

Study results will inform immunization programs globally

January 22 2020



Professor Helen Marshall from the University of Adelaide's Robinson Research Institute. Professor Marshall is the leader of the B Part of It meningococcal B study. Credit: University of Adelaide.

The results of the B Part of It study—the largest meningococcal B herd immunity study ever conducted—are published today in the *New England Journal of Medicine*.

The results have implications for all meningococcal B vaccine programs globally.

Led by Professor Helen Marshall from the University of Adelaide's Robinson Research Institute, the B Part of It study involved almost 35,000 senior school students in South Australia, aged 15 to 18 years, during 2017 and 2018.

"Our study has shown good protection was provided by the meningococcal B vaccine against meningococcal [disease](#) in those vaccinated but did not show an overall reduction in the proportion of adolescents carrying the bacteria, including the B strain," Professor Marshall says.

Adolescents can harmlessly carry the meningococcus bacteria in the back of the throat with only a very small proportion developing the disease. Meningococcal B is one of the most common strains that causes meningococcal disease, an acute bacterial infection that kills approximately 10% of those infected, and causes permanent disabilities in about 20% of cases. Those most at risk are babies and children up to the age of five years, and teenagers and [young adults](#) from ages 15 to 24 years.

"We are pleased to report not a single case of meningococcal disease among our study participants to date, over the three years since the study began, compared to 12 cases in the same age group in the two years prior to the study.

"Potentially this means a life or lives were saved, as, on average, one in every 10 children with meningococcal disease dies from it," Professor Marshall says.

"These results highlight the importance of individual vaccination for adequate protection, as the vaccine is unlikely to be able to stop spread of the bacteria between individuals," Professor Marshall says. "The study has identified the critical finding that individuals need to be vaccinated to protect themselves against meningococcal B disease, rather than expecting community protection through reduced transmission of the bacteria," she says.

The study also identified a number of high-risk behaviours associated with carriage of meningococcal strains in young people, including: smoking cigarettes, attending bars or clubs, and intimate kissing. Older school students, school boarders, and those who had recently had a cold or [sore throat](#) were also more likely to carry the meningococcus in their throat.

The outcomes of the B Part of It study are now being used in Australia and globally, to assess the cost-effectiveness of meningococcal B immunization programs for children and young people.

Gill and Oren Klemich, who lost their 18-year-old son, Jack, to meningococcal B in 2009, have supported the B Part of It program as ambassadors and followed the results closely.

"We are extremely proud of the impact this study has had in informing

both local and global policy around meningococcal B, as well as the impact the study and South Australian Government funded program have had in vaccinating and protecting over 60,000 [young people](#) against this horrible disease," says Oren.

More information: *New England Journal of Medicine* (2020). [DOI: 10.1056/NEJMoa1900236](#)

Provided by University of Adelaide

Citation: Study results will inform immunization programs globally (2020, January 22) retrieved 4 May 2024 from <https://medicalxpress.com/news/2020-01-results-immunization-globally.html>

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