

EVIDENCE-BASED INTERVENTIONS TO ENHANCE VACCINATION RATES

Community-based interventions

Person-to-person interactions

LEVEL OF EVIDENCE

Strong evidence of effectiveness in increasing vaccination rates

Moderate evidence of effectiveness in increasing vaccination rates

Insufficient evidence of effectiveness in increasing vaccination rates

Strong evidence of ineffectiveness in increasing vaccination rates

It is impossible to globally assess the effectiveness of community-based interventions to increase awareness and knowledge among the public to increase vaccine coverage. This is due to the heterogeneity of interventions included in that category, as well as the contradictory results that were obtained (Stone et al. 2002; Harvey et al. 2015). A separate fact sheet has therefore been created for each of the following four types of interventions: distribution of information alone, face-to-face interactions on vaccination, mass media campaigns, and multicomponent interventions with at least one education/information component.

This fact sheet is solely devoted to person-to-person interaction on vaccination. Central to this type of intervention is the exchange of ideas and/or opinions between two or more people on the issue of vaccination. The interaction may take place face to face, or over the phone or by computer. It can be a one-on-one exchange or a collective discussion, with a health professional or with peers. Interaction-based interventions include a large variety of formats (oral presentation, discussion group, telephone discussion, individual interview at home or in a clinical setting, etc.), but the majority of interventions that have been evaluated are individual face-to-face interactions with a trained professional. This type of intervention is particularly adapted for persons speaking their native language or with difficulties in expression (Kaufman et al. 2013).

Expected impact

Increase in vaccination rates.

Other possible impacts

Increase in vaccine knowledge and attitudes.

Decrease of vaccine hesitancy.

Review of evidence

Overview

There is insufficient evidence to assess the effectiveness (or ineffectiveness) of person-to-person interactions in increasing vaccination rates (Harvey et al. 2015; Kaufman et al. 2013; Isenor et al. 2016; Usami et al. 2009) or in increasing knowledge and positive attitudes about vaccination (Kaufman et al. 2013). The results observed in the scientific literature are contradictory and are generally the product of studies with poor methodology. Not enough studies have been conducted to evaluate the effectiveness of this type of intervention in reducing vaccine hesitancy (Dubé et al. 2015).

Effectiveness according to population subsets and vaccines

The effectiveness of person-to-person interactions has been demonstrated for the elderly (Isenor et al. 2016; Usami et al. 2009; Krieger et al. 2000), but not for parents (contradictory results). A meta-analysis has shown an average increase of 12% in vaccination rates of children whose parents were offered a face-to-face discussion with a health professional, as opposed to the control group which received a pamphlet (Harvey et al. 2015). Another study showed uncertain effects of this type of intervention on children's vaccine coverage, whether it be one or several interaction sessions (Kaufman et al. 2013).

Effectiveness according to means of intervention

Interventions in which pharmacists distribute information and personalized advice to senior citizens have been proven effective for different vaccines and in different countries (Isenor et al. 2016; Usami et al. 2009). Senior citizens who have had received such an intervention are three times more likely to be vaccinated than others (Isenor et al. 2016).

Cost-effectiveness questions

There is not enough information in the literature on this question.

Promising interventions

Some approaches appear promising for increasing vaccination rates. However, they have been insufficiently evaluated to date. This is the case with peer interactions (Krieger et al. 2000) or dialogues via social networks (Jarret et al. 2015). In Quebec (Canada), an intervention based on motivational interviewing techniques was developed to educate parents of infants about vaccination in maternity wards. This intervention was first pilot-tested in a regional cohort study and showed an increase of 15% in the parents' intention to vaccinate their infant at 2 months of age and a 7% increase in vaccine coverage at 7 months. The effectiveness of the strategy was also demonstrated in a provincial randomized-controlled trial resulting in an increase of 12% (78–90%, $p < .0001$) in parental intention to vaccinate (Gagneur et al. 2018).

Impact on inequalities

There is not enough information on this question in the literature.

Example

Seattle Senior Immunization Project (Krieger et al. 2000)

Senior citizens who attended a centre for the elderly in Seattle (United States) were recruited on a volunteer basis to promote pneumococcal and influenza vaccination among their peers. After receiving training, they were contacted by persons attending the same centre to talk about and encourage vaccination. This program, lasting on average 6 weeks, allowed for an increase in vaccination rates for these two vaccines (+10% percentage point change). The cost of the programme was \$14,106 for 530 people who took part in the intervention. The cost for each additional person vaccinated was estimated at \$205 for the pneumococcal vaccine and \$380 for the influenza vaccine.

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This study's objectives were to help actors and decision-makers identify their territory's strengths and weaknesses with the help of synthetic indicators on the state of health and its determinants (available in SIRSéPACA) and to go from observation to action, through guiding them in the choice of actions to put in place. This study built on the American experience, *County Health Rankings and Roadmaps* (www.countyhealthrankings.org).

On the choice of actions to implement, bibliographic research was undertaken using different databases (Cochrane Library, Health Evidence, The Community Guide, Medline...). This permitted the identification of three main types of interventions (interventions to increase community demand for vaccination, to enhance access to vaccine services or provider-based interventions). The effectiveness of these interventions was evaluated in accordance with the number, type and methodological quality of studies available, as well as the breadth and coherence of the results (Briss P et al. *Developing an evidence-based Guide to Community Preventive Services-methods*. Am J Prev Med 2000;18(1S):35-43).

Ten themed fact sheets oriented to the principal types of interventions in the field of vaccination were written. All documents are available on the website of the System of Regional Health Information PACA (www.sirsepaca.org).

TYPE OF INTERVENTIONS	FACT SHEETS
Interventions to increase community demand for vaccination	Client-based written education interventions when used alone Person-to-person interactions Mass media campaigns Multicomponent interventions with at least one education / information component Client incentives and rewards Reminder and recall systems for clients
Interventions to enhance access to vaccine services	Home visits
Provider-based interventions	Reminder and recall systems for providers Audit and feedback Standing orders

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