Rotavirus vax creates herd immunity

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HOSPITALISATION for all causes of acute gastroenteritis among children is declining markedly due to rotavirus vaccination, Australian data reveals.

Analysis of more than 257,000 Queensland hospital records found an immediate reduction in rotavirus-associated acute gastroenteritis (AGE) hospital admissions for people younger than 20 years following the introduction of the vaccine in mid-2007.

Dr Stephen Lambert and colleagues also showed reductions in non-rotavirus associated AGE, particularly among under five-year olds.

Dr Kristine Macartney, deputy director (policy) for the National Centre for Immunisation Research and Surveillance, said it was the first published Australian study showing such a decline.

Previous research had suggested that adding rotavirus vaccine to the immunisation schedule reduced notifications and laboratory testing, she said.

The Queensland findings were in line with unpublished studies from NSW and SA in showing a drop in hospital gastroenteritis admissions in children, she said.

“We think there’s a reduction in rotavirus circulating in the community that is creating a herd immunity effect.”

The study also found three-dose rotavirus vaccine (RotaTeq) was “highly effective” in preventing non-rotavirus gastroenteritis hospitalisation in this cohort. Pediatrics 2010; in press