

Physician Communication With Vaccine-Hesitant Parents: The Start, Not the End, of the Story

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COMPANION PAPER: A companion to this article can be found on page 70, and online at www.pediatrics.org/cgi/doi/10.1542/peds.2014-3199.

In this month's issue of *Pediatrics*, Henrikson et al¹ report a trial of the impact of communication training for physicians on the vaccine hesitancy of parents. The authors found that a physician-targeted communication intervention did not reduce vaccine hesitancy in mothers nor improve physician confidence compared with standard care. However, the study requires careful interpretation and should be seen as the start, not the end, of the story in finding effective approaches to vaccine hesitancy.

There is a clear need to develop new approaches to vaccine consultation. Although only 0.7% of children in the United States are completely unvaccinated, an estimated 13% of parents delay or select out of certain vaccines,^{2,3} and the risk of this choice is enhanced by geographic clustering, creating a critical mass for disease outbreaks.⁴ Even parents who fully vaccinate have some concerns (eg, the number of vaccines, the vaccine ingredients, whether they potentially "damage" the immune system).^{5,6}

To address vaccination concerns, hesitancy, and refusal, some advocate a tougher line with strong physician recommendation, little room for expression of concern, and even denial of care to vaccine-refusing families. For example, the survey by Kempe et al⁷ of 696 pediatricians and family medicine physicians found that 10% would always or often dismiss families if they refused vaccine in the primary series for their child. Giving a vaccine recommendation comes with some

empirical support, with studies finding a strong association between physician recommendation and vaccine uptake.⁸⁻¹⁰ In addition, Opel et al¹¹ found that "presumptive" communication (language that conveys an assumption that the child will be vaccinated) was associated with better compliance with vaccinations within the same visit but reduced parental satisfaction. The study by Henrikson et al¹ could also be interpreted as providing support for a presumptive approach because it found no benefit from an intervention that trained clinicians to encourage parents to ask questions and express concerns. However, the training for the physicians in the intervention group was short (ie, 45 minutes) and part of this time was spent on didactic presentations. Training of short duration without a practical component and feedback would not be expected to change physician behavior, and thus the approach may be effective if delivered differently.¹²

Although many would dismiss parental satisfaction if it comes at the expense of a fully vaccinated child, a presumptive approach with vaccine-hesitant parents may reduce trust and possibly schedule completion in the longer term. A systematic review showed that lower vaccine uptake was linked to a perception that the discussion with health professionals about immunization concerns was inadequate in length and depth, dismissive, and difficult.⁴ Another found that parents want opportunities to ask questions but do not always feel

confident in doing so.¹³ The opportunity to ask questions also supports the process of valid consent. More broadly, the vaccination consultation is also a community intervention because parents will talk with each other about their experiences at clinics.

Communication interventions are only effective if physicians effectively take them up. Time for training is problematic because “real-world” physicians do not have time for extended training; hence, the pragmatically brief approach offered by Henrikson et al.¹ However, too small a dose of training will have no impact even if the intervention could work under ideal conditions.

Decision aids may change the consultation script while requiring relatively little physician training. They are designed to help people understand their options and potential outcomes, to consider the possible benefits and harms of their choices, and to increase consumer participation in decision-making.¹⁴ A UK study found a decision aid given to parents before their measles-mumps-rubella vaccine consultation was effective in improving decision-making, resulted in 100% compliance with this vaccine, and was cost-effective.^{15,16} Abbreviated versions of such tools offered to vaccine-hesitant parents may be a more effective way to embed more satisfying and effective communication strategies. However, these ideas, like others, need to be fully evaluated.

The great challenge in achieving high acceptance of vaccines is to find and test interventions that lead to full compliance with the vaccination schedule and parent satisfaction and also build trust in the recommendations of physicians. These interventions need not prevent the physician from recommending vaccination but, with vaccine-hesitant parents, we suggest that this recommendation is best made in the

context of an overall guiding (rather than instructing) approach.^{11,17,18}

Physicians should aim for both parental satisfaction and a positive decision to vaccinate.¹⁹ Researchers must continue to develop conceptually clear, evidence-informed, and practically implementable approaches to parental vaccine hesitancy, and agencies need to commit to supporting the evidence base. Billions of dollars fund the research and development of vaccines to ensure their efficacy and safety. There needs to be a proportional commitment to the “R&D” of vaccine acceptance because vaccines are only effective if people willingly take them up.

REFERENCES

- Henrikson NB, Opel DJ, Grothaus L, et al. Physician communication training and parental vaccine hesitancy: a randomized trial. *Pediatrics*. 2015;136(1):70–79
- Elam-Evans LD, Yankey D, Singleton JA, Kolasa M; Centers for Disease Control and Prevention (CDC). National, state, and selected local area vaccination coverage among children aged 19–35 months—United States, 2013. *MMWR Morb Mortal Wkly Rep*. 2014;63(34):741–748
- Glanz JM, Newcomer SR, Narwaney KJ, et al. A population-based cohort study of undervaccination in 8 managed care organizations across the United States. *JAMA Pediatr*. 2013;167(3):274–281
- Omer SB, Enger KS, Moulton LH, Halsey NA, Stokley S, Salmon DA. Geographic clustering of nonmedical exemptions to school immunization requirements and associations with geographic clustering of pertussis. *Am J Epidemiol*. 2008;168(12):1389–1396
- Brown KF, Kroll JS, Hudson MJ, et al. Factors underlying parental decisions about combination childhood vaccinations including MMR: a systematic review. *Vaccine*. 2010;28(26):4235–4248
- Kennedy A, Basket M, Sheedy K. Vaccine attitudes, concerns, and information sources reported by parents of young children: results from the 2009 HealthStyles survey. *Pediatrics*. 2011;127(suppl 1):S92–S99
- Kempe A, Daley MF, McCauley MM, et al. Prevalence of parental concerns about childhood vaccines: the experience of primary care physicians. *Am J Prev Med*. 2011;40(5):548–555
- Rosenthal SL, Weiss TW, Zimet GD, Ma L, Good MB, Vichnin MD. Predictors of HPV vaccine uptake among women aged 19–26: importance of a physician's recommendation. *Vaccine*. 2011;29(5):890–895
- Hayles EH, Cooper SC, Wood N, Sinn J, Skinner SR. What predicts postpartum pertussis booster vaccination? A controlled intervention trial. *Vaccine*. 2015;33(1):228–236
- Wiley KE, Massey PD, Cooper SC, et al. Uptake of influenza vaccine by pregnant women: a cross-sectional survey. *Med J Aust*. 2013;198(7):373–375
- Opel DJ, Mangione-Smith R, Robinson JD, et al. The influence of provider communication behaviors on parental vaccine acceptance and visit experience (published online ahead of print March 19, 2015). *Am J Public Health*.
- Berkhof M, van Rijssen HJ, Schellart AJ, Anema JR, van der Beek AJ. Effective training strategies for teaching communication skills to physicians: an overview of systematic reviews. *Patient Educ Couns*. 2011;84(2):152–162
- Jackson C, Cheater FM, Reid I. A systematic review of decision support needs of parents making child health decisions. *Health Expect*. 2008;11(3):232–251
- O'Connor AM, Stacey D, Entwistle V, et al. Decision aids for people facing health treatment or screening decisions. *Cochrane Database Syst Rev*. 2003;(2):CD001431
- Shourie S, Jackson C, Cheater FM, et al. A cluster randomised controlled trial of a web based decision aid to support parents' decisions about their child's measles mumps and rubella (MMR) vaccination. *Vaccine*. 2013;31(50):6003–6010
- Tubeuf S, Edlin R, Shourie S, Cheater FM, Bekker H, Jackson C. Cost effectiveness of a web-based decision aid for parents deciding about MMR vaccination: a three-arm cluster randomised controlled trial in primary

- care. *Br J Gen Pract.* 2014;64(625): e493–e499
17. Rollnick S, Butler CC, Kinnersley P, Gregory J, Mash B. Motivational interviewing. *BMJ.* 2010;340:c1900
 18. Leask J, Kinnersley P, Jackson C, Cheater F, Bedford H, Rowles G. Communicating with parents about vaccination: a framework for health professionals. *BMC Pediatr.* 2012;12(154):154
 19. Diekema DS; American Academy of Pediatrics Committee on Bioethics. Responding to parental refusals of immunization of children. *Pediatrics.* 2005;115(5):1428–1431

A CACOPHANY OF CALLS: *Early each morning in the spring and summer my wife and I hear birds begin to chatter. We have many fruit trees and a ring of thickets close to our house, so the birds have lots of food and places to perch or hide. Occasionally, the usual calls and squawks are punctuated by an intense burst of very loud calls of different types, and it seems as if hundreds of birds are just outside our window. I have always wondered what causes the sudden cacophony of sound.*

As reported in The New York Times (Science: May 18, 2015), it may be that one of the birds has recognized a predator and warned the others. While it is not unusual for animals of one species to warn others in the same species of a predator, scientists have begun to understand that animals of one species can recognize the alarm signals of animals from other species. Birds, mammals, and fish all can recognize the alarm signals of other species and use that to their advantage. For example, many different bird species can recognize the alarm calls of the tufted titmouse - a small songbird from North America. Squirrels and chipmunks also can recognize the alarm calls of birds.

Birds and other animals make use of this phenomenon to develop an early warning system. If a bird recognizes a predator and sends out an alarm, the call can be heard and then transferred by different species of birds across a large area. The alarm calls may travel at speeds up to 100 miles an hour, effectively alerting birds and other small animals that a predator is approaching.

I am not entirely sure if the sudden bursts of intense bird calls early in the morning outside our window are due to a predator or simply joy at the abundance of food around our house. I do know, however, that it gets my attention, and it must be important to other species in the area.

Noted by WVR, MD

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