

## THE EFFECTIVENESS OF IMMUNOPROPHYLAXIS IN SUPPRESSING CARRIAGE OF NEISSERIA MENINGITIDIS IN THE MILITARY ENVIRONMENT

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**Background.** *Neisseria meningitidis*, etiological factor of invasive meningococcal disease, is a human commensal that colonizes the nasopharynx. Colonization is usually asymptomatic but is a prerequisite for disease. Asymptomatic carriers are the major source of infection.

**Material and methods.** The survey of *N. meningitidis* carriage was conducted between January and March 2013 in a military unit in Poland. The single-time throat culture samples were collected from 559 professional soldiers (302 unvaccinated vs. 257 vaccinated individuals with a quadrivalent conjugate vaccine A,C,Y,W-135). The bacterial identification was performed with classic microbiological methods (culture, incubation, identification). Non-culture method (PCR) was used for confirmation of detected strains of *N. meningitidis* and determination of serogroups.

**Results.** 29 carriers were found in the group of unvaccinated soldiers (9,6% of examined individuals) whereas among vaccinated soldiers only 3 persons were carriers of *N. meningitidis* (1,2%). The most frequently identified serogroups among 32 carriers serving in the same military facility were serogroup B (28,1%), followed by Y (25,0%), and C (21,9%).

**Conclusions.** The initiation of mass vaccination with quadrivalent conjugate vaccine A,C,Y,W-135 in the military environment seems to be an effective method of suppressing *Neisseria meningitidis* carriage.