

Science proves vaccines are helpful, not harmful, to society

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As more and more parents buy into the belief that vaccines cause autism and refuse to vaccinate their children, previously eradicated diseases are making their way back into society. These beliefs are part of "post-truth" politics in which authority figures are making public assertions without any proof or factual basis and are refusing to acknowledge factual rebuttals. The relationship between the measles, mumps and rubella (MMR) vaccination and autism has perpetrated society despite having been debunked in numerous scientific studies, and the Human Papillomavirus vaccine has been targeted as well.

Members of the medical community are concerned with how they can make facts 'attractive' again and how trust in scientific information can be rebuilt, moving society towards a "post-trust" era. The Vaccine Communication symposia presented at the 2018 Society for Risk Analysis (SRA) Annual Meeting, co-organized by the Vienna Vaccine Safety Initiative, will explore concrete ways to improve vaccination policy moving forward in this "post-truth" era.

The World Health Organization (WHO) requires that each medical encounter between patient and professional be used to check vaccination status and catch up on vaccines, but in practice that is rarely happening. Barbara Rath, MD, Ph.D., Vienna Vaccine Safety Initiative, has been working with the ViVI Think Tank to develop [digital tools](#) aimed at improving communication between doctors and patients. Rath's presentation, "Human-centered infectious diseases and [vaccine](#) communication—Bridging the gap," will illustrate the development of

these tools.

The team has developed the VaccApp, a [mobile app](#) that helps parents better understand the immunizations given to their children. The ViVI Score allows [health care providers](#) to instantly measure disease severity in children and adults with flu-like illness. The team developed two additional mobile apps, the VACC tool and the ViVI health survey. The VACC Tool aids in the identification of adverse events at the point of care and the health survey was developed to assess health needs in vulnerable populations after evacuations from natural disasters or conflict zones.

Over the past four years, about two million Nigerians have become internally displaced persons (IDPs) due to armed conflict. IDPs live under poor conditions with minimal access to food, water and shelter, conditions that encourage the spread of infectious diseases. Winifred Ekezie, MPH, University of Nottingham, and her team of researchers explored the occurrence of [infectious diseases](#), vaccine coverage and vaccine management perceptions among IDPs.

Ekezie's study, "Infectious disease prevalence and vaccination management among internally displaced people living in camp-like setting in Nigeria: A mixed method study," found that malaria, typhoid, diarrhea and cough were most prevalent among the IDPs. Self-reports showed that approximately 60 percent of the IDPs had received vaccinations, but only 15 percent had received them while in the camp. Two of the nine camps studied had no health service providers and four never had on-site vaccinations. The study also found that most IDPs did not know which vaccines they had received. Interviewed parties lacked knowledge of proper vaccination guidelines and most assumed it was the responsibility of non-governmental organizations.

"Proactive healthcare interventions, especially vaccination provision and

communication, are required in any displacement conditions," states Ekezie. "This approach would help minimize the risks of infection spreading disease to the general population."

Measles incidences are on the rise in Europe and measles vaccination rates are dropping. Ruth Kutalek, Ph.D., Medical University of Vienna, and her team investigated this emerging vaccine hesitancy from an anthropological perspective by conducting interviews with 44 public health experts, vaccine hesitant professionals and vaccine hesitant parents in Vienna, Austria. Experts stressed that vaccine hesitancy is reinforced by the spread of myths and rumors from vaccine-critical platforms.

The study, "Measles vaccination and vaccine hesitancy in Austria—Anthropological perspectives" found that the most prominent reason parents chose not to vaccinate their child is the perception that measles do not pose a significant threat and they are anxious about side effects and are concerned about overloading the child's immature immune system. Vaccine critical health professionals suspected that vaccine information was biased and that there were not enough studies of the long-term effect of early vaccination and that measles complications were overexaggerated. The overarching theme was a lack of trust in the [scientific information](#) provided about measles and the vaccine.

Nigeria has made immense progress in the Global Polio Eradication Initiative with a decline wild poliovirus cases from 1122 in 2006 to just four in 2016 and zero to date. The country has started the countdown for WHO certified polio-free status until 2019. Isolated poliovirus cases in IDPs residing in the northeastern region in 2016 delayed the certification until next year. Chris Elemuwa, National Primary Healthcare Development Agency—Nigeria, and his Nigerian team have been working to implement phase 1a of the Global Action Plan as a

component of the Global Polio Eradication and End-Game Strategic Plan. In his presentation, "Building trust in polio surveillance and eradication policy in Nigeria," Elemuwa will discuss the steps taken to implement surveillance throughout the country, even in nearly inaccessible parts.

More information: These studies will be presented during the Vaccine Communication I and Vaccine Communication II symposia on Monday, Dec. 3 from 10:30 a.m.-12:10 p.m. and from 1:30-3:10 p.m. at the 2018 SRA Annual Meeting at the New Orleans Marriott in New Orleans, Louisiana.

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