

Response to Serogroup B Meningococcal Disease Among Military Trainees

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Introduction:

Neisseria meningitidis has caused numerous outbreaks amongst military trainees living in congregate settings. The impact of meningococcal disease has decreased over the last several decades with the introduction of the quadrivalent vaccine against serogroup A, C, W, and Y. Serogroup B meningococcal vaccination is only recommended for adolescents with specific medical conditions, such as asplenicism, or if they are in a community that is experiencing a serogroup B meningococcal outbreak. In this abstract, we describe the public health response to this disease in a group of military trainees participating in water-based training activities where there was use of

“buddy breathing.” During “buddy breathing,” military trainees share common breathing equipment between multiple trainees to prepare for diving emergencies.

Case Description:

A military trainee presented to sick call with headache, neck stiffness, myalgia, vomiting, and purpura on his trunk, extremities, and his soft palate. He had a lumbar puncture performed which revealed a neutrophilic pleocytosis (5,348 WBC/microliter, 85% polymorphonuclear leukocytes), hypoglycorrhachia (<2 mg/dL), elevated protein (312 mg/dL), Gram stain with gram-negative diplococci, and a polymerase chain reaction (PCR) positive for *Neisseria meningitidis*. Which was indentified by whole genome sequencing as serogroup B. The patient was successfully treated with intravenous ceftriaxone and resumed training after completion of his therapy.

Conclusions:

Despite their frequent use of shared breathing equipment, along with their already known risk of living in a congregate military setting, we observed no secondary cases following our public health interventions which ultimately did not include mass vaccination for serogroup B meningococcus.

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