Cost Calculator for Mass Vaccination Response to a US College Campus Outbreak of Serogroup B Meningococcal Disease

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INTRODUCTION

• Invasive meningococcal disease (IMD) is a life-threatening disease caused by the pathogen Neisseria meningitidis.

• Serogroup B meningococcal disease is the most common serogroup and is responsible for nearly 60% of IMD cases among 18–24-year-olds.

• The epidemic in the United States in 2014–2016 was the largest in the modern era, with over 1000 cases reported, and 70% of cases were among college students.

• Costs associated with meningococcal disease are significant, including medical costs, lost productivity, and emotional and psychological impacts.

• The CDC recommended mass vaccination campaigns to combat the outbreak.

• The present study aimed to calculate the costs associated with a mass vaccination campaign to combat the meningococcal disease outbreak at Providence College.

METHODS

• A 2015 serogroup B meningococcal disease outbreak at Providence College in Rhode Island was studied.

• The study used an Excel-based cost calculator to estimate costs associated with a mass vaccination campaign.

• The cost calculator included direct costs, such as labor, supplies, and medical care, and indirect costs, such as lost productivity.

• Costs were estimated based on the actual numbers of individuals vaccinated and the amounts spent on materials and labor.

• The model was validated by comparing the estimated costs with the actual costs incurred.

• The results were used to inform future mass vaccination campaigns and to guide resource allocation.

CONCLUSIONS

• This cost calculator can be used to estimate the costs associated with mass vaccination campaigns for meningococcal disease outbreaks.

• The model can help universities and public health agencies plan and budget for future outbreaks.

• The study highlights the importance of early detection and rapid response to meningococcal disease outbreaks.

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