Medical Xpress

Efficacy of DTaP, tdap holds despite pertactin deficiency

April 12 2016

(HealthDay)—Despite an increased proportion of *Bordetella pertussis*

isolates lacking pertactin, vaccine effectiveness (VE) is still high in Vermont for the five-dose diphtheria, tetanus, and acellular pertussis vaccine (DTaP) series and the tetanus, diphtheria, and acellular pertussis vaccine (Tdap), according to research published online April 12 in *Pediatrics*.

Noting that the proportion of *Bordetella pertussis* isolates lacking pertactin increased from 2010 to 2012 in the United States, Lucy Breakwell, Ph.D., from the U.S. Centers for Disease Control and Prevention in Atlanta, and colleagues conducted two matched case-control evaluations in Vermont to examine the impact on VE for DTaP among 4- to 10-year-olds and Tdap among 11- to 19-year-olds. Clinical cases of pertussis were reported during 2011 to 2013, and matched with three controls each.

The researchers found that the overall VE for DTaP was 84 percent. Within 12 months of dose five, VE was 90 percent, and decreased to 68 percent within five to seven years after vaccination. For Tdap, overall VE was 70 percent. VE was 76 percent within 12 months of Tdap vaccine, decreasing to 56 percent by two to four years after vaccination. More than 90 percent of cases with available isolates were pertactin-deficient.

"Our DTaP and Tdap VE estimates remain similar to those found in other settings, despite high prevalence of pertactin deficiency in Vermont, suggesting these vaccines continue to be protective against reported pertussis disease," the authors write.

More information: Full Text (subscription or payment may be required)

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Citation: Efficacy of DTaP, tdap holds despite pertactin deficiency (2016, April 12) retrieved 24 April 2024 from
https://medicalxpress.com/news/2016-04-efficacy-dtap-tdap-pertactin-deficiency.html

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