

# EVIDENCE-BASED INTERVENTIONS TO ENHANCE VACCINATION RATES

## Community-based interventions

### Mass media campaigns

#### 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 media campaigns. This type of intervention consists of using different types of media (television, written press, radio...) to promote vaccination on a large scale. These campaigns may target the general public or specific subsets of the population, and may be conducted at the local, regional or national level (Community Services Preventive Task Force 2011).

### Expected impact

Increase in vaccination rates.

### Other possible impacts

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

## Review of evidence

### Overview

There is insufficient evidence to assess the effectiveness (or ineffectiveness) of mass media campaigns in improving vaccination rates or reducing vaccine hesitancy (Briss et al. 2000; Jarrett et al. 2015; Kim & Yoo 2015; Ngui et al. 2015; Dubé et al. 2015; Community Preventive Services Task Force 2015), regardless of the geographical region studied.

### Effectiveness according to population subsets and vaccines

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

### Effectiveness according to means of intervention

No study suggests that effectiveness varies according to the geographic scale of the campaigns. However, several success factors have been identified: targeted campaigns as opposed to general ones (Dubé et al. 2015; Jarret et al. 2015), repeated exposure over time, involving influential people (political or religious leaders, celebrities, etc.) in the campaigns (Jarret et al. 2015) or including testimonies of people from the population (Jarret et al. 2015).

Several systematic reviews have shown that multicomponent interventions with at least one education/information component were effective in increasing vaccination rates (see the fact sheet on multicomponent interventions).

Several recently published random trials provide evidence that message framing and means of communication are important components of mass media campaigns (Nyhan et al. 2014; Nyhan & Reifler 2015; Hendrix et al. 2014; Prati et al. 2012). Messages correcting misconceptions about the risks linked to

vaccines may contribute to combating prejudice against some vaccines, but not among the people who are most reluctant and anxious, for whom negative attitudes may actually be reinforced (Nyhan et al. 2014; Nyhan & Reifler 2015). Testimonials (narratives) and images of people suffering from vaccine-preventable diseases may reinforce misconceptions and negative attitudes about vaccines (Nyhan et al. 2014). Informative messages about the dangers of vaccine-preventable diseases (Nyhan et al. 2014; Nyhan & Reifler 2015; Prati, Pietrantoni, & Zani 2012) have no impact on public attitudes. It must be noted that none of the messages evaluated had an impact on people's intention to vaccinate themselves or their children (Nyhan et al. 2014).

A random trial suggests that insisting on the individual benefits of childhood vaccination is more effective than insisting on the collective benefits for increasing the intention to vaccinate children. However, when it comes to adult vaccination, emphasizing collective benefits seems to be more effective (Hendrix et al. 2014).

### Cost-effectiveness questions

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

### Impact on inequalities

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

***Last modified: March 27, 2017***

## References

- Briss, P. A., L. E. Rodewald, A. R. Hinman, A. M. Shefer, R. A. Strikas, R. R. Bernier, V. G. Carande-Kulis, H. R. Yusuf, S. M. Ndiaye, and S. M. Williams. 2000. "Reviews of Evidence Regarding Interventions to Improve Vaccination Coverage in Children, Adolescents, and Adults. The Task Force on Community Preventive Services". *American Journal of Preventive Medicine* 18 (1 Suppl): 97-140.
- Community Preventive Services Task Force. 2015. "Vaccination Programs: Community-Wide Education When Used Alone". <https://www.thecommunityguide.org/findings/vaccination-programs-community-wide-education-when-used-alone>.
- Community Preventive Services Task Force. 2011. "Skin cancer: mass media". <https://www.thecommunityguide.org/findings/skin-cancer-mass-media>
- Dubé, Eve, Dominique Gagnon, Noni E. MacDonald, and SAGE Working Group on Vaccine Hesitancy. 2015. "Strategies Intended to Address Vaccine Hesitancy: Review of Published Reviews". *Vaccine* 33 (34): 4191-4203. doi:10.1016/j.vaccine.2015.04.041.
- Harvey, Hannah, Nadja Reissland, and James Mason. 2015. "Parental Reminder, Recall and Educational Interventions to Improve Early Childhood Immunisation Uptake: A Systematic Review and Meta-Analysis". *Vaccine* 33 (25): 2862-80. doi:10.1016/j.vaccine.2015.04.085.
- Hendrix, Kristin S., S. Maria E. Finnell, Gregory D. Zimet, Lynne A. Sturm, Kathleen A. Lane, and Stephen M. Downs. 2014. "Vaccine Message Framing and Parents' Intent to Immunize Their Infants for MMR". *Pediatrics* 134 (3): e675-683. doi:10.1542/peds.2013-4077.
- Jarrett, Caitlin, Rose Wilson, Maureen O'Leary, Elisabeth Eckersberger, Heidi J. Larson, and SAGE Working Group on
- Vaccine Hesitancy. 2015. "Strategies for Addressing Vaccine Hesitancy - A Systematic Review". *Vaccine* 33 (34): 4180-90. doi:10.1016/j.vaccine.2015.04.040.
- Kim, Minchul, and Byung-Kwang Yoo. 2015. "Cost-Effectiveness Analysis of a Television Campaign to Promote Seasonal Influenza Vaccination Among the Elderly". *Value in Health: The Journal of the International Society for Pharmacoeconomics and Outcomes Research* 18 (5): 622-30. doi:10.1016/j.jval.2015.03.1794.
- Ngui, Emmanuel M., Chelsea Hamilton, Melodee Nugent, Pippa Simpson, and Earnestine Willis. 2015. "Evaluation of a Social Marketing Campaign to Increase Awareness of Immunizations for Urban Low-Income Children". *WMJ: Official Publication of the State Medical Society of Wisconsin* 114 (1): 10-15.
- Nyhan, Brendan, and Jason Reifler. 2015. "Does Correcting Myths about the Flu Vaccine Work? An Experimental Evaluation of the Effects of Corrective Information". *Vaccine* 33 (3): 459-64. doi:10.1016/j.vaccine.2014.11.017.
- Nyhan, Brendan, Jason Reifler, Sean Richey, and Gary L. Freed. 2014. "Effective Messages in Vaccine Promotion: A Randomized Trial". *Pediatrics* 133 (4): e835-842. doi:10.1542/peds.2013-2365.
- Prati, Gabriele, Luca Pietrantonio, and Bruna Zani. 2012. "Influenza Vaccination: The Persuasiveness of Messages among People Aged 65 Years and Older". *Health Communication* 27 (5): 413-20. doi:10.1080/10410236.2011.606523.
- Stone, Erin G., Sally C. Morton, Marlies E. Hulscher, Margaret A. Maglione, Elizabeth A. Roth, Jeremy M. Grimshaw, Brian S. Mittman, Lisa V. Rubenstein, Laurence Z. Rubenstein, and Paul G. Shekelle. 2002. "Interventions That Increase Use of Adult Immunization and Cancer Screening Services: A Meta-Analysis". *Annals of Internal Medicine* 136 (9): 641-51.

This vaccination-themed fact sheet was written by the l'Observatoire Régional de la Santé Provence-Alpes-Côte d'Azur (ORS Paca) as part of a study conducted in 2016-2017, thanks to financial support from l'Agence Régionale de Santé Provence-Alpes-Côte d'Azur (ARS Paca). The original version is available here: <http://www.sirsepaca.org/territoires-actions-probantes/>.

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](http://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](http://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 <b>Mass media campaigns</b> 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

We extend thanks to the study's follow-up committee, which includes ARS Paca, Comité Régional d'Education pour la Santé Paca, l'Union Internationale de Promotion de la Santé et d'Education pour la Santé, University of Wisconsin Madison (USA), Observatorio de Salud en Asturias, and ORS Paca.

Editorial Committee/Supervision  
Aurélie Bocquier, Hélène Dumesnil, & Pierre Verger (ORS Paca)

English translation  
John-Samuel MacKay & Dominique Gagnon

*\*This fact sheet has been translated and adapted from ORS PACA (Observatoire Régional de la Santé Provence-Alpes-Côte d'Azur, France) with their permission. The views expressed herein do not necessarily represent the views of the Public Health Agency of Canada.*