

## To promote vaccination, physicians need to provide booster shots of information

André Picard

A generation or two ago, vaccination was an easy sell. Infectious disease was omnipresent. So too were the tragic consequences: large numbers of children sickened, crippled and killed. Parents yearned for protection from common viruses and bacteria that stalked their babies and embraced childhood vaccination as a godsend. So too did hospitals, which were able to shut down their polio and measles wards, and mothball the iron lungs.

The reality is much different today. Once-common childhood illnesses have virtually disappeared from everyday life. The threat posed by pathogens seems more illusory than real. Vaccination feels more like an ordeal than a necessity, and anxieties around the side effects of vaccines – real and imagined – appear to have blinded many parents to the benefits, and they are left with nagging doubts about there being too many shots.

It has been said many times, but vaccination is a victim of its own success. Eliminating (and sometimes eradicating) age-old illness is a triumph of science and one of the greatest accomplishments of public health. Mass vaccine campaigns have taken everyday threats – measles, mumps, polio, diphtheria, chickenpox, pertussis, meningitis and more – out of sight and out of mind.

But the flip side is that it is much more difficult to convince parents that these enemies are real, not just historical artifacts, even if they are often invisible.

The challenge for health practitioners today is, more than anything, communicating the continuing value of vaccination. That's not easy, especially given the dramatically different sociopolitical environment before large-scale immunization campaigns were first introduced.

In the buoyant baby boom period, there was unquestioning trust in science and medicine. Even the deaths of several children due to a poisoned batch in the early days of the Salk polio vaccine rollout did not deter enthusiasm. That kind of blind trust no longer exists. Today, many parents fear theoretical harms that may occur from micrograms of preservatives, and they object vociferously to something as mild as a needlestick.

We live in an age of doubt and distrust, especially with 'Big Pharma' and 'Big Brother' (government), and we no longer show the same deference to "experts" such as physicians. We also live in a time when children are safer and healthier than they have ever been and, paradoxically, that has left us fearful and intolerant of any risk, regardless of benefits.

In this environment, it's no surprise that people doubt vaccines.

But we have to remember that vaccination hesitancy has been around, to varying degrees, since the advent of vaccines – since Edward Jenner inserted pus from a cowpox pustule into an incision on a young boy's arm in 1796.

There have always been skeptics and doubters; they are, proportionally, no more numerous today, but they are louder (thanks

to amplifying communication technologies such as the Internet) and more organized. But there is not, as many believe, a massive antivaccination movement.

Virtually every parent wants to protect their child (or children) from harm and they know, intuitively if not scientifically, that vaccination can prevent infections. Sure, there are a few zealots who staunchly oppose vaccination for political or religious reasons, or because they stand to gain financially from promoting so-called 'alternative' treatments, but they are a tiny minority.

Only approximately 2% of parents refuse vaccination outright for their children. But another 10% to 20% of parents delay vaccination or undervaccinate their children until they are forced to do otherwise (to meet the prerequisites for child care or school admission) because they have doubts or unanswered questions.

This growing demographic of fence-sitters is not ignorant or uneducated – on the contrary. They have legitimate concerns and fears, and having been raised in an era of skepticism, they believe that vaccination is up for negotiation – just like everything else in their lives.

What they don't always have is accurate information, or access to mainstream health professionals who are willing to engage. What they do have is unlimited access to disinformation and a hearty welcome from some 'alternative' practitioners, such as homeopaths and chiropractors, who eschew and belittle vaccination in favour of unproven potions and unscientific promises.

The case of Andrew Wakefield is a classic example. In 1998, he published a research article in the prestigious medical journal *The Lancet* entitled 'Ileal-lymphoid-nodular hyperplasia, non-specific colitis, and pervasive developmental disorder in children'. It was a blockbuster. The gastroenterologist examined the cases of 12 children with bowel disease, nine of whom experienced "behavioural abnormalities" shortly after receiving the measles, mumps and rubella (MMR) vaccine. At a press conference, Dr Wakefield suggested that the MMR vaccine could trigger autism, particularly in children with intestinal abnormalities. He called for an end to MMR vaccination – the cornerstone of childhood immunization programs – and called for it to be replaced by three separate shots.

The media, and Britain's infamous tabloids in particular, were all over this 'perfect storm' of a story, coming as it did when autism rates were soaring, parents were tiring of seeing their children become pin-cushions for vaccines and a new communications tool called the Internet was booming.

Scientists around the world diligently tried to reproduce findings from Wakefield's study but never found any evidence of a link between the MMR vaccine and autism. With the passage of time, it became abundantly clear that the research was profoundly flawed, scientifically and ethically. Dr Wakefield was on the payroll of a law firm that was mounting a class action suit on behalf of

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“victims” of MMR vaccination, and he had developed a measles vaccine that he was convinced would make him rich.

Although the “research” – fraudulent from beginning to end – was thoroughly discredited, the media coverage (and, truth be told, the rather weak response from public health and the medical establishment) did lasting damage. Fear and doubt are a lot easier to instill than they are to assuage.

But that is the challenge of vaccine providers today: to rebuild trust.

Medical professionals often puzzle at the power and influence of antivaccination activists such as Jenny McCarthy. What she does is connect on a personal level, speak eloquently to parents about the challenges of parenthood and the tough decisions they have to make. She offers sympathy and support, and a seemingly pain-free alternative.

That is something that few physicians and nurses have the time to do in our increasingly impersonal health system. We tend to treat vaccination as a routine medical act that has to be quickly dispensed with during well-baby visits. That approach disempowers and frightens parents.

With childhood diseases well-controlled – despite the ever-increasing number of outbreaks – there has to be more basic education. Children need to learn about vaccination in school – not merely be lined up for shots occasionally – and serious discussions about vaccination need to occur during the prenatal period. We need to ‘prime the pump’, if you will.

Vaccines themselves, and the way they are administered, also need to get better. Outbreaks of measles, mumps and pertussis are blamed on antivaccinationists, but part of the problem is waning immunity. We do a good job of targeting infants, but the follow-up

work – the boosters for teens and young adults – is not performed nearly as thoroughly. The pain and discomfort of injected vaccines cannot be dismissed out-of-hand either. When vaccination is a traumatic experience for a child (and their parents) it can have a lifelong impact on their views.

The good news is that, despite all the challenges, the vast majority of children – 90% – do get their recommended shots. Vaccines are still saving lives. But faith is wavering, especially in parts of the population that influence public policy.

What the public needs is regular reminders of the benefits of vaccination – booster shots, if you will – and support for their decisions. Books, such as *Your Child's Best Shot*, are a perfect example of how this can be done. Beyond the printed word, health professionals, and parents themselves, need to engage: to talk openly about the risks and benefits of vaccination and not being vaccinated, to promote and share credible sources of information, and to challenge and denounce the fallacies and myths that are all too common.

Ultimately, parents will make a choice – to have their children vaccinated or not – based on their knowledge and convictions. We have to do everything in our power to ensure that children get their best shot at a healthy life.

*André Picard is the health columnist at The Globe and Mail. This commentary was originally published in Your Child's Best Shot (Dorothy Moore, ed. Ottawa: Canadian Paediatric Society, 2015). Reprinted with permission.*