

Increasing Appropriate Vaccination: Community-Based Interventions Implemented in Combination

Task Force Finding and Rationale Statement

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Suggested Citation:

The Community Preventive Service Task Force (CPSTF). *Increasing Appropriate Vaccination: Community-Based Interventions Implemented in Combination*. The Community Guide [www.thecommunityguide.org]. The Community Preventive Service Task Force, Atlanta, Georgia, 2014. <https://doi.org/10.15620/cdc/168613>

Task Force Finding and Rationale Statement

Intervention Definition

Community-based interventions implemented in combination involve the use of two or more coordinated interventions to increase vaccination rates within a targeted population. Efforts involve partnerships between community organizations, local government, and vaccination providers to implement and coordinate the following:

- One or more interventions to increase community demand (client reminder and recall systems, manual outreach and tracking, client or community-wide education, client incentives, client-held paper immunization records, and case management)
- One or more interventions to enhance access to vaccination services (expanded access in healthcare settings, home visits, and reduced client out-of-pocket costs)

Efforts may also include additional interventions directed at vaccination providers (e.g. provider assessment and feedback, provider education, and provider reminder systems).

Task Force Finding (October 2014)

The Community Preventive Services Task Force recommends community-based interventions implemented in combination to increase vaccinations in targeted populations, on the basis of strong evidence of effectiveness in increasing vaccination rates.

The conclusion of strong evidence was based on findings from 18 studies that evaluated coordinated interventions to:

- Increase community demand
- Enhance access to vaccination services, and
- Reduce missed opportunities by vaccination providers

In 13 of the 18 studies, the community-based effort combined one or more interventions to increase community demand for vaccinations with one or more interventions to enhance access to vaccination services.

The Task Force notes that implementing manual outreach and tracking or home visits can be resource-intensive and costly, relative to other options for increasing vaccination rates. Such interventions should be used only when there is demonstrated need, and resources are available.

Rationale

Basis of Finding

This Task Force finding is based on evidence from a Community Guide systematic review completed in 2010 (17 studies; search period 1980 - 2010) combined with more recent evidence (1 study, search period 2010 - 2012). Based on the combined evidence, the Task Force reaffirms its recommendation based on strong evidence of effectiveness.

All of the included studies provided a common measure of change and showed a median increase in vaccination rates of 14 percentage points (interquartile interval [IQR]: 7 to 24 percentage points).

The included studies evaluated a variety of interventions in different combinations. The Task Force examined the evidence of differences attributable to specific interventions and combinations of interventions using different strategic approaches.

Fourteen studies implemented an effective combination of one or more interventions to increase community demand with one or more interventions to enhance access to vaccination services and showed a median increase in vaccination rates of 16 percentage points (IQI: 12 to 26 percentage points).

Client reminder and recall systems were used in most of the evaluated programs (15 study arms). Systems were implemented by vaccination providers, established as one part of a community manual outreach and tracking program, or generated from a regional immunization information system (IIS).

Applicability and Generalizability Issues

Interventions were effective in increasing vaccination rates for vaccines recommended for children (childhood series, hepatitis B) and for adults (influenza, pneumococcal vaccine). None of the included studies examined effectiveness for vaccines recommended for adolescents.

Most studies evaluated urban or suburban communities and findings are applicable to these settings. None of the included studies examined effectiveness in rural settings. Interventions were predominantly targeted to populations with low vaccination rates. Evidence demonstrated effectiveness of these interventions in low SES groups (10 studies), and for African American and Latino populations in urban settings (8 studies).

In this review, the Task Force did not consider coordinated interventions implemented exclusively in schools and organized child care centers or in Women, Infants, and Children (WIC) settings. The Task Force has separate findings for interventions implemented in these settings.

Other Benefits and Harms

Coordinated efforts to increase the receipt of recommended vaccinations may increase contact between health care providers and their clients, allowing for opportunities to deliver other clinical care or preventive services. Home visits may provide additional opportunities to help clients address barriers to social and clinical services and identify other health concerns in the home environment. Concerns about the safety of staff involved in home visits was described in one study, however, and may be a barrier to the use of these interventions.

Economic Evidence

The economic review identified a total of 22 studies (search period 1980-2012). Monetary values are in 2012 U.S. dollars. Nineteen studies were conducted in the United States, with single studies from Australia, Canada, and Finland, respectively. The median size of study intervention groups was 429 (IQI: 185 to 6013, 21 studies). Interventions were implemented at a median cost per person per year of \$54 (IQI: \$14 to \$214, 19 studies) and achieved a median cost per additional person vaccinated of \$461 (IQI: \$51 to \$798, 19 studies).

Several interventions were found to be resource-intensive. Community-based efforts using manual outreach and tracking or home visits were found to have higher costs compared to community-based efforts without these components. Resource-intensive interventions may be necessary to increase vaccination rates among populations with very low vaccination rates or communities where disparities in coverage persist. These interventions are likely to cost less if implemented as part of a stepped approach, beginning with less resource-intensive interventions such as client reminder and recall systems.

Considerations for Implementation

Coordinated interventions may be especially important in communities that have wide disparities in vaccination coverage. Program planners should consider community characteristics, such as mobility and fragmentation of health care, in the selection and combination of interventions to increase vaccination rates and reduce disparities.

Partnerships between community organizations and vaccination providers are likely to be an essential component of effective, sustained community-based efforts. Most studies involved partnerships with existing vaccination providers in the community to increase access to vaccinations, rather than creating new vaccination services. Coalitions represent one way to establish effective partnerships, with the size of the coalition varying based on the community, targeted population, and scope of the problem. Four studies involved community coalitions that used the principles of community-based participatory research.

Evidence Gaps

More evidence is needed on the effectiveness of these programs in adolescents, and when implemented in rural settings. More economic information on these interventions is needed, specifically, evaluations on the efficiencies of the resource-intensive components of manual outreach and tracking and home visits. Future research could compare program effectiveness based on differences in the component interventions and strategic combinations. Additional research also should examine ways to sustain these programs, especially when provided by existing community-based organizations.

The data presented here are preliminary and are subject to change as the systematic review goes through the scientific peer review process.

Disclaimer

The findings and conclusions on this page are those of the Community Preventive Services Task Force and do not necessarily represent those of CDC. Task Force evidence-based recommendations are not mandates for compliance or spending. Instead, they provide information and options for decision makers and stakeholders to consider when determining which programs, services, and policies best meet the needs, preferences, available resources, and constraints of their constituents.

Document last updated February 13, 2015