Department of Agriculture (USDA) and the Centers for Disease Control and Prevention (CDC) have collaborated to meet the Healthy People 2010 Objective of a 90% immunization completion rate in children 2 years of age and under. The importance of this collaboration was highlighted in a December 2000 White House Executive Memorandum instructing WIC and CDC to partner in order to improve the immunization status of WIC-enrolled children. The memorandum guided WIC to assess each child's immunization status during a WIC visit and to refer those children in need of immunizations to their providers.

Assessment and referral forms the basis for all WIC Immunization linkage programs, which consists of reviewing a child's immunization record to determine if he/she is up to date (UTD) with immunizations. If the WIC participant's immunizations are not UTD, the child is referred to an immunization provider, preferably at his/her primary care setting. Assessment and referral can be implemented alone, or with outreach and tracking, parental or staff incentives, or with monthly benefit issuance such as Monthly Voucher Pick-up (MVP). These and other innovative strategies are described below. In an effort to decrease the burden on WIC staff, WIC policy makes clear that assessment activities only at certification/recertification visits are a viable option, although more frequent assessments are encouraged. This policy also allows sites to base assessment and referral on a single vaccine (DTaP) instead of on multiple vaccines.

Since 1998, CDC has monitored the WIC Immunization linkage programs through an annual survey of state Immunization and WIC programs. A recent analysis of these data shows that immunization and WIC programs are coordinating their activities to a larger extent, and that immunization and WIC services are now more likely to be co-located. Further promotion of this important intervention and addressing barriers to implementation will be essential to reach some of our most vulnerable children.

References

- White House Executive Memorandum, December 11, 2000.
- WIC Policy Memorandum #2001-7, August 30, 2001.
- Recommendations regarding interventions to improve vaccination coverage in children, adolescents, and adults. Task Force on Community Preventive Services. *Am J Prev Med* 2000; 18(1 Suppl):97-140.
- 2007 VFC Program Operations Guide: <http://www.cdc.gov/nip/home-partners.htm#progmgrs>
- A Status Report from 1996-2004: Are More Effective Immunization Interventions Being Used in the Women, Infants, and Children (WIC) Program? George T, Shefer A, Rickert

D, David F, Stevenson J, Fishbein D. Maternal and Child Health Journal. Published online 15 March 2007.

- 2008-2012 Immunization Program Operations Manual (IPOM) Chapter 3, 8, and 10

Program Requirements

None

Activities to raise immunization coverage levels among children enrolled in WIC:

Required activities

None

Recommended activities

- 11a. Ensure buy-in from senior management including the WIC Director.
- 11b. Ensure adequate resources (fiscal, human, and technical) at the WIC sites for WIC and/or immunization program staff to screen and refer children to their immunization provider or to screen and immunize on site.
- 11c. As part of the screening and referral process, promote and facilitate the utilization of the Immunization Information System (IIS) to access WIC-enrolled clients' immunization records and to conduct direct data entry when vaccinations are administered on site. Ensure that staff utilizes the IIS to verify that shots have been recorded and enters missing data into the IIS when applicable. For example, in one state, WIC staff utilizes the IIS to assess 4th DTaP vaccination status and to refer as needed. The WIC data system is automatically linked with the IIS and staff cannot proceed without reviewing the 4th DTaP. In another state, the WIC-immunization linkage, including IIS utilization, is included as review criteria for local health department accreditation. In particular, criteria include whether or not the local health department actively uses an IIS report to help track and follow-up on children attending WIC clinics with incomplete immunization records.
- 11d. Offer incentives to WIC staff for implementation of immunization-promoting activities as well as WIC clients who are up-to-date and/or whose up-to-date immunization records are entered into the IIS. Examples of incentives for WIC clients include books, toothbrushes, bibs, books, albums, bags, growth charts, magnets, and toys. Examples of incentives for WIC staff include certificates of appreciation, small gift cards, small stipends to highest up-to-date rate clinics, and appreciation luncheons where tote bags, mugs, and certificates are distributed.
- 11e. Consider implementation of the monthly benefit issuance (such as MVP) protocol. The benefit issuance option is used to help provide assisted referral and supportive follow-up for parents who need more assistance in getting their children immunized. When a child is identified as under-immunized, the parent is asked to call the child's doctor and schedule an appointment for immunizations if the doctor recommends it. A WIC appointment is scheduled for the following month, and one month (rather than the usual two or three months) of WIC checks is issued to the parent. When the parent returns the next month,

the child's immunization record is screened. In this way, children can be followed more closely to ensure that they receive timely vaccinations. This strategy can be implemented at all WIC visits, or given limited resources or for ease of implementation, can be implemented only at certain age milestones such as at or around the time when the child turns 7 months and 15 months of age.

- 11f. Offer training on a regularly scheduled basis as needed to WIC staff. Training may include information on immunization; how to interpret the ACIP schedule and client records; VPDs; how to utilize the IIS for screening, referral, and data entry; and open question and answer sessions.

Description of two successfully implemented WIC-Immunization linkage programs:

Massachusetts:

In 1992, the Massachusetts WIC Program initiated collaboration with the Massachusetts Immunization Program (MIP) as part of its commitment to include immunization assessment and referral as part of the routine WIC assessment and certification process. A complete immunization assessment includes:

Data collection and entry: WIC staff reminds participants to bring immunization documentation to each WIC appointment. These data are entered into the WIC system whenever it is presented to staff.

Occasionally, staff is not able to conduct a complete assessment because a parent/guardian fails to bring a current immunization record. Or they may identify a child who is never up-to-date due to medical or religious reasons. Although every effort is made to collect current immunization data and to encourage parents to get their children immunized, the lack of immunizations does not interfere with a participant's checks or check pick-up schedule. The Massachusetts WIC program feels that the use of 'monthly voucher pickup' often unjustly punishes parents and other caretakers whose children are under-immunized and their use is against Massachusetts WIC policy. Local programs that experience difficulties in obtaining participant immunization records are encouraged to contact the Immunization Coordinator at the state office to discuss possible strategies. Some of these strategies include:

- Faxing a Release Form to the child's doctor in order to obtain the missing information.
- Reminding the parent/guardian to bring the immunization record to the next visit.

Assessment and education: All local WIC programs are required to conduct immunization assessment and education at all certification, recertification and follow-up appointments. The population of children less than 24 months of age should be the primary focus of the program's immunization initiative; however, it is expected that each child's immunization status will be assessed until the child is fully immunized. Assessment always includes a review of the shots that are due next or, if applicable, overdue. Documentation of missing shots is provided to the caretaker for each child.

Referral: When an immunization assessment determines that a child is behind on or missing shots, caretakers are encouraged to:

- Schedule an appointment with the child's own doctor to obtain the shots.
- Contact a local community health center if the child has no medical home and provide the caretaker with contact information.
- Contact immunization program staff at the Massachusetts Department of Public Health Regional office. The staff can help direct the parent to places where they may be able to obtain immunizations for little or no cost to the participant.

The disparity between the up-to-date rates for two-year-old children in the Massachusetts WIC Management Information System (MIS) database and the National Immunization Survey for Massachusetts children indicates that assessments are not performed consistently and/or are performed with incomplete immunization data. Incomplete data result in less than adequate assessments and referrals. Massachusetts WIC has developed and implemented two incentive programs to address this disparity, one focused on caregivers, the other on WIC staff.

In an effort to increase the accuracy of immunization assessments and referrals performed for participants, an initiative referred to as 'Bring a Book-Get a Book' was implemented in October 2000. Storybooks appropriate for preschool-aged children are given to caretakers as an incentive to bring their children's shot records to WIC appointments. Graphic materials, such as posters and handouts, are provided to local WIC programs to promote the initiative.

Participants receive a book each time they bring new immunization data to WIC at certification, recertification or follow-up appointments until they complete the primary series of shots (4 DTaP, 3 Polio, 1 MMR, 3 Hib, 3 Hep B, 1 VZV, and 3 PCV7). The 'Bring a Book-Get a Book' initiative has improved WIC's ability to keep its immunization database current, enabling staff to make accurate immunization assessments in conjunction with appropriate immunization education and referral.

A second incentive, referred to as immunization incentive funding, provides additional funds to contracted local WIC agencies that are able to show, through the use of the WIC MIS immunization database, 85 percent of children with 4-3-1-3 at 24 months or who have increased the percent of children with 4-3-1-3 by 15 percentage points each year.

All local programs are offered annual technical assistance by the WIC Immunization Coordinator, funded at .5 FTE by MIP, to help them in achieving this goal. Strategies for improving rates included implementing the use of an immunization release form which could be faxed or mailed to the provider, assigning staff to oversee follow-up on forms that were sent and ensuring data entry for new immunization data obtained, making reminder phone calls to participants, prior to their appointment, reminding them to bring their immunization record to WIC, and reviewing files to ensure that all data provided by the participant is entered into the WIC MIS.

The WIC Immunization Coordinator also conducts a bi-annual performance evaluation at each local program to ensure that all performance standards related to immunization are met. The

coordinator also organizes an annual immunization training, provides technical assistance to newly hired local program nutrition staff, shares relevant information regarding immunization with the local programs, develops and distributes a quarterly newsletter for local program staff, and ensures that state and locally produced immunization reports are correctly utilized by local program as part of routine quality assurance activities.

California:

In California the Women, Infants, and Children (WIC) Supplemental Nutrition program serves over 1.3 million participants each month. There are 82 local WIC agencies that provide services at approximately 623 different sites statewide. Of the 82 agencies, 42 are part of local public health departments and 40 are private non-profit agencies. However, only nine of the public agencies and thirteen of the private agencies have some or all of their sites housed at primary healthcare clinics.

In 1991 the California Department of Health Services' Immunization Branch initiated discussions and subsequently collaboration with the WIC Branch on ways to improve immunization coverage among infants and children enrolled in the WIC program. Initially a few local WIC agencies worked with and received some funding from their local immunization programs to screen immunization records and refer children to their medical home for needed immunizations.

In 1998 a collaboration among the Immunization and WIC Branches and California's largest local WIC agency, Public Health Foundation Enterprises (PHFE) WIC program, and Los Angeles County Immunization Program developed and implemented an automated immunization screening module (ISIS-IZ) for WIC's automated service delivery system known as ISIS. Use of the module is voluntary, and to date 31 local WIC agencies have received varying levels of funding from their local immunization programs or Immunization Branch collaborative grants to use the module to screen immunization records and refer participants for immunizations.

As California's Statewide Immunization Information System (SIIS) becomes more developed and used more widely, the redundancy of ISIS-IZ has become apparent. The Immunization Branch now encourages local WIC agencies to use their regional immunization information system (IIS) and has provided funding through collaborative grants and local immunization program funding to assist 38 WIC agencies to transition to using the registry. It is likely that the ISIS-IZ module will be retired within one to two years.

Currently there is no mandate in California for WIC agencies to conduct immunization screening of all vaccines or to use the IIS. Therefore, there are 35 local WIC agencies that have chosen the minimum immunization screening option (manually counting doses of DTaP) mandated by the U.S. Department of Agriculture effective March 2003. Nine WIC agencies continue to use ISIS-IZ for the time being. The Immunization Branch and the WIC program will continue to demonstrate the benefits of using SIIS to these agencies to encourage their use of SIIS.

Data collection and entry: California WIC agencies are very diverse and operate differently depending on their size, rural or urban location, participant needs, and other factors, so the data collection and data entry procedures at one agency are generally not the same at other agencies.

Currently, 47 agencies remind parents to bring a documented immunization record to the enrollment appointment, infant mid-certification appointment, and each recertification appointment; twenty-four agencies ask for immunization records only at enrollment and recertification appointments; and eleven agencies review immunization records at every WIC appointment.

WIC agencies use a variety of methods to remind parents to bring immunization records to the WIC appointment, including printed reminder checklists, a reminder sticker on the parent's WIC folder, reminder posters displayed at the WIC site, and autodialer appointment reminders.

Thirty-five WIC agencies manually count doses of DTaP vaccine received and compare that to the number of doses the child should receive by a specific age checkpoint. Eight of these agencies store this information in a computer. Forty-seven agencies assess immunization records for all vaccines; Thirty-eight of these use their regional IIS, and nine assess the records manually. Additionally, eight agencies assess immunization records for all vaccines at some of their sites and count doses of DTaP at their remaining sites.

As in other states, the effectiveness of immunization assessment at WIC depends upon the parent remembering to bring the child's immunization record to the WIC appointment, upon the WIC staff person remembering to assess the record, and finally upon the parent heeding WIC staff recommendations to return to the child's medical home for needed immunizations. The Immunization Branch offers colorful staff reminders and parent reminders to help both staff and parents. Also, WIC staff provides information on locations of free and low-cost immunization clinics and, if needed, assists parents with making an appointment for immunization services with the child's regular healthcare provider.

Assessment and education: All local WIC agencies, whether they count doses of DTaP vaccine or use automated immunization assessment software or an IIS, assess immunization records, at a minimum, of children birth through 2 years of age. The education component includes a review of immunizations that appear to be due or past due, a form that either congratulates the parent for her child's up-to-date status or documents the past due immunizations, and information on the recommended immunization schedule for the child's age. Most WIC agencies offer an immunization promotion class annually or more often as well.

Referral: As part of the education and supportive follow-up, 23 local WIC agencies have chosen to use the Monthly Voucher Pick-up (MVP) strategy for under-immunization. The MVP option is used to help provide assisted referral and supportive follow-up for parents who need more assistance in getting their children immunized. When a child is identified as under-immunized, the parent is asked to call the child's doctor and schedule an appointment for immunizations if the doctor recommends it. A WIC appointment is scheduled for the following month and one month, rather than the usual two or three months, of WIC checks is issued. When the parent returns the next month, the child's immunization record is screened. If the child is still not up-to-date, some agencies offer the parent an immunization promotion class, refer the parent back to the provider, and follow-up again in one month. Often if the child still has not received needed immunizations after two months, the WIC staff person contacts the local immunization program to follow-up with the family. However, local agencies report that children are generally up-to-date after one month. Further, agencies that use the MVP protocol

report that there are many reasons that a participant is issued one month of WIC checks; under-immunization is just one of them. Parent interviews and staff focus groups conducted at five WIC agencies using the MVP protocol indicated that this was not a strategy that parents believed would prevent them from returning to WIC or that made them think negatively about WIC.

Strategies for improving immunization rates: In addition to the MVP Protocol, some local WIC agencies use other strategies to improve immunization coverage levels. Sixteen agencies provide on-site immunizations for children at some or all of their sites. Twelve agencies escort parents and children to collocated or nearby immunization clinics.

Sixteen agencies use various forms of parental incentives to encourage parents to immunize their children. One agency gives third-trimester pregnant women a luggage tag for the suitcase they take to the hospital. The luggage tag is imprinted with a reminder to immunize their newborn with the Hepatitis B birth dose. Five agencies offer monthly lotteries for parents of children who are up-to-date. The prize is generally a \$20-\$25 gift certificate. Five additional agencies offer gifts to parents whose children are fully immunized at age two. The gifts include a child's book, beach ball, snap-a-snack dish, lunch bag, First Aid Kit, tote bag, photo album, Band-Aid holder, cups, or coupons for various items. Smaller items offered by many other agencies include, magnetic photo frames, stickers, buttons, magnets, Frisbees, and certificates of achievement for parents whose children are fully immunized at age two years.

Strategies used to inform and motivate staff include sharing 12- and 24-month up-to-date rates monthly with staff, providing charts and graphs to show each site's progress in improving immunization rates, and monthly strategy meetings. Some agencies provide incentive items to staff such as immunization calendars, memo cubes, one hour per month of paid leave for the staff person at each site who assesses the most immunizations, or an employer-provided luncheon for the site that has the most improved immunization rates.

Support to local WIC agencies: The immunization Branch regularly provides technical assistance to local WIC agencies and to WIC Branch staff through telephone, e-mail, and on-site immunization training. The Immunization-WIC Coordinator works closely with Immunization Branch Field Representatives, local Immunization Coordinators, and Immunization Registry Managers to provide needed immunization assistance or training to WIC agencies. Through an arrangement with the WIC Branch warehouse, local agencies are able to order immunization materials—immunization schedules, pamphlets, posters, and other materials—directly from the warehouse along with their usual WIC materials orders. A biannual immunization newsletter—WHIZ* (WIC Helps ImmuniZe) Kids News—offers local agencies new immunization information, an agency sharing corner, highlights of successful WIC immunization projects, fun learning activities such as immunization crossword puzzles or word scrambles, upcoming immunization conferences and events, and other information.

Currently Immunization Branch staff is working with local WIC agencies to assist them in transitioning to using their regional IIS.