Community Preventive Services Task Force

Increasing Appropriate Vaccination: Provider Reminders

Task Force Finding and Rationale Statement

Intervention Definition

Provider reminders inform those who administer vaccinations that individual clients are due for specific vaccinations. Techniques by which reminders are delivered vary, but may include notes prepared in advance and posted in client charts, alerts in electronic medical records, or letters sent by mail or e-mail.

Task Force Finding (March 2015)

The Community Preventive Services Task Force recommends provider reminders on the basis of strong evidence of effectiveness in increasing vaccination rates: (1) among adults, adolescents and children; (2) when used alone or with additional interventions; (3) across a range of intervention characteristics (e.g., computerized or simple reminders, checklists, flowcharts); and (4) in a range of settings and populations.

Rationale

Basis of Finding

Task Force finding is based on evidence from a Community Guide systematic review completed in 2008 (23 studies, search period 1997–2007) combined with more recent evidence (5 studies, search period 2007–February 2012). Based on the combined evidence, the Task Force reaffirms its recommendation based on strong evidence of effectiveness.

The Task Force considered evidence from 28 studies. Twenty-two studies provided a measurement of change in vaccination rates, with an overall median increase of 10 percentage points (interquartile interval [IQI]: 6 to 25 percentage points). Of these, seven studies examined provider reminders alone with a median increase of 12 percentage points (IQI: 6 percentage point to 25 percentage points). Fifteen studies examined the impact of provider reminders with additional interventions and observed a median increase of 9 percentage points (IQI: 5 to 25 percentage points). Six additional studies did not provide a common measurement of change in vaccination rates; however, five of the studies provided additional support for the use of provider reminders.

Applicability and Generalizability Issues

Evidence indicates that provider reminders remain an effective option for consideration in a wide range of clinical settings and populations. A subset of the included evidence, however, suggests that standing orders may be more effective in improving vaccination rates in both inpatient and outpatient settings than provider reminder systems.

Other Benefits and Harms

A review of included studies and the broader literature did not identify any additional benefits or potential harms associated with this intervention.

Economic Evidence

Four studies were included in the economic review (search period 1980 –2012). Studies were conducted in the U.S. (3 studies) and Canada (1 study) and examined intervention effectiveness on uptake of influenza or pneumococcal vaccinations (2 studies), tetanus vaccinations (1 study), and the childhood series (1 study). All monetary values are reported in 2013 U.S. dollars.

The median intervention group size was 2910 clients (IQI: 1660 to 19,770, 4 studies). The median cost of intervention per person per year was $7 (IQI: $2 to $47, 3 studies). Additional vaccinations due to intervention were achieved at a median cost per additional vaccinated person of $309 (IQI: $29 to $559, 3 studies). The cost tended to be higher for interventions that used a manual process rather than an immunization information system to generate the reminders. The economic evidence presented here is limited given the small number of studies.

Evidence Gaps

Evidence indicates that provider reminders are effective in a wide range of contexts. Additional research should focus on system-level implementation of reminder systems, and identify strategies to encourage regular and sustained use. In addition, future research could examine or compare the effectiveness of specific reminder prompts provided as a capability of regional or state-level immunization information systems.

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

Disclaimer

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