

# Increasing Appropriate Vaccination: Home Visits to Increase Vaccination Rates

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## Task Force Finding and Rationale Statement

### Intervention Definition

In these programs, home visitors assess clients' vaccination status, discuss the importance of recommended vaccinations, and either provide vaccinations to clients in their homes or refer them to available immunization services. Home visits may be conducted by vaccination providers (e.g., nurses) or others (e.g., social workers, community health workers).

Interventions may be directed to all clients in a designated population (e.g., low-income single mothers), or to those clients who have been unresponsive to previous intervention efforts, such as client reminder and recall systems. Home visiting programs may be implemented alone or as part of a larger healthcare system or community-based program to increase vaccination rates.

### Task Force Finding (February 2016)

The Community Preventive Services Task Force recommends home visits based on strong evidence of their effectiveness in increasing vaccination rates. The Task Force notes, however, the economic evidence showing that home visits can be resource-intensive and costly relative to other options for increasing vaccination rates. Evidence on effectiveness was considered strong based on a body of evidence that included studies of home visits delivered to all clients or to those unresponsive to other interventions, home visits focused on vaccination alone or in combination with other health concerns, and home visits that provided vaccinations on-site or referred clients to vaccination services outside the home.

### Rationale

#### Basis of Finding

This Task Force finding is based on evidence from a Community Guide systematic review completed in 2009 (19 studies, search period 1980-2009) combined with more recent evidence (4 studies, search period 2009-2012). Based on the combined evidence, the Task Force reaffirms its recommendation based on strong evidence of effectiveness. The Task Force notes that home visiting interventions are potentially effective in addressing a wide range of public health problems and that the focus of this review is the subset of interventions specifically addressing vaccination rates.

The Task Force considered evidence from 23 studies of home visits, with 20 studies and 21 study arms using a common measure of change in vaccination rates. The overall effect was a median increase of 11 percentage points (Interquartile interval (IQI): 5 to 15 percentage points). Meaningful improvements were observed as a result of home visits delivered to all clients (12 study arms) and to only those clients unresponsive to other interventions (9 study arms), home visits focused on vaccination alone (12 study arms) and in combination with other health concerns (9 study arms), and home visits providing on-site vaccinations (8 study arms) and referring clients to vaccination services outside the home (13 study arms). Home visits delivered as the sole intervention (8 study arms) and home visits delivered as part of a larger healthcare system or community-based program (13 study arms) also produced meaningful change in vaccination rates.

### **Applicability and Generalizability Considerations**

Effectiveness studies were conducted primarily in urban settings (15 studies) and in lower income populations (10 studies). Increases in rates were comparable for home visits directed at children (15 studies) and adults (7 studies), as well as for influenza (7 studies) and childhood vaccinations (14 studies).

### **Other Benefits and Harms**

Included studies noted that home visits give providers additional opportunities to assess clients' undetected health risks or medical problems. Although no specific harms were identified in the included studies, potential harms described in the larger literature include difficulties managing clients with adverse reactions to vaccinations, and stigmatization of socially or economically disadvantaged clients identified as needing special services.

### **Economic Evidence**

The findings from the economic review indicate that home visits are resource-intensive and high-cost interventions relative to other available options. Nine studies were included in the review (search period: 1980 - 2012). Studies were conducted in the United States (5 studies), the United Kingdom (2 studies), Australia (1 study), and Canada (1 study). One study looked at adolescent vaccines and the remaining evaluated interventions focused on the childhood vaccination series. Monetary values are in reported in 2013 US dollars.

The median intervention group size was 575 (IQI: 215 to 1500; 9 studies). Median cost per person was \$56.30 (IQI: \$45.21 to \$137.96; 9 studies). Median cost per additional vaccinated person was \$786.79 (IQI: \$163.03 to \$2280.57; 9 studies).

### **Considerations for Implementation**

Home visit interventions that serve multiple purposes (e.g., parent education, home safety assessment, vaccination promotion) may be logistically challenging. Timing for vaccinations and other home visit services also may be difficult (i.e. seasonal influenza and childhood series). In addition, clients may have security or privacy concerns about opening their homes to strangers or refuse services.

Resource-intensive interventions such as home visits 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.

### **Evidence Gaps**

More research is needed on the effectiveness and economic benefits of home visits to increase vaccination rates among adolescents and in rural settings. Additional economic research is needed to estimate the portion of home visits that can be attributed solely to improving vaccination rates when home visits include other activities and objectives.

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

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### **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.

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