

Parents' Confusion from Misinformation on Vaccines a Possible Driver in Disruption of Routine Pediatric Immunisation in Europe

New survey fielded by Excellence in Pediatrics Institute, with support from Pfizer, aims to uncover challenges and find solutions to concerning pediatric vaccination rates in Europe.



Medicine's Most Important Innovation - Vaccines - Underused Across Europe

Vaccines are one of the most powerful public health inventions. Every year, vaccines prevent an estimated 3.5 to 5 million deaths worldwide from diseases like diphtheria, tetanus, pertussis, influenza, and measles.¹ Routine immunisation increases the chances for children to reach adulthood and for adults to maintain good health.²

Scientists around the world continue to invent new vaccines to help protect against some of the most intractable diseases in our communities. Yet, despite remarkable advances in reducing or eliminating diseases, routine pediatric vaccination rates globally are falling short of public health goals. This is especially true across Europe, where confidence in the safety and effectiveness of vaccines is among the lowest in the world causing vaccine hesitancy even among healthcare workers.²

In October 2022, Pfizer and the Excellence In Pediatrics Institute (EIP) – a not-for-profit association providing continuous medical education to a global network of over 45,000 child healthcare providers – surveyed EIP's network along with relevant civic, advocacy, and HCP organisations across Europe to uncover barriers and identify solutions to making routine pediatric immunisation a priority. The quantitative, closed-ended questionnaire focused on routine pediatric immunisations in Europe, with COVID-19 vaccinations excluded from the survey. The survey received 106 valid and completed responses between October 6-21.

"Vaccines remain one of the best tools to help prevent disease. As certain infectious diseases evolve and new strains become more prevalent, it is more important than ever to bring forward new vaccines that offer broader protection and to ensure that all children receive the full schedule of recommended vaccines on time. Through this research with the Excellence in Pediatrics Institute, we are exploring ways to overcome the complex challenges facing pediatric vaccine decision-making in Europe."

~ Gabriel Mircus, Senior Director, Global Pneumococcal Vaccines Medical Affairs Lead, Pfizer Inc.

Declining vaccination rates causing disease resurgence

According to the World Health Organization (WHO), vaccine coverage plateaued over the last decade.³

As a result, there has been a concerning increase in the incidence of vaccine-preventable diseases in Europe, especially repeated outbreaks of measles occurring in France, Greece, Italy, and Romania.² In 2018, only five EU Member States – Hungary, Portugal, Slovakia, Sweden, and Malta – reported at least 95% childhood vaccination coverage rates for both doses of the measles, mumps and rubella (MMR) vaccine, compared to 14 countries in 2007. Half of all EU Member States remain below the recommended 95% threshold for the first MMR dose alone,² a threshold required to achieve herd immunity.² By 2019, Albania, the Czech Republic, Greece, and the United Kingdom all lost their "measles elimination status" – defined by the WHO as an absence of measles virus transmission for at least 12 months – due to continuous infection rates in 2017 and 2018.⁴

"Vaccine coverage is suboptimal for many debilitating diseases that can be prevented through routine immunisation," said Gabriel Mircus, Senior Director, Global Pneumococcal Vaccines Medical Affairs Lead, Pfizer Inc. "Across the WHO European region, there remains an important gap in vaccine coverage for pneumococcal disease – only 82% – despite mounting evidence affirming the benefits of vaccination in preventing disease and death."^{3,5,6}

Pneumococcal disease is a leading cause of vaccine-preventable death worldwide, with the majority of deaths occurring in developing countries.^{3,5} It is estimated that between 2010 and 2019, more than 53 million infants in the European region were vaccinated with a pneumococcal conjugate vaccine, preventing approximately 21 million cases of pneumococcal disease and more than 23,000 associated deaths.⁶

More concerning, data show that the decline in vaccine coverage rates has been exacerbated by the COVID-19 global pandemic.³

Vaccine hesitancy and misinformation: the pandemic effect

Declining rates in routine pediatric immunisations in Europe are fuelled by both complacency in the perceived risk of getting a vaccine-preventable disease and low confidence in vaccination, according to the European Commission. Much of this is driven by misconceptions around the safety and potential side effects of vaccines along with the lack of awareness of the benefits to individuals and societies.² Results from the recent Eurobarometer on vaccine confidence show that nearly half of EU citizens (48%) incorrectly believe that vaccines often are associated with serious side effects.²

“With the increasing spread of myths and false claims around vaccines, primarily from the anti-vaccination community, more and more parents are second-guessing public health recommendations and growing wary of vaccines for their children.² This has become even more pronounced during the COVID-19 pandemic,” said Professor Emeritus George Syrogiannopoulos, Excellence in Pediatrics Institute Scientific Program Coordinator, University of Thessaly, Greece.

The WHO has noted that the pandemic and its associated disruptions have caused a sustained negative impact on routine pediatric immunisations. In 2021, 25 million children missed a routine vaccination, which is 5.9 million more than in 2019 and the highest number since 2009.³ The European Commission advised that “reductions in the spread of communicable diseases” between March and August 2020 during the COVID-19 outbreak “may only be temporary if vaccination coverage does not go up.”⁴

Examining challenges and uncovering solutions: the Pfizer and EIP survey

According to the new survey,⁷ the majority of respondents (HCPs and stakeholder organisations) believe that the greatest challenges for parents to get their children vaccinated include:

- **“Confusion around conflicting information about vaccines and which information sources can be trusted”**
 - 56% of respondents stated this is a top challenge, with 24% believing that it will be “very difficult” to overcome
- **“Concerns about individual vaccine safety and adverse events”**
 - cited by 51% of respondents as a top challenge
- **“Belief that vaccines are not relevant/necessary; lack of understanding about the dangers of vaccines”**
 - identified by 45% of respondents as a top challenge

For parents with children under 2 years of age, 58% of respondents said the most-concerning vaccine-preventable diseases are **measles, mumps and rubella** followed by **meningococcal disease (55%)**. Respondents believe that parents with children under 2 are least-concerned about hepatitis A (7%) and *Haemophilus influenzae* type B (7%).*

“Both pediatric HCPs and organisations throughout Europe recognise that between misinformation or anti-vaccine messages, and concerns about vaccine safety, there are many challenges that prompt parents to question pediatric vaccination,” said Professor Emeritus George Syrogiannopoulos. Oftentimes, these challenges are very difficult for parents to overcome, which is why HCPs need effective tools to help educate and provide guidance so these parents can make more informed decisions.”

Survey respondents cited these potential guiding solutions to improve adherence to pediatric immunisation:

1. Offer a compelling message: Promoting the value of routine pediatric vaccination to parents requires having a message that will resonate and propel them to act. Respondents felt that the most effective messages should be about the **safety of vaccines** (ranked #1), followed by messages about **vaccine effectiveness** (#2). Messages about scientific innovation of vaccines were ranked as least-compelling in the survey questionnaire.

2. Identify the right person to deliver that message: 58% of respondents believe that **HCPs** have the **greatest influence on parents' decisions to vaccinate their child**, followed - quite far behind - by family members (13%).

HCPs were also cited by 64% of respondents as most credible about pediatric vaccination, whereas public health experts (11%) and government officials (6%) lagged in credibility on the subject. Notably, no respondents indicated that vaccine manufacturers would be considered as credible when speaking to parents about pediatric immunisation.

3. Deliver that message with the right approach: Respondents felt that the most effective way to reach parents and guardians about pediatric vaccination is through **social media** (ranked #1), followed by **public service announcements** (#2) and informational/educational websites (#3). Text messages and emails were ranked as least-effective.

37% of respondents also indicated that **parent-friendly materials/education on pediatric immunisation questions and facts** would be a most helpful resource to enable them or their organisation to more effectively encourage routine pediatric vaccination. Vaccine appointment reminder systems/programmes for parents and/or HCPs were also cited as a helpful resource by 19% of respondents.

The survey findings highlight the persistent and far-reaching impact of vaccine misinformation on immunisation decision-making for European families, and reinforce the need to provide clear and relevant information about vaccine safety and efficacy through trusted and influential messengers. The survey results can be considered in the context of current pediatric vaccination trends and best practices in health communications, to build out more effective approaches supporting pediatric HCPs and parents in prioritising routine pediatric immunisation in the years ahead.

This material was developed in collaboration between Excellence in Pediatrics Institute and Pfizer



1 World Health Organization. Health Topics: Vaccines and Immunization. Available at: https://www.who.int/health-topics/vaccines-and-immunization#tab=tab_1. Accessed September 2022.

2 European Commission. State of Health in the EU Companion Report 2019. Available at: https://health.ec.europa.eu/system/files/2019-11/2019_companion_en_0.pdf. Accessed September 2022.

3 World Health Organization. Newsroom: Immunization Coverage. Available at: <https://www.who.int/news-room/fact-sheets/detail/immunization-coverage>. Published July 2022. Accessed September 2022.

4 OECD. European Commission. Health at a Glance: Europe 2020. Available at: <https://doi.org/10.1787/23056088>. Accessed September 2022.

5 Wahl, et al. Burden of Streptococcus pneumoniae and Haemophilus influenzae type b disease in children in the era of conjugate vaccines: global, regional, and national estimates for 2000–15. Lancet Global Health. 2018;6(7):e744-e757. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6005122/>. Accessed September 2022.

6 Chapman R, Sutton K, Dillon-Murphy D, Patel S, Hilton B, Farkouh R, et al. Ten year public health impact of 13-valent pneumococcal conjugate vaccination in infants: a modelling analysis. Vaccine. 2020;38(45):7138-45. Available at: <https://pubmed.ncbi.nlm.nih.gov/32912642/>. Accessed September 2022.

7 The quantitative, close-ended survey was fielded online by EIP and Prodege, with support from Pfizer, from October 6 through October 21, 2022, to the EIP member database of pediatric HCPs and a specified list of topic-relevant stakeholder organisations, including HCP, advocacy and civic groups in Europe. Questions were framed in the context of routine pediatric immunisations, with COVID-19 vaccinations excluded from the survey. The survey received 106 valid and completed responses.

* COVID-19 was not a response option