

## A Safe Look at 16 Years of National Reports on DTaP Vaccine Adverse Events

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One of the most common questions we get about the vaccines we give to infants, children, and teenagers is whether or not a vaccine is safe to administer. It is for that reason that the national Vaccine Adverse Event Reporting System (VAERS) was created by the Centers for Disease Control. Any potential vaccine adverse reaction can be reported to this system. So what can we learn from the data in the VAERS system? Moro et al.

([10.1542/peds.2017-4171](#)) opted to look into this question with a new study being released this week in our journal. The authors looked for adverse reactions associated with the diphtheria, tetanus toxoid and acellular pertussis (DTaP) vaccine from 1991 to 2016. While one might be concerned that just over 50,000 VAERS reports were filed after DTaP vaccination was given over the period surveyed, this number is quite small compared to overall number of DTaP vaccines given annually in this country. In addition, only 11% of these reports over the period surveyed were rated as serious reactions. These consisted of such things as seizures, intussusception, and allergic and anaphylactic reactions. Most of the reactions involved site erythema, swelling, warmth, and, in about 20%, fever. In addition, almost 90% of the time the DTaP had been given with other vaccines so the adverse event reported might not even be due to the DTaP vaccine itself. No adverse events occurred that were not already described on the immunization information form.

What can we share from this study with our patients who ask us about DTaP safety? Infectious disease specialist Dr. Flor Munoz ([10.1542/peds.2018-1036](#)) shares with us her perspective in an accompanying commentary. Dr. Munoz points out that unfortunately we did not have the VAERS system in place to compare these reported DTaP reactions to those of the whole cell vaccine given prior to the acellular vaccine. Yet with almost 90% of the reports being minor, one needs to recognize that the vaccine is extremely safe and reaffirms the known safety profile of this vaccine. While there is great benefit to the DTaP, we also know that its immunogenicity is time-limited. Booster doses are required for teenagers and adults. Providing a booster dose to a pregnant woman not only protects the woman but persistence of

immunity can help protect her baby. We should be happy that we can effectively prevent the spread of pertussis and in turn its life-threatening complications through the DTaP vaccine.

If you need a study to reassure families of the relative safety of the DTaP and its benefits versus risks, then take a sharp look at this study and commentary and then inject what you learn into the vaccine conversation you have with families—especially those who are hesitant about the overall safety of this vaccine.

- [Effectiveness of Vaccination During Pregnancy to Prevent Infant Pertussis](#)
- [Waning Immunity to Pertussis Following 5 Doses of DTaP](#)
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