



FACT SHEET | MARCH 2019 [*Translated and adapted from ORS PACA]

EVIDENCE-BASED INTERVENTIONS TO ENHANCE VACCINATION RATES

Provider-based interventions

Audit and feedback

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

Audit and feedback interventions consist of evaluating the performance of health professionals regarding the vaccination of their patients, and giving them feedback on their performance. The feedback may be on the performance of a group of health professionals, or that of one professional in particular. This type of intervention may be implemented alone or in combination with other types of interventions (financial incentives, benchmarking...).

Expected impact

Increase in vaccination rates.

Other possible impacts

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



Review of evidence

Overview

Evidence suggests that audit and feedback measures are somewhat effective in increasing vaccination rates. This level of evidence is backed up by several systematic reviews and meta-analyses (Briss et al. 2000; Ivers et al. 2012; Groom et al. 2015; Dubé et al. 2015; Williams et al. 2011), and by research in the literature conducted by the Community Preventive Services Task Force (Community Preventive Services Task Force 2015).

The literature review conducted by the Community Preventive Services Task Force in 2015 (20 studies included) shows an average increase in vaccine coverage of 9 percentage points (Community Preventive Services Task Force 2015). Two older systematic reviews report an average increase of 19% (Wiliams et al. 2011) and 16% (Briss et al. 2000).

One Cochrane systematic review has shown more generally that this type of intervention is effective in promoting health behaviours among the population, as well as good practices among health professionals (Ivers et al. 2012).

Effectiveness according to population subsets and vaccines

The effectiveness of audit and feedback measures has been demonstrated for different population groups (adults, children, teenagers...), for different vaccines (MMR, Td Polio, influenza...), and in different settings (private practice, public health, health centres...) (Briss et al. 2000; Williams et al. 2011; Community Preventive Services Task Force 2015). It is, however, impossible to determine the effectiveness or ineffectiveness of audit/feedback interventions in improving influenza vaccination for the elderly (Thomas & Lorenzetti 2014).

Effectiveness according to means of intervention

Audit/feedback interventions are just as effective alone and when combined with other types of interventions (Briss et al. 2000; Community Preventive Services Task Force 2015).

A systematic review (Ivers et al. 2012) identified several success factors: the intervention had a greater impact when the level of performance was low prior to intervention, when the audit/feedback supervisor was a senior colleague, and when the result was given verbally and in writing more than once and included a plan of action with explicit objectives.

Cost-effectiveness questions

Few data exist regarding the cost-effectiveness of audit/feedback interventions (Briss et al. 2000; Community Preventive Services Task Force 2015). A study estimated the cost of a combined intervention including one measure facilitating access to a health centre (clinic with extended hours), several sensitization actions promoting public health, and an audit/feedback action for professionals, to be \$7.65 per vaccination (Briss et al. 2000).

Promising interventions

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.



Example

An audit/feedback intervention was conducted at a community health centre in Milwaukee, Wisconsin (United States), as a means to increase vaccination rates in children under 3 years of age. Doctors received information on the proportion of children who should have been vaccinated but were not ("missed opportunities for vaccination").

This before-and-after study showed that missed opportunities were three times lower following the intervention (49% to 13%).

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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 : Provider Assessment and Feedback".
 https://www.thecommunityguide.org/findings/ vaccination-programs-provider-assessmentand-feedback
- 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.
- Groom, Holly, David P. Hopkins, Laura J. Pabst, Jennifer Murphy Morgan, Mona Patel, Ned Calonge, Rebecca Coyle, et al. 2015.
 "Immunization Information Systems to Increase Vaccination Rates: A Community Guide Systematic Review". Journal of Public Health Management and Practice: JPHMP 21 (3): 227-48. doi:10.1097/ PHH.000000000000069.
- Ivers, Noah, Gro Jamtvedt, Signe Flottorp, Jane M. Young, Jan Odgaard-Jensen, Simon D. French, Mary Ann O'Brien, Marit Johansen, Jeremy Grimshaw, and Andrew D. Oxman. 2012. "Audit and Feedback: Effects on Professional Practice and Healthcare Outcomes". The Cochrane Database of Systematic Reviews, no 6 (June): CD000259. doi:10.1002/14651858.CD000259.pub3.

- Thomas, Roger E., and Diane L. Lorenzetti. 2014. "Interventions to Increase Influenza Vaccination Rates of Those 60 Years and Older in the Community". The Cochrane Database of Systematic Reviews, no 7 (July): CD005188. doi:10.1002/14651858.CD005188.pub3.
- Williams, Nia, Helen Woodward, Azeem Majeed, and Sonia Saxena. 2011. "Primary Care Strategies to Improve Childhood Immunisation Uptake in Developed Countries: Systematic Review". JRSM Short Reports 2 (10): 81. doi:10.1258/shorts.2011.011112.



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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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