



Audio File

RECENT ADVANCES IN MENINGOCOCCAL B DISEASE PREVENTION: REAL WORLD EVIDENCE FROM 4CMENB VACCINATION

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BACKGROUND

The 4-component meningococcal serogroup B vaccine (4CMenB) is indicated for active immunization against invasive meningococcal disease caused by serogroup B. It is licensed worldwide based on immunogenicity and safety data. We comprehensively reviewed all available real-world evidence from effectiveness and impact gathered from use of 4CMenB since licensure.

OBJECTIVE

Available evidence on vaccine effectiveness (VE), impact, and safety of 4CMenB in routine use were reviewed.

VACCINE EFFECTIVENESS

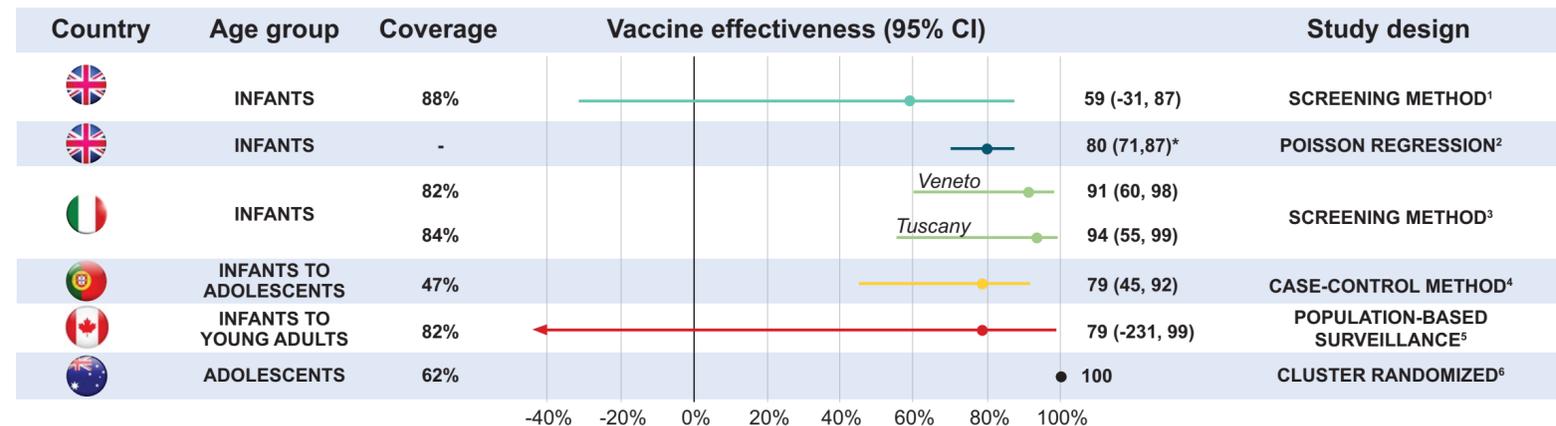
Meningitis B disease **risk estimation** in vaccinated versus unvaccinated in individuals

VACCINE IMPACT

Meningitis B disease **reduction** at the population level in vaccine-eligible individuals regardless of vaccination status

RESULTS

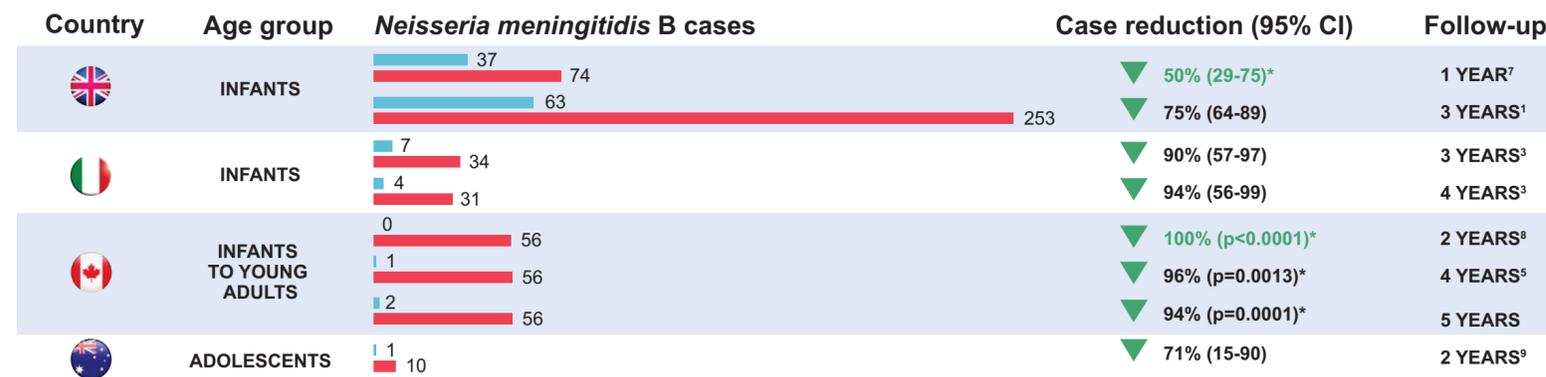
Significant VE of 4CMenB in preventing MenB invasive disease was demonstrated in fully vaccinated infants, young children, and adolescents



*95% Bayesian credible interval. 4CMenB, 4-component meningococcal serogroup B vaccine; CI, confidence interval; MenB, meningococcal serogroup B; VE, vaccine effectiveness.

VE of ≥3 doses of 4CMenB administered to infants ranged from 59.1% to 93.6%. Estimates were usually higher than predicted strain coverage rates using the Meningococcal Antigen Typing

Observed cases of MenB invasive disease were significantly lower than expected after 4CMenB introduction (vaccine impact)



■ observed MenB cases post-vaccination ■ expected MenB cases based on pre-vaccination rates 50%-100% percentages in green are the minimum and maximum values

*rate ratios of post- versus pre-vaccination periods. 4CMenB, 4-component meningococcal serogroup B vaccine; CI, confidence interval; MenB, meningococcal serogroup B.

4CMenB reduced rates of invasive disease in all of the countries and age groups (infants/children/adolescents/young adults) studied.

CONCLUSIONS

Substantial and consistent real-world data demonstrate 4CMenB effectiveness and impact in reducing MenB invasive disease.

The available data support the use of 4CMenB in preventing invasive meningococcal disease caused by MenB.

Estimates of VE are available from 5 countries: funded routine use in the United Kingdom (UK) and Italy; prospective observational studies in Portugal and South Australia; and outbreak control in Saguenay-Lac-Saint-Jean, Canada.

Effectiveness was sustained for 4 years in Quebec and for 2 years after the booster dose in young children vaccinated in infancy in the UK (Sup Table).

The safety profile of 4CMenB administered in real-world settings reflects that established in pre-licensure clinical trials. No safety concerns have been raised in post-marketing surveillance.

Encore previously presented at ESPID21 EP358 / #209.

Funding: GlaxoSmithKline Biologicals SA

Acknowledgements: Business & Decision Life Sciences platform (Coordination: Carole Desiron; Writing: Joanne Wolter).



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