2455. Is Category B Working? Uptake Patterns of Meningococcal Group B Vaccine Among US Adolescents and Young Adults

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Background. In October 2015, ACIP recommended that serogroup B meningococcal vaccine may be administered to persons aged 16–23 years (age 16–18 preferentially) as Category B (individual clinical decision-making), in addition to the Category A recommendation made in June 2015 for at-risk individuals aged ≥12 years. Currently, MenB vaccine coverage among adolescents and young adults (AYAs), including whether disparities exist, is not well-described.

Methods. We performed a cross-sectional analysis of claims data collected by IQVIA and linked to sociodemographic data collected by Experian to estimate overall and subpopulation-level uptake of MenB vaccine (≥1 dose) among AYAs aged 16–25 years as of May 31, 2017.

Results. Among 2,501,188 AYAs aged 10–25 years, MenB vaccine uptake was only 1.4% at the end of May 2017. MenB vaccination varied by age, with uptake of 0.2%, 2.5%, 1.6%, and 0.2% among individuals aged 10–15, 16–18, 19–23, and 24–25 years (P < 0.01), respectively. Lower uptake was observed for non-Hispanic blacks (1.1% vs. 1.4% among non-Hispanic whites, P < 0.01), AYAs in lower income households (1.0% vs. 2.2% among lowest vs. highest income deciles, P < 0.01), and those living in rural (0.6%) or urban/inner-city (0.9%) areas (vs. 1.5% in suburban areas, P < 0.01). The strongest predictors of MenB vaccination were previously receiving quadrivalent meningococcal vaccine (OR ≥12.9, P < 0.01), a history of ≥1 dose MenACWY, and being primed with a MenB vaccine vaccine ≥47% of primed participants achieved hSBA titers ≥85 (P < 0.01), and by day 29 almost all primed participants had seroprotective titers across all serogroups. Overall, the vaccine was well tolerated across participants in all 3 groups and no safety concerns were raised.

Conclusion. MenACWY-CRM induced robust boosting in adolescents and adults primed with a quadrivalent meningococcal conjugate vaccine 4–6 years earlier, with an acceptable clinical safety profile.

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2456. Immunogenicity and Safety of a MenACWY-CRM Booster Dose 4–6 Years After Primary Quadrivalent Meningococcal Conjugate Vaccine in Healthy US Adolescents and Adults

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Background. Neisseria meningitidis serogroups A, B, C, W, and Y are a leading cause of bacterial meningitis and sepsis worldwide. Infants <1 year, adolescents and young adults are at the highest risk. The US Advisory Committee on Immunization Practices (ACIP) recommends routine MenACWY conjugate vaccine for adolescents at 11–12 years of age, with a booster dose 5 years later. We examined responses to a booster dose of MenACWY-CRM given 4–6 years after primary vaccination with a licensed quadrivalent meningococcal conjugate vaccine (NCT02982928).

Methods. 602 adolescents and adults aged 15–55 years who had received either MenACWY-CRM (N = 301) or MenACWY-D (N = 301) 4–6 years earlier, and a control group of vaccine-naive participants (N = 102) were enrolled at 37 centers across the US and 701 overall received a single dose of MenACWY-CRM at Day 1, across study groups. Immunogenicity was evaluated pre-vaccination, either 4 or 6 days post-vaccination (sampling subgroups) and 29 days post-vaccination by serum bactericidal activity assay using human complement (iSBA). After vaccination, all participants were to be monitored for 7 days for reactogenicity, 29 days for unsolicited adverse events (AEs), and 6 months for occurrence of medically attended events, AEs leading to withdrawal and serious AEs.

Results. Sufficient immune response to a booster dose of MenACWY-CRM was demonstrated as the lower limit of the 1-sided 97.5% confidence interval for percentages of participants with iSBA seroresponse for each serogroup at 29 days post-vaccination was >75%, both in participants primed with MenACWY-CRM and MenACWY-D. Independent of quadrivalent meningococcal vaccine priming, >93% of participants achieved a seroresponse at day 29 post-booster. By day 6 post-booster, >47% of primed participants achieved ≥85% iSBA titers more likely adolescents ≥93% for MenW and ≥85% for MenY, and by day 29 almost all primed participants had seroprotective titers across all serogroups. Overall, the vaccine was well tolerated across participants in all 3 groups and no safety concerns were raised.

Conclusion. MenACWY-CRM induced robust boosting in adolescents and adults primed with a quadrivalent meningococcal conjugate vaccine 4–6 years earlier, with an acceptable clinical safety profile.

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2457. Multivariate Analyses of Socio-Economic Inequities in Parental Awareness and Utilization of Meningococcal Serogroup B Vaccines

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Background. In 2015, the US Advisory Committee on Immunization Practices (ACIP) made a Category B recommendation for serogroup B meningococcal (MenB) vaccines for adolescents 16–18 years. In 2016, MenB caused ~60% of invasive meningococcal disease among US individuals 16–23 years old; however, utilization of MenB vaccines was much lower than other vaccines with Category A recommendations. Therefore, we examined factors associated with awareness and utilization of MenB vaccines.

Methods. An online quantitative survey was fielded among 619 US parents of adolescents aged 16–19 years, recruited from GfK's KnowledgePanel in December 2016. Demographics, access to care, decision making, and vaccine use were collected. A population-based weighting method was applied. Four logistic regressions and Classification And Regression Trees (CART) were conducted to examine most influential factors associated with MenB vaccine awareness and utilization.

Results. Of the weighted sample, 57% were unaware of MenB vaccines (Figure 1). Results from logistic regression models (Table 1) revealed that awareness was likely associated with gender and race. Parents who obtained a recommendation from HCPS were 4.8X (95% CI: 2.5–9.4) times more likely to vaccinate or intend to vaccinate their adolescents for MenB vaccines compared to parents and their relationship with HCPS were among the most influential predictors of awareness of MenB vaccines or interest in learning about MenB vaccines if they were unaware.

Conclusion. MenB awareness and vaccination are associated with parents' socioeconomic status and HCPS recommendation. Even among those unaware, there was a willingness to vaccinate when recommended by an HCP. These data underscore the critical need for robust understanding and consistent implementation of ACIP's Category B recommendation to reduce inequities in MenB vaccine awareness and utilization.