Canadian rotavirus vaccine effectiveness data

We read with interest and enjoyed Dr Goldman’s recent Child Health Update on the effectiveness of rotavirus vaccines.1

In Australia, there are 4 states currently using the multiple-strain vaccine (i.e., RV5), and the remaining 2 states and 2 territories are using the single-strain vaccine (i.e., RV1).2 Dr Goldman attributes our decline in rotavirus notifications and hospitalizations2 to RV1, but in Queensland we have always used RV5.4 Since mid-2007, we saw a rapid decline in rotavirus notifications in both vaccinated and older, unvaccinated age groups, and a fall in the proportion of laboratory tests positive for rotavirus in all age groups.5

Canada’s experience with rotavirus vaccines provides a wonderful opportunity to observe the effects of rotavirus vaccines, particularly in indigenous children living in harsh arctic and subarctic regions. In the pre-vaccine era in Queensland, we found rotavirus disproportionately affected aboriginal and Torres Strait Islander children with higher rates of notification and hospitalization, and hospitalization earlier in life with a longer average length of stay.6 Recent outbreak data from the Northern Territory, where RV1 has been used since late 2006, suggests effectiveness wanes rapidly after infancy in indigenous children.7 To date, we have no equivalent data from a state that uses RV5, but we are collating these data in Queensland. Of note, middle-income Latin American countries have seen blunt effectiveness values, compared with efficacy data, with both vaccines.8

We look forward to Canadian effectiveness data, particularly from Canada’s aboriginal population, as they become available to aid our understanding of rotavirus epidemiology in the vaccine era.

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Competing interests
Dr Lambert has previously been a co-investigator on clinical trials sponsored by Merck, CSL, and GlaxoSmithKline—manufacturers or distributors of rotavirus vaccines in Australia. Merck paid an honorarium to his institute for 2 rotavirus presentations to international meetings. Dr Grimwood has, in the past 10 years, been a member of a Rotavirus Advisory Board and received support for conference attendance, lecture fees, and a research grant from GlaaxoSmithKline. He has also received a research grant from Merck.

References