

This Evidence Bulletin summarises a Cochrane systematic review.

In a systematic review the researchers aim to locate, quality appraise and synthesise all of the available evidence related to a specific research question.

Cochrane review authors adopt rigorous methods to minimise bias as a way of producing reliable findings with the ultimate goal of making the evidence more useful for practice. For more information see: <http://cccr.org.cochrane.org/about>.

The intended audience of this Evidence Bulletin is decision-makers and clinicians involved in informing and/or educating parents about early childhood vaccinations.

Face to face interventions for informing or educating parents about early childhood vaccination

Cochrane review summary

In this Cochrane systematic review, Jessica Kaufman and colleagues sought to answer:

Do face to face education interventions targeting parents about early childhood vaccinations change vaccination rates, knowledge and attitudes towards vaccinations and vaccine-preventable diseases?

What are face to face information and education interventions targeting parents?

Information or education interventions make people aware of the practical or logistical factors associated with vaccination or help them to understand the meaning and relevance of vaccination for themselves, their family or community. Face to face communication is interactive, efficient and can be tailored for people with low literacy or for contexts with limited resources.

Key findings

There is limited evidence that face to face interventions to inform or educate parents about early childhood vaccination:

- may have little impact on immunisation status
- may have little impact on knowledge or understanding of vaccination.

There was limited evidence related to the cost of implementing interventions.

There was no evidence available regarding: parent intention to vaccinate, parent experience of the intervention, or adverse effects.

Full citation for this Cochrane review:

Kaufman J, et al. [Face to face interventions for informing or educating parents about early childhood vaccination](#). *Cochrane Database of Systematic Reviews*, 2013, Issue 5. Art. No.: CD010038. DOI: 10.1002/14651858.CD010038.pub2.

Detailed review information

Background

Routine childhood vaccination is an important issue in both high- and low-income countries. In high-income countries, vaccination coverage can be impacted by a number of elements including religious beliefs, financial limitations, urban or rural residence, immigration status or lack of education.

Vaccination decision-making is a complex process, influenced by many factors. The degree of indecision or uncertainty parents feel about vaccination is known as 'vaccine hesitancy'. A contributing factor to vaccine hesitancy is a lack of understanding or awareness about the benefits and side effects of vaccination, where and how to access vaccines, and how vaccination works. Misinformation and safety concerns can also influence vaccination decision-making. Successful vaccination programs rely on people having sufficient and appropriate knowledge to make an informed decision to participate.

Information about this review

Kaufman and colleagues conducted a detailed search of studies published up to July 2012. Using pre-determined criteria they looked for:

Types of studies

- Randomised controlled trials (RCTs) and cluster RCTs.

Participants

- Included: parents, guardians or others fulfilling the parental role, alone or in groups, targeted to receive face to face information or education, and who have at least one child due or overdue for childhood vaccinations. Participants may also be expectant parents, who are individuals or couples currently pregnant, considering adoption or otherwise expecting to become guardians of a child.

Types of intervention

- Face to face early childhood (<6 years) vaccination education and/or information interventions directed to parents individually or in groups.

Comparison

- Face to face interventions versus control (usual care or passive intervention, ie no intervention, pamphlet)
- Face to face interventions directed at individuals versus groups
- Face to face intervention A versus face to face intervention B.

Outcomes

- Immunisation status of child
- Parent knowledge or understanding of vaccination
- Parent intention to vaccinate child
- Parent experience of intervention (eg satisfaction, assessment of communication)
- Cost of implementing intervention
- Unintended adverse effects due to the intervention.

Main results

This review included seven individualised and cluster RCTs. In total, 2978 people participated in the seven trials. The majority of interventions were directed to mothers. The intervention in one study was directed to expectant parents. Three studies targeted mothers for whom additional barriers to accessing vaccination exist (illicit drug users, adolescent mothers, mothers of low socioeconomic status).

About the studies

Four studies were conducted in high-income countries including Australia, Canada, and the United States. Two studies were conducted in Pakistan and one in Nepal. Only one study took place in a rural setting; the rest were in urban or peri-urban locations.

The interventions were delivered primarily in a clinic or hospital, in the mother's home, or both. All studies delivered some form of face to face information or education about vaccination, but the intensity, timing and content of the interventions varied. Some programs were delivered in a single session whereas other delivered their intervention program over multiple sessions. The timing of the sessions varied, from being delivered before birth, at birth or up to six months after birth. Some intervention programs focussed solely on vaccination information, whereas others were delivered as part of a broader parenting program. The program deliverer also varied, including midwives, nurses, community health workers and researchers.

Effects of interventions

There is low certainty evidence that face to face interventions directed at parents to inform and/or educate about childhood vaccination:

- may have little impact on immunisation status
- may have little impact on knowledge or understanding of vaccination.

There was limited evidence related to the cost of implementing interventions.

There was no evidence available regarding: parent intention to vaccinate, parent experience of the intervention, or adverse effects.

Two trials indicated that a brief, targeted, immunisation-specific face to face intervention may result in improved immunisation rates among certain low-income and low-literacy populations, but these results are not reflected in the other studies.

What this review does not show

This review did not include interventions with additional information or education components, such as written materials. It is

possible that face to face interventions may be more or less effective depending on the additional interventions with which they are combined.

No studies were identified that addressed the following comparisons: (i) face to face interventions directed to individuals versus face to face interventions directed to groups; or (ii) face to face intervention A versus face to face intervention B. The one study that measured face to face interventions directed to groups of parents versus control did not have usable data.

Results table: Intervention aimed at communities versus usual care

	Narrative summary of findings	No. of participants (studies)	Evidence quality (GRADE) #
Immunisation status measured 3 months after a single-session intervention	Effect is uncertain. Four comparisons in 3 studies showed inconsistent results. Studies with higher risk of bias were associated with greater increase in immunisation, compared with control, while a study with lower risk of bias showed no or little evidence of effect	2101 (3 studies)	Low
Immunisation status measured at the conclusion of a multi-session intervention	Effect is uncertain. Results were statistically insignificant, ranging from reduced to no evidence of effect, and had wide confidence intervals	328 (2 studies)	Very low
Knowledge or understanding of vaccination	Effect is very uncertain. Two eligible studies with multi-session interventions showed non-significant increases in knowledge scores compared with control	489 (2 studies)	Very low
Cost	Effect is very uncertain. A single study reported that the estimated mean cost of usual care per fully immunised child was \$US1587 or \$US1273 for children defined as high-risk. The estimated additional cost per fully immunised child was approximately 8 times higher than usual care for all children and 4 times higher for high-risk children	365 (1 study)	Very low
Adverse effects	The included studies did not measure adverse effects related to the intervention		

What does this mean for health care in Victoria, Australia?

<p>The broader policy and clinical context</p>	<p>Australia has relatively high vaccination rates overall. However, maintaining good coverage (depending on the vaccine, 90-95% coverage is considered optimal) and improving rates in particular communities and populations requires ongoing effort and innovation.</p> <p>Communication strategies are integral to vaccination strategies at the State and National levels. The Victorian strategy includes communication with consumers and the general public via face-to-face interactions with immunisation service providers and other health professionals; immunisation information leaflets; a State web-site; an immunisation reminders app for Victorian parents and a telephone help-line; and periodic press releases, typically in response to adverse media coverage of immunisation-related issues. Similarly, the National Immunisation Strategy for Australia, in its Strategic Priority 5, seeks to maintain and ensure community confidence in the National Immunisation Program through effective communication strategies by focusing on the following key communication actions:</p> <ul style="list-style-type: none"> • Identify ways to strengthen the current communications strategy, particularly for population groups with low and/or delayed immunisation coverage. • Monitor and revise communication resources and campaigns to improve the reach of immunisation awareness and confidence for key target groups. <p>In 2015, the following percentages of Victorian children were fully immunised according to the National Immunisation Program Schedule: 91.53% at age 12 months, 89.05% at 24 months and 92.75% at 60 months. In Australia, the rate of vaccine refusal or rejection has been relatively low, with conscientious objections recorded for only 1.71% of children at the end of 2014. However, the public health impact of parents who refuse vaccines is heightened because they tend to cluster in particular regions or communities. From January 2016, conscientious objection has been removed as a valid reason for vaccination exemption under both the federal government's No Jab No Pay and Victoria's No Jab No Play policies. This means vaccine objection data is no longer collected, so it may become more difficult to monitor potential clusters of vaccine refusal. Historically, examples of problematic areas include Lismore, NSW (where the rate of objection was 7% in 2014) and the Bayside Medicare local catchment area, which recorded the lowest rate of Victorian children aged 5 years fully immunised in 2012-13 at 82.9%.</p> <p>Nearly a third of parents in Australia may be considered 'vaccine hesitant' - that is, they have concerns about or are distrustful of vaccines. Vaccine hesitancy is driven by societal influences, making targeted communication about vaccination in communities with lower uptake particularly important. Health providers play an important role in addressing questions and concerns about vaccination, and they are often seen as the most trusted sources of information. Regardless of the evidence on its effectiveness, face to face communication between providers and parents takes place in every encounter and should be undertaken in a considered and respectful way.</p>
<p>Relevance of settings and populations</p>	<p>The findings of this review are applicable to the Australian context. Addressing vaccination at the face to face level is a transferable concept. However face to face information or education alone may not be sufficient to change behaviour.</p>
<p>Implications for decision-makers</p>	<p>The limited evidence available is low quality and suggests that face to face interventions to inform or educate parents about childhood vaccination have little to no impact on immunisation status, or knowledge or understanding of vaccination. There is insufficient evidence to comment on the cost of implementing the intervention, parent intention to vaccinate, parent experience of the intervention, or adverse effects. While face to face interventions alone have an apparently limited effect, the provider-parent interaction remains a regular and trusted source of information for many parents and it may be feasible and appropriate to incorporate additional communication interventions alongside the face to face communication.</p>

What does this mean for health care in Victoria, Australia? (continued)

Implications for decision-makers (continued)	If implementing a program, consider evaluating process outcomes in addition to vaccination status (e.g. knowledge, attitudes) to determine more accurately where and whether the intervention is working.
Implications for clinicians	Face to face communication alone might not be sufficient to change behaviour – though it is still a relevant form of communication and the first point of contact for most people. When talking to parents, consider doing more than simply informing them of facts – vaccine hesitancy and decision aid literature suggests that people are more likely to change their minds with patient and respectful consideration of their points of view .

Related Resources

- Australian Department of Health 2013 [National Immunisation Strategy for Australia 2013-2018](#)
- Department of Health and Human Services, Victoria, Australia 2013 [Victorian Immunisation Strategy 2009-2012](#)
- National Health Performance Authority 2014 [Healthy Communities: Immunisation rates for children in 2012-13](#)
- Department of Health and Human Services, Victoria, Australia [VaxOnTimeApp](#)
- Australian Childhood Immunisation Register 2014 [National vaccine objection \(conscientious objection\) data](#)
- Leask 2011 [Target the fence-sitters](#)
- Danchin 2014 [A positive approach to parents with concerns about vaccination for the family physician](#)
- Leask 2014 [The big picture in addressing vaccine hesitancy](#)
- Larson 2014 [Understanding vaccine hesitancy around vaccines and vaccination from a global perspective: A systematic review of published literature, 2007-2012](#)

Examples of communication interventions to improve vaccination

- Willis 2013 [‘Communicate to vaccinate’: the development of a taxonomy to organise the evidence of communication interventions to improve vaccination in low- and middle-income countries](#)
- NPS Medicinewise 2013 [Vaccination communication](#)

Related systematic reviews

- Saeterdal 2014 [Interventions aimed at communities to inform and/or educate about early childhood vaccination](#)
- Oyo-Ita 2011 [Interventions for improving coverage of child immunization in low- and middle-income countries](#)
- Ryan 2014 [Interventions to improve safe and effective medicines use by consumers: an overview of systematic reviews](#)

Related Evidence Bulletins

- Interventions aimed at communities to inform and/or educate about early childhood vaccination

Evidence Bulletins are available [here](#)

This Evidence Bulletin draws on the format developed for SUPPORT summaries (for more information on SUPPORT summaries see www.supportsummaries.org).

Centre for Health Communication and Participation

The Centre for Health Communication and Participation produces Evidence Bulletins. The Centre is funded by the Consumer Partnerships and Quality Standards Unit, Department of Health and Human Services, Victoria, Australia. Evidence Bulletins summarise reviews published by the Cochrane Consumers and Communication Review Group.

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Suggested citation

Synnot A, Kaufman J, Lowe D. (2016) Face to face interventions for informing or educating parents about early childhood vaccination. Evidence Bulletin. Centre for Health Communication and Participation <http://www.latrobe.edu.au/chcp/evidence-bulletins>



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