ESTIMATIONS OF THE COST OF UNIVERSITY-BASED OUTBREAKS OF SEROGRUP B MENINGOCOCCAL DISEASE IN THE UNITED STATES

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BACKGROUND
- Thirteen outbreaks of serogroup B meningococcal disease (MenB) occurred at US universities in 2011-2019
- In an outbreak, CDC recommends mass vaccination, including booster doses for anyone whose completion of a MenB primary series was ≥1 year prior
- Two MenB vaccines are available requiring 2 and 3 doses, respectively
- The primary aim of this study was to develop a calculator to estimate the societal economic burden of a university-based MenB outbreak, by prematriculation policies for MenB vaccination

METHODS
- Calculator
  - A user-friendly Excel-based calculator was built to enable universities to estimate societal costs of a MenB outbreak at their institutions
  - Some inputs define key university characteristics. Others’ values were informed by a targeted literature review of publications on the economic burden of historical MenB outbreaks and cost-effectiveness analyses of MenB vaccination
- Scenarios observed
  - Calculated costs for a hypothetical university under 3 MenB vaccination policies for incoming students: MenB vaccination required, recommended, or no policy
  - Mass vaccination targeting all undergraduates with 2- or 3-dose MenB vaccine
- Costs considered (in 2020 US$)
  - Costs to students, university, and other entities
  - Costs of MenB cases, case investigation and contact prophylaxis, other outbreak response management, mass vaccination
  - Direct medical and other nonmedical costs and productivity losses

RESULTS
- Expected outcomes for mass vaccination of all undergraduates at a hypothetical university of 20,000 students

CONCLUSIONS
- A MenB outbreak at a hypothetical university with 20,000 students and no MenB vaccination policy is estimated to cost $5.1M or $5.5M if targeting all undergraduates for mass vaccination with a 2- or 3-dose vaccine, respectively
- Societal economic burden due to mass vaccination required in a MenB outbreak is lower if a university has a prematriculation MenB vaccination requirement or recommendation versus no policy

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- PG and CH are employees of the GSK group of companies and hold shares in the GSK group of companies. PN was an employee of the GSK group of companies and held shares in the GSK group of companies at the time of the study conduct. PN is now an employee of Moderna and holds shares in Moderna. KH, JC, and SA are employees of RTI Health Solutions. KH, JC, and SA declare that their employer received funding via a contractual agreement with the GSK group of companies to perform the work contributing to this research. MH declares having received personal fees as a consultant from the GSK group of companies during the conduct of this study. MH declares having received grants from Sanofi Pasteur and Takeda, personal fees from Seqirus for participation to an advisory board, and non-financial support from Dynavax outside the submitted work. The authors declare no other financial and non-financial relationships and activities.