

Working with vaccine-hesitant parents

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Abstract

While most Canadian parents ensure that their children are immunized on time, some are hesitant about vaccination, delay vaccinations or outright refuse recommended vaccines. This practice point offers clinicians evidence-based guidance on how to work with vaccine-hesitant parents, especially those with safety concerns. Suggested steps include: understanding the specific parental vaccine concerns; using motivational interviewing techniques; staying on message and using clear language to present evidence of disease risks, and vaccine benefits and risks fairly and accurately; informing parents about the rigour of the vaccine safety system; addressing issues related to pain from immunization; and avoiding dismissal of children from a practice because parents refuse to immunize. Because immunization is one of the most important preventive health measures, responsible for saving literally millions of lives, addressing the concerns of vaccine-hesitant parents must be a priority for health care providers.

Key Words: Childhood immunization; Vaccine hesitancy; Vaccine pain; Vaccine safety

While most Canadian parents ensure that their children receive routine immunizations (estimated to be >80% of children),^[1] health care providers will encounter parents who are hesitant about vaccination or outright refuse to accept some or all of the recommended vaccines.^{[2][3]} For most of these parents, the main concern is vaccine safety.^{[3][4]} Research has shown that a health care provider's advice has a major influence on parental decision-making.^{[2][6]} This practice point offers evidence-based guidance to clinicians on how to work with vaccine-hesitant parents, especially those with vaccine safety concerns.

To more effectively approach vaccine-hesitant parents, health care workers need to appreciate why parents develop ambivalence about immunization. Exposure to purported 'experts' who make cognitive shortcuts, use flawed logic and send

mixed messages contributes to parental confusion about vaccine safety.^{[7][8]} Parents may readily recall a media or friend's story claiming to show that vaccines cause autism, yet they have likely never seen or heard of a child with measles pneumonia or encephalitis. The Internet, traditional media and celebrities also contribute to vaccine refusal.^{[8][11]} Even 5 min to 10 min on an antivaccine website can dramatically alter one's perception and decrease acceptance of vaccines.^[11] Despite antivaccine websites being filled with cognitive errors in reasoning, wishful thinking and distortion of reality,^[12] the powerful stories of children alleged to have been damaged by vaccines linger in the subconscious and influence parental decision.^[7]

How can health care providers more effectively engage vaccine-hesitant parents in a decision-making partnership? What follows are five important steps in this process.

1. Understand the specific vaccine concerns of the parent: Use motivational interviewing, ie, questions that are client-centred, semidirective and aimed at changing behaviour^[13]

Do not assume that every parent has the same concerns.^{[3][13]} Using a nonjudgemental and nonconfrontational tone, ask parents what they are most worried about and to describe their understanding of disease risks and vaccine benefits and risks. Listen carefully. Validate why parents may hold a specific belief about a vaccine, especially if it is based on misinformation and/or misunderstanding. Do not plant new concerns by bringing up spurious vaccine allegations that the parent has not brought forward because this may suggest that vaccines are truly dangerous. If the concern is about the measles, mumps and rubella vaccine and autism, discuss how the original allegations were fraudulent and that there is no evidence of a link.^[14] Correct other specific misconceptions if parents have them, such as "the inactivated poliovirus vaccine causes polio" or "all routine infant vaccines contain mercury (thimerosal)".^[15] Health care providers can promote the value of vaccination by relating compelling stories of children damaged or killed by vaccine-preventable diseases.^[7] If the clinician does not have personal experience with such cases, powerful vignettes can be found at www.cdc.gov/CDCTV/PersonalFluStories/index.html or www.immunize.org/reports/.

2. Stay on message and use clear language to present evidence of vaccine benefits and risks fairly and accurately

“Vaccines are safe and effective, and serious disease can occur if your child and family are not immunized.”

Parents may be under the impression that their child is at a lesser risk for infectious disease because of good health, privileged socioeconomic status or protection from breastfeeding. The evidence is strong that healthy, nonimmunized children are more affected than adults during outbreaks, given their comparatively wider social networks. For example, a 2011 measles outbreak cut a wide swath across Europe, readily infecting those who were not vaccinated.^[16]

Despite unimmunized children being at low risk of acquiring certain infections in Canada, the risk of devastating consequences from serious vaccine-preventable infectious diseases is only an airplane flight away. Infants, children and youth need to be immunized on schedule and on time.^[4]

Parents should be reminded that their decision not to immunize on time can have consequences for others. Their healthy unvaccinated child may spread a vaccine-preventable disease to high-risk individuals. For example, a child might infect an infant sibling with pertussis, a pregnant woman with rubella, or a grandparent with influenza or pneumonia. Cocooning – providing protection for young infants by immunizing those around them – can be a helpful strategy to prevent pertussis.^[17]

Consequences – especially when they have the potential to strike close to home – can influence parental decision-making. Invoking parent-child equity can help in discussions with younger parents, who have enjoyed good health and freedom from many infectious diseases as a result of their routine childhood vaccinations. Consider asking questions such as: “Don’t you want your child to have the same health advantages you had?” or “Wouldn’t you feel terrible if your child suffered from a disease that you have been spared from?” Some vaccine-hesitant parents rely on herd protection from vaccine-preventable diseases^[6] without knowing that this is not possible for a disease such as tetanus. Remind these parents that the tetanus-causing microbe resides in soil and will never be eliminated. Deciding to defer tetanus immunization until an accident can be tragic because many cases of tetanus occur in individuals who have sustained only a seemingly trivial injury.^[18] Similarly, a ‘wait-and-see’ plan to vaccinate only in an outbreak scenario places the child in a precarious position. Full protection against many diseases (eg, pertussis) cannot be achieved with one dose of vaccine. Even vaccines that are efficacious with a single dose act too slowly to reliably protect if they are given at the start of an outbreak because it may take two to three weeks to achieve protective levels of antibody.

Be aware of the language you use. Use standard vocabulary for both disease and vaccine risks. Explain what you mean by

‘common’, ‘rare’ and ‘very rare’. Use a common denominator for disease and vaccine risks. Parents may not understand single-event probability. Emphasize that many disease and complication risks are high, and complications may not be correctable even with the very best medical care.

Framing your message – presenting information of the equivalent outcome in terms of gains (positive) or losses (negative) – is key.^{[19][20]} For example, most people would choose “75% lean beef burgers” over “25% fat beef burgers,” even though the two statements are identical. Given that risks can create anxiety, the statement, “A vaccine is 99% safe” is more effective than, “There is a 1% chance of side effects.” Similarly, “If you decide not to be immunized against HPV, you increase your chances of getting HPV and cervical cancer,” is more effective than, “If you decide to get the HPV vaccine, you decrease your chances of getting HPV and cancer and giving HPV to your partners.”^[20]

Avoid using academic jargon that can be misconstrued or misunderstood.^[21] There are many good resources for answering parental vaccine questions using clear language that avoids academic language pitfalls, including: the Canadian Paediatric Society’s book, *Your Child’s Best Shot*;^[22] the *Immunization Communication Tool* from British Columbia;^[23] *Basics and Common Questions* (www.cdc.gov/vaccines/vac-gen/default.htm) and *Provider Resources for Vaccine Conversations with Parents* (www.cdc.gov/vaccines/hcp/patient-ed/conversations/index.html), two websites from the Centers for Disease Control and Prevention (USA); and *Caring for Kids* (www.caringforkids.cps.ca), a bilingual website for parents and caregivers produced by the CPS.

3. Inform parents about the rigour of the vaccine safety system

Vaccine safety worries are the top concern of hesitant parents.^[3] Few are aware of Canada’s robust vaccine safety system or that vaccines are held to a higher safety standard than drugs.^[24] Both the National Advisory Committee on Immunization and the CPS make recommendations for vaccination based on the disease epidemiology and evidence for vaccine safety, efficacy and effectiveness. These statements are independent of vaccine manufacturers. As well, because vaccines are often only approved in Canada after they have been in general use in other countries for some time, Canadians benefit from additional safety and effectiveness data. This information is reassuring for some vaccine-hesitant parents.

4. Address the issues of pain with immunization

For many parents, immunization pain is a source of distress that is often overlooked.^[25] A 2010 evidence-based Canadian clinical practice guideline on measures to reduce the pain of childhood vaccination, developed by an interdisciplinary group of experts and endorsed by the CPS, provides helpful suggestions for parents and immunizers.^[25]

5. Do not dismiss children from your practice because parents refuse to immunize

Dealing with parents who outright refuse immunization for their children can be frustrating for health care providers. While a minority of parents (an estimated 3% in the United States)^[13] may never change their minds, many do accept vaccination if health care professionals respectfully listen to and address their concerns. While this may take multiple discussions and progress may be slow, the result of a fully immunized child is worth the effort. Every health encounter is an opportunity to discuss vaccination. Referral to an expert skilled in discussing this area may help, although persuading the parent to attend such a visit is often a struggle. Faced with parents who refuse immunization for their children, some physicians may consider dismissal from their practice. However, in Canada there are complex legal, ethical and public health issues.^[26] Refusing to continue the child's care is unlikely to prompt the parents to agree to immunization and would not be considered to be in the best interests of the child.

In summary, dealing with vaccine-hesitant parents requires knowledge and skill. Health care professionals must understand parents' specific concerns and take time to foster trust. This means presenting the evidence in a way that parents can understand it and showing compassion for the child. Taking the time to do these things well can mean the difference between a child being immunized or not. Because immunization is one of the most important preventive health measures, responsible for saving literally millions of lives, addressing the concerns of vaccine-hesitant parents must be a priority for health care providers.

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References

1. World Health Organisation. Canada: WHO and UNICEF estimates of immunization coverage: 2011 revision (data as of July 6, 2012). www.who.int/immunization_monitoring/data/can.pdf (Accessed March 13, 2013).
2. Gust DA, Darling N, Kennedy A, Schwartz B. Parents with doubts about vaccines: Which vaccines and reasons why. *Pediatrics* 2008;122(4):718-25.
3. Salmon DA, Moulton LH, Omer SB, DeHart MP, Stokley S, Halsey NA. Factors associated with refusal of childhood vaccines among parents of school-aged children: A case-control study. *Arch Pediatr Adolesc Med* 2005;159(5):470-6.
4. Committee on the Assessment of Studies of Health Outcomes Related to the Recommended Childhood Immunization Schedule; Board on Population Health and Public Health Practice; Institute of Medicine. *The Childhood Immunization Schedule and Safety: Stakeholder Concerns, Scientific Evidence, and Future Studies* 2013. www.nap.edu/catalog.php?record_id=13563 (Accessed March 13, 2013).
5. Swennen B, Van Damme P, Vellinga A, Coppieters Y, De-poorter AM. Analysis of factors influencing vaccine uptake: Perspectives from Belgium. *Vaccine* 2002;20(Suppl 1):S5-7.
6. Smith PJ, Kennedy AM, Wooten K, Gust DA, Pickering LK. Association between health care providers' influence on parents who have concerns about vaccine safety and vaccination coverage. *Pediatrics* 2006;118(5):e1287-92.
7. MacDonald NE, Smith J, Appleton M. Risk perception, risk management and safety assessment: What can governments do to increase public confidence in their vaccine system? *Biologicals* 2012;40(5):384-8.
8. Galdi S, Arcuri L, Gawronski B. Automatic mental associations predict future choices of undecided decision-makers. *Science* 2008;321(5892):1100-2.
9. Scullard P, Peacock C, Davies P. Googling children's health: Reliability of medical advice on the internet. *Arch Dis Child* 2010;95(8):580-2.
10. Freed GL, Clark SJ, Butchart AT, Singer DC, Davis MM. Sources and perceived credibility of vaccine-safety information for parents. *Pediatrics* 2011;127(Suppl 1):S107-12.
11. Betsch C, Renkewitz F, Betsch T, Ulshöfer C. The influence of vaccine-critical websites on perceiving vaccination risks. *J Health Psychol* 2010;15(3):446-55.
12. Jacobson RM, Targonski PV, Poland GA. A taxonomy of reasoning flaws in the anti-vaccine movement. *Vaccine* 2007;25(16):3146-52.
13. Healey CM, Pickering L. How to communicate with vaccine-hesitant parents. *Pediatrics* 2011;127(Suppl 1):S127-33.
14. MacDonald NE, Pickering L; Canadian Paediatric Society, Infectious Diseases and Immunization Committee. Autistic spectrum disorder: No causal relationship with vaccines. *Paediatr Child Health* 2007;12(5):393-5. With addendum available at www.cps.ca/en/documents/position/autistic-spectrum-disorder-no-causal-relationship-with-vaccines#addendum (Accessed March 13, 2013).
15. Gemmil I. National Advisory Committee on Immunization (NACI). Statement on thimerosal. *Can Commun Dis Rep* 2003;29:1-10.
16. Centers for Disease Control and Prevention (CDC). Increased transmission and outbreaks of measles - European Region, 2011. *MMWR Morb Mortal Wkly Rep* 2011;60(47):1605-10.
17. Wiley KE, Zuo Y, Macartney KK, McIntyre PB. Sources of pertussis infection in young infants: A review of key evidence informing targeting of the cocoon strategy. *Vaccine* 2013;31(4):618-25.
18. Grunau BE, Olson J. An interesting presentation of pediatric tetanus. *CJEM* 2010;12(1):69-72.
19. Kahneman D, Tversky A. The psychology of preferences. *Sci Am* 1982;246(1):160-73.
20. Gerend MA, Shepher JE. Using message framing to promote acceptance of the human papillomavirus vaccine. *Health Psychol* 2007;26(6):745-52.
21. MacDonald NE, Picard A. A plea for clear language on vaccine safety. *CMAJ* 2009;180(7):E2-3, 697-8.
22. Gold R. *Your Child's Best Shot. A parent's guide to vaccination*, 3rd edition. Ottawa: Canadian Paediatric Society, 2006.
23. Derban A, Jarvos L, Klein M, Morgana T, Pringle J. *Immunization Communication Tool*. 2008. Immunize BC. www.bccdc.ca/NR/rdonlyres/

DADA3304-7590-48AC-8D2C-65D54ADFC77E/0/
CDC_IC_Tool.pdf (Accessed March 13, 2013).

24. MacDonald NE, Pickering L; Canadian Paediatric Society, Infectious Diseases and Immunization Committee. Canada's eight-step vaccine safety program: Vaccine literacy. *Paediatr Child Health* 2009;14(9):605-11. www.cps.ca/en/documents/position/vaccine-safety-program (Accessed March 13, 2013).
25. Taddio A, Appleton M, Bortolussi R, et al. Reducing the pain of childhood vaccination: An evidence-based clinical practice guideline (summary). *CMAJ* 2010;182(18):1989-95.
26. Halperin B, Melnychuk R, Downie J, Macdonald N. When is it permissible to dismiss a family who refuses vaccines? Legal, ethical and public health perspectives. *Paediatr Child Health* 2007;12(10):843-5.

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