Increasing Appropriate Vaccination: Vaccination Programs in the Special Supplemental Nutrition Program for Women, Infants and Children (WIC) Settings (2009 Archived Review)

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Review Summary

Intervention Definition

Vaccination interventions in WIC settings involve activities to assess the immunization status of infants and children participating in the program, and to promote and assist efforts to obtain recommended vaccinations. At a minimum, WIC vaccination interventions involve the periodic assessment of each client's immunization status and referral of underimmunized infants and children to a vaccination provider.

Additional WIC interventions include client reminder and recall systems or tracking and outreach efforts, and incentives to obtain recommended vaccinations (e.g., monthly voucher pickup, which requires more frequent WIC visits when clients are not up-to-date). Access can be enhanced through the provision of vaccinations in WIC settings, or through collocation and coordination of WIC programs with available healthcare services.

Summary of Task Force Recommendations and Findings

The Community Preventive Services Task Force recommends coordinated vaccination interventions in WIC settings based on strong evidence of effectiveness in increasing vaccination coverage in children. Evidence on effectiveness was considered strong based on studies in which assessment of client immunization status and referral to a vaccination provider was combined with additional interventions or with the provision of vaccinations on-site or in a collocated healthcare service. Studies included in this review combined assessment and referral with monthly voucher pickup requirements, tracking and outreach, client reminder and recall systems, or enhanced access to vaccination services.

The Task Force finds insufficient evidence to determine the effectiveness of assessment and referral in WIC settings when implemented alone.

Results from the Systematic Review

The Task Force finding is based on evidence from a Community Guide systematic review published in 2000 (search period 1980-1997) combined with more recent evidence (search period 1997-2009). The systematic review was conducted on behalf of the Task Force by a team of specialists in systematic review methods, and in research, practice, and policy related to increasing appropriate vaccination.

Sixteen studies qualified for the review (four from the previous review and twelve from the more recent search).

- Vaccination rates: median increase of 10.5 percentage points (Interquartile Interval [IQI]: 4 to 19 percentage points; 8 studies, 10 study arms)
- Improvements in vaccination rates were reported in studies with monthly voucher pickup requirements (5 studies).
- Improvements in vaccination rates were reported in studies that coordinated activities between collocated WIC and health care services, or provided vaccination services on-site (4 studies).
- One study evaluated the use of assessment and referral alone and observed no effect on vaccination rates (1 study).

Economic Evidence

Four studies qualified for the economic review; two from the previous review and two from the updated review.

- The cost per additional fully immunized child ranged from $44 (2009 dollars) for vaccinations provided off-site via referral, to $142 (2009 dollars) for vaccinations provided by an on-site WIC nurse (3 studies). The fourth study reported only the cost of assessing the vaccination status of each child.

Task Force Finding and Rationale Statement

Intervention Definition

Vaccination interventions in WIC settings involve activities to assess the immunization status of infants and children participating in the program, and to promote and assist efforts to obtain recommended vaccinations. At a minimum, WIC vaccination interventions involve the periodic assessment of each client's immunization status and referral of underimmunized infants and children to a vaccination provider. Additional WIC interventions include client reminder and recall systems or tracking and outreach efforts, and incentives to obtain recommended vaccinations (e.g., monthly voucher pickup, which requires more frequent WIC visits when clients are not up-to-date). Access can be enhanced through the provision of vaccinations in WIC settings, or through collocation and coordination of WIC programs with available healthcare services.

Task Force Finding (March 2009)

The Community Preventive Services Task Force recommends coordinated vaccination interventions in WIC settings based on strong evidence of effectiveness in increasing vaccination coverage in children. Evidence on effectiveness was considered strong based on studies in which assessment of client immunization status and referral to a vaccination provider was combined with additional interventions or with the provision of vaccinations on-site or in a collocated healthcare service. Studies included in this review combined assessment and referral with monthly voucher pickup requirements, tracking and outreach, client reminder and recall systems, or enhanced access to vaccination services. The Task Force finds insufficient evidence to determine the effectiveness of assessment and referral in WIC settings when implemented alone.

Rationale

In 1997, the Task Force recommended vaccination interventions in WIC settings based on sufficient evidence of effectiveness in increasing vaccination coverage among children. Based on the findings of this 2009 update, the Task Force now recommends these interventions based on strong evidence of effectiveness.

This updated review included a total of 15 studies of vaccination interventions conducted in WIC settings. Eight studies with 10 study arms provided a common measurement of change in vaccination coverage, and observed a median increase of 10.5 percentage points with an interquartile range (IQI) of 4 to 19 percentage points. Studies employed a range of different vaccination activities, and the Task Force conclusion does not draw a distinction on effectiveness of specific components.

The Task Force notes that meaningful improvements in vaccination coverage were observed in five studies implementing monthly voucher pickup requirements, and in four studies either coordinating activities between collocated WIC and health care services or providing vaccination services on-site. One study specifically examined the use of assessment and referral alone, and observed no effect on vaccination coverage.

All of the included studies evaluated or included WIC programs in urban settings and populations. Despite a lack of evaluations from rural settings, the Task Force believes that evidence on effectiveness is applicable to most WIC settings and populations.

The economic findings are based on four studies: two studies from the previous 1998 review and two from the update. Three of these studies were based in Chicago. No studies estimated the economic benefits of the interventions. Cost per child in two studies ranged from $8.65 to $25.50 (adjusted to 2007 dollars) for monthly voucher pickup (MVP) plus different referral types such as off-site, collocated facility, or on-site with provision of vaccine by a WIC nurse, and for MVP plus monitoring. The higher estimate was for the MVP plus on-site referral with provision of vaccine by a WIC nurse. One study reported a cost per child of $227 (adjusted to 2007 dollars); however, this was an intervention adding a client reminder and recall system to an MVP program. The cost per additional fully vaccinated child ranged from $44 to $142 (adjusted to 2007 dollars) for the same three studies, the lower and upper estimates being for the off-site referral and on-site referral with vaccine provision by a WIC nurse, respectively.

One study reported the cost of assessment for age-appropriate vaccination status to range from $2.03 to $4.21 (adjusted to 2007 dollars), with the higher cost associated with the use of an on-site nurse.

The Task Force notes the possibility that administering vaccinations outside of the client's primary source of care may lead to discontinuity of care such as disrupting well-child care visits and the receipt of clinical preventive services. This issue is greatest when vaccinations are provided on-site in WIC settings. However, one study that provided vaccinations in collocation with an immunization clinic found that WIC interventions may increase the delivery of well-child care, follow up, and clinical preventive services.

The Task Force calls for additional implementation research on efforts to collocate WIC and health care services, in the adoption of monthly voucher pickup requirements, and on the impact of providing WIC interventions outside of the medical home.

Disclaimer

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