

What Works

To Improve Adult Immunization 2016

What They Did

A study by Parkland Hospital and the University of Texas Southwestern Medical Center aimed to evaluate whether an electronic medical record best practice alert (BPA) could affect Tdap vaccination rates in pregnant women.

Parkland Hospital implemented a best practice alert in the form of a reminder of clinical guidelines within their electronic medical record. They set up this electronic reminder to start in June 2013, and the investigators reviewed the results after 13 months. The BPA was triggered when a woman reached 32 weeks' gestation, sending a message to her health care provider that Tdap vaccination was now indicated. The BPA would be triggered for every subsequent prenatal visit until the patient accepted vaccination or she delivered.

The study also looked at the association of Tdap vaccination with local pertussis attack rates in infants before and after the BPA was implemented.

Streamlined procedures for ordering and administering the vaccine were written into the BPA. If the provider clicked acceptance of the vaccine, they were directed immediately to the order entry page with the vaccine information already populated. If the patient declined the vaccine, the provider was directed to a page where they could enter the reason why the patient declined.

Before implementation of the best practice alert in June 2013, women were routinely offered Tdap immunization only during the postpartum period.

Best Practice Alert for Improving Pertussis Vaccination of Pregnant Women in Dallas, Texas



Citation:

"Association of a Best-Practice Alert and Prenatal Administration With Tetanus Toxoid, Reduced Diphtheria Toxoid, and Acellular Pertussis Vaccination Rates," *Obstetrics & Gynecology*: August 2015 (Vol. 126, No. 2), Morgan et al.

This "What Works" vignette is one in a series of examples collected by the Provider Workgroup of the National Adult and Influenza Immunization Summit. For more information or to nominate an example of "what works" to improve adult immunization, go to <http://www.izsummitpartners.org/>. This vignette does not constitute an endorsement from any of the organizations that participate in the Provider Workgroup or the NAIIIS.

Results They Got

During the study period, the University of Texas Southwestern Medical Center and Parkland Hospital investigators identified:

- 10,201 pregnant women who were offered Tdap vaccine during prenatal care
- 9,879 (96.8%) of these pregnant women ultimately accepted antenatal Tdap immunization

Of the 7,378 women who ultimately delivered at Parkland Hospital, 7,152 (97%) accepted Tdap vaccination and 226 (3%) declined.

In comparison, 48% (5,064 of 10,600) of women who delivered at Parkland Hospital the year before the alert was implemented received Tdap vaccine postpartum.

The consistent, programmed BPA for health care providers, in combination with streamlined processes for ordering and administering the vaccine, may account for this program's success.

This relatively simple, inexpensive, and easily reproducible strategy has the potential to significantly improve national Tdap vaccine coverage during pregnancy, with the ultimate goal of decreasing maternal and pediatric infectious morbidity.

The researchers also tracked incidence of pertussis in children younger than 2 years of age:

- According to Dallas County Health Department records, 61 cases of pertussis were reported the year prior to study initiation, and only 22 cases were reported during the study period.
- The incidence of pertussis among infants born to mothers who delivered at Parkland Hospital declined from 13 cases per 10,000 deliveries the year before to 7 per 10,000 deliveries during the study period.

