BIZCOMMUNITY

Research in the news: Yale researcher says whooping cough vaccines effective, despite outbreaks

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Despite recent outbreaks of pertussis (whooping cough) - a highly contagious bacterial disease that is preventable by the current pertussis vaccines - Yale researcher Dr. Eugene Shapiro maintains in an editorial that the vaccines are effective and should still be administered.

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Shapiro said that although acellular vaccines may be suboptimal, they are still quite effective and should be focused on pregnant women, infants, and caregivers. "It is most important to try to protect infants, who have the most severe illnesses and highest mortality from pertussis," said Shapiro, professor of pediatrics. "The highest rates of both hospitalizations and deaths from pertussis occurred in children younger than two months."

The resurgence of pertussis in the United States, even among those who have been vaccinated in the past, has led many experts to question the long-term duration of immunity. Published in the Nov. 28 issue of Journal of the American Medical Association (JAMA), Shapiro's editorial stresses that while there is speculation that the outbreak is linked to the vaccine's waning immunity over time, there is no definitive evidence that this is the primary or sole reason for increases in reported cases of pertussis.

The original whole-cell pertussis vaccine DTwP, which also included vaccines against diphtheria and tetanus, was introduced for childhood immunization in the 1940s. But acellular combination pertussis vaccines (DTaP) replaced DTwP in the early 1990s because the whole-cell vaccine had high rates of side-effects such as fever and inflammation at the injection site. DTaP uses purified components to reduce side-effects, but Shapiro said there is not enough data on the duration of the DTaP vaccine's immunity.

"There have been periodic outbreaks in the past even with the whole cell vaccine, so there is no way to know for sure that the outbreaks are linked to the accelular vaccine," he said. "There is no definitive evidence as to why there are increased outbreaks, and there may be multiple reasons for it."

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