

Gastroenteritis hospitalizations in adults reduced since start of infant rotavirus vaccination

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The researchers found that compared with prevaccine years, during 2008-2010, statistically significant reductions were observed in rotavirus-coded discharges in the age groups 0-4 years; 5-14 years; and 15-24 years. Similarly, significant reductions were observed in cause-unspecified discharges in the age groups 0-4 years; 5-14 years; 15-24 years; and 25-44 years.

"Implementation of infant rotavirus vaccination in 2006 has substantially reduced the burden of severe [gastroenteritis](#) among U.S. children younger than 5 years," write Paul A. Gastanaduy, M.D., M.P.H., of the Centers for Disease Control and Prevention, Atlanta, and colleagues. "Whether indirect protection (due to reduced transmission of rotavirus) extends to adults remains unclear."

As reported in a Research Letter, the authors assessed patterns of gastroenteritis hospitalizations among children 5 years of age or older and among adults before and after implementation of infant rotavirus immunization. Rotavirus-coded and cause-unspecified gastroenteritis discharges from January 2000 through December 2010 were retrieved from a nationally representative database of hospital inpatient stays, the Nationwide Inpatient Sample. Estimates were determined of annual and monthly incidence rate ratios (RR) of the postvaccine years (2008, 2009, and 2010) separately and combined vs. the prevaccine years (2000-2006); 2007 was a transition year with limited coverage and was excluded.

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discharges in the age groups 0-4 years; 5-14 years; 15-24 years; and 25-44 years. "Compared with prevaccine years, significant reductions in rotavirus-coded discharges occurred up to age 25 years in 2008, age 15 years in 2009, and across all age groups in 2010, with similar patterns for cause-unspecified discharges. Cause-unspecified reductions across all age groups and postvaccine years were focused in the late winter and early spring; in 2010, significant reductions were observed in March or April for all [age groups](#)."

"The pattern of observed reductions in gastroenteritis discharges among unvaccinated older children and adults is consistent with indirect protection resulting from infant rotavirus vaccination," the authors write. "These results point to the primacy of children in the transmission of rotavirus and illustrate how indirect benefits may amplify the effect of the U.S. rotavirus vaccination program."

More information: [DOI: 10.1001/jama.2013.170800](#)

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