

PERSPECTIVE

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VACCINES AND KIDS

Rates are up across state but so is resistance

By Daniel Schemer
Contributing Writer

First, do no harm," a soundbite from the medical vernacular well-known in popular culture.

Despite not actually deriving from the original Hippocratic Oath, modernized versions have incorporated this summation as a core principle that all medical professionals strive to adhere to with their patients. Unfortunately, when certain public health issues become so contentious that there are no easy answers, the Hippocratic Oath manifests as two sides of the same coin.

Case in point: Although Massachusetts has one of the highest childhood vaccination rates in the country, pockets of communities across the state continue to delay and refuse basic immunizations for their children through verbal resistance or by seeking allowed exemptions. "Vaccination is one of the top three reasons for increased life expectancy, right next to clean water and safe food," said Cheryl Bartlett, CEO for Greater New Bedford Community Health Center (GNBCHC), which oversees the vaccination program for the city.

As a former Commissioner for the state Department of Public Health, Bartlett saw these pockets of communities across the state and communicated regularly with schools dealing with parents refusing vaccinations.

Because of the risk posed by these vulnerable carriers, medical practitioners are faced with an enormous dilemma over what would be more harmful: continue to serve unimmunized patients the best they possibly can and respect their decision, or dismiss these patients on the grounds of risking exposure to other patients whom, for

legitimate medical reasons, are unable to receive vaccinations.

"This is an issue that, over the last several years, our practice has struggled with. We don't want to be known as a practice where someone caught something from us that could have easily been prevented," said Dr. Jason Reynolds, a pediatrician at Wareham Pediatrics.

As more private practices across the region turn away or consider turning away patients and child patients due to this anti-vaccine sentiment, health-care providers like GNBCHC are faced with a predicament that can only be described as "damned if we do, damned if we don't."

"Right now, our approach to the issue is we're using a soft glove on a gentle hand," said Bartlett, who is currently evaluating policy and preparing the GNB Community Health Center for the possibility where they could start receiving an influx of willful, unimmunized patients. This soft approach includes increasing awareness and education on immunization through additional forms requiring signatures, finding ways to refute any misinformation people are basing their views on, and simply increasing opportunities for conversations on the issue with their medical professionals. "Our facilities have a very strong workforce of nurses. We try and educate the nurses who are usually closer to the people, the patients, whom we're trying to impact."

"Our practice has always tried to educate on the importance of vaccination. If parents have concerns, we give what we believe is the most scientifically valid information," said Reynolds, who is also vice president of the Bristol South District Chapter of the Massachusetts Medical Society, vice chairperson of the Marion Board of Health, and adjunct staff at Boston Children's

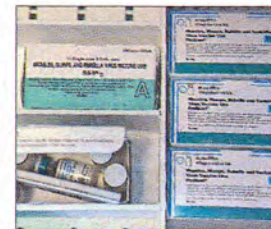


Nineteen-month-old Leandia Doucette was at Seaside Pediatrics in 2013 for a wellness checkup. She also got two shots, a HIB (Haemophilus Influenza Type B vaccine) and her Tetanus vaccine. She was with her grandmother Debbie Doucette. Nurse Nichole Maiolini puts on a Band-Aid after giving her the shots. (JIM PRESTON/CAPE COD TIMES)

Hospital. He said he is like many pediatricians who aren't just concerned for their easily prone child patients being exposed to a vaccine-preventable disease, but also for the pressure placed by other parents worried over the risk of exposure to their kids.

Kids unable to receive vaccinations include those with vulnerable immune systems, such as those resulting from chemotherapy and steroid treatments, and severe allergies (egg and gelatin are main ingredients in most vaccines). These patients must rely on what's called herd immunity, when people are protected from those around them already vaccinated.

"Unvaccinated kids are a breeding ground that puts other patients at risk. I try and strike



This file photo, shows boxes of the measles, mumps and rubella virus vaccine (MMR) and measles, mumps, rubella and varicella vaccine inside a freezer at a doctor's office in Northridge, Calif.

(AP PHOTO/DAMIAN DOVARGANES, FILE)

a middle ground. I try and get them to see I'm advocating for the child's best interests

and acknowledge that we both want what's best for them. But I'm drawing on all this through medical literature."

LAWS AND PATTERNS

Massachusetts state law requires documentation of vaccination for specific diseases in order for any child to attend school. Rejection based on personal, ethical, or philosophical belief is not accepted. Medical exemptions, such as allergies, congenital conditions that pose risk with vaccination, or threat of harm when combined with other lifesaving medications, must come from a doctor.

Religious exemption, where

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the parents reject vaccination on the stipulation that it violates religious beliefs, requires written notice from both parents. Massachusetts does not require parents to provide detailed reasons for claiming religious exemptions; some may find that an easy out and cause for concern.

"Kindergarten rates are the gold standard for vaccine exemption rates, and these rates have steadily risen in the state over the last 25 years," said Pejman Talebian, director of the Immunization Program for the state Department of Public Health.

In 2000, there were 752 exemptions in kindergarten classes reported state-wide. In 2016, there were 893 kindergarten exemptions, contrasting with the total number of kindergarten students in the state dropping from 80,971 to 70,109 over the 16-year period.

Statewide, the total exemption rate for all grades in 2016 was 3.2 percent, with the majority being religious exemptions, according to statistical data and school surveys conducted by DPH. Larger pockets of groups with exemptions are gathered in the Western Massachusetts and Cape Cod regions.

In Bristol County, for example, 3 percent of kindergarteners had an exemption last year. In Franklin County, the rate was 4.5 percent. Barnstable County had one of the highest percentages in the state for kindergartners entering school completely unimmunized with 1.6 percent.

The total exemption rate for all grade levels show dramatic difference. Bristol County's total rate of exemption for all grade levels was 4.5 percent in 2016; Franklin County was 12.4 percent; Barnstable County was 5.5 percent; and Martha's Vineyard was 12.6 percent.

Despite these numbers Talebian says that after a dramatic spike during the 2012-2013 school year, which bothered state officials and healthcare providers, the rate of exemptions and unimmunized kids has since slowed down and leveled off over the years.

NOT A NEW ISSUE

In 1998 a prominent British scientific journal printed a research article that linked childhood vaccinations with autism. The controversial article would later be attributed to plummeting vaccination rates and small outbreaks of measles across the country. Many leading scientists and medical associations condemned the article's author, Andrew Wakefield, and cited

The prevalence of the digital age is undoubtedly a factor in this debate; the global spread of "fake news" and stories over the last couple of decades, coupled with misguided disdain towards anything labeled "the establishment" has produced a culture of disbelief and one that gravitates towards information marketed as provocative and against the norm.

Socio-economic background may also play a factor.

A recently published study in *Social Science & Medicine* examined the use of Twitter for anti-vaccine beliefs. The scientists in this study harvested hundreds of thousands of tweets published from 2009-2015 using keywords like autism and vaccine. The study found a correlation between geographic and demographic data with anti-vaccine sentiment.

Generally, the majority of these anti-vaccine tweets came from five states — Massachusetts is one of them — and originate from mainly affluent households and communities.

"People often don't read reliable sources for science and instead have ready access to misinformation due to the internet and social media," said Talebian.

SOLUTIONS AND OUTREACH

Physicians and public officials agree that continued outreach and education is necessary to minimize skepticism and resistance.

Bartlett said that talking with parents about their beliefs and concerns, and reiterating the significance vaccination brings to a society's well being is the chosen method for fighting anti-immunization views. "I always feel you need to hear the other side and their arguments if you are to properly frame your messages to them. That's how I try and bring the science to the discussion."

Reynolds said that since its inception Wareham Pediatrics has followed the guidelines imposed by the American Academy of Pediatrics (AAP) which advises members not to turn away patients based on beliefs.

Last year the AAP dismissed patients only as a last resort, after all other efforts and methods proved unsuccessful.

Just as AAP revised its policy, so have many private pediatric practices.

Reynolds and Wareham Pediatrics are undergoing their own revision. Reynolds said he still firmly believes in dialogue, education and working to dispel false information and unfounded fears. A last resort dismissal policy, after exhausting all efforts of negotiations, is just that — a last resort.

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In 2010, investigations by journalists and the British General Medical Council found Wakefield had used fraudulent research, violated rules of ethics and conduct, and had clear financial motives for producing the article. The article was redacted and the author was stripped of his medical license in Britain.

Over the last 18 years the Wakefield research has reached and found support from various parents groups, public officials, and pockets of communities across the world skeptical of the medical consensus that everyone, if feasible, should be vaccinated. Outbreaks of measles and other vaccine-preventable diseases in Europe and other parts of the world, usually attributed to low vaccination rates in those areas, hasn't deterred vaccine detractors.

One reason posed for the continued spread and acceptance of anti-vaccine views in the U.S. is the lack of memory or experience many of these skeptics possess. "Because we eradicated most of these childhood diseases, thanks to vaccines, most people don't have any historical memory to associate with them," said Bartlett.

"Most people don't know someone with measles. Most people haven't met someone suffering from sterility resulting from mumps. Most people haven't lost a child to meningitis. It doesn't take many patients refusing vaccination to make an entire community susceptible," said Reynolds.

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"I believe vaccines are safe, effective, and important for individual and public health," Reynolds said. "I an unvaccinated child ever poses a risk to my other patients, I will be compelled to act on that belief," he added.

"Massachusetts invests more in public health than other states. With these resources comes more innovation when addressing public health issues," said Bartlett on why the state has higher-than-average vaccination rates.

Bartlett and other public health officials credit the state for greatly valuing its medical professionals and their accomplishments. Examples of this are its universal vaccination policy; vaccines for MMR (measles, mumps and rubella), polio, diphtheria, and all other required immunizations are free, eliminating cost as a barrier.

"We have a very strong primary care provider system. Massachusetts has created a strong model for working with pediatricians, primary care providers, and insurance providers," said Talebian.

The state Department of Public Health over the years has implemented other initiatives aimed at dispelling misinformation, such as increased public information campaigns through social media, making all school data on vaccinations public and available, and continuing close partnerships with primary care providers across the state. "We work to insure that physicians and pediatricians have the proper tools and information to address questions and skepticism because they're the ones vaccinating and dealing with parents" said Talebian.