

Public health conclusions

Several vaccines targeting different serogroups exist for the prevention of invasive meningococcal disease. The choice of introducing a vaccine into the routine national immunisation programme depends on the disease and vaccine attributes, as well as context-specific factors in each country, such as the disease and serogroup burden, cost-effectiveness and feasibility.

Continued strengthening of IMD surveillance is essential to evaluate the impact of ongoing immunisation programmes and to support decision-makers in view of the availability of new vaccines. Surveillance at the European level will become even more important as the incidence of the disease declines, and the pooling of data may enable the description of trends which are difficult to discern at the national level.

References

1. Rosenstein NE, Perkins BA, Stephens DS, Popovic T, Hughes JM. Meningococcal disease. *N Engl J Med*. 2001;344(18):1378-88
2. Bijlsma MW, Bekker V, Brouwer MC, Spanjaard L, van de Beek D, van der Ende A. Epidemiology of invasive meningococcal disease in the Netherlands, 1960-2012: an analysis of national surveillance data. *Lancet Infect Dis*. 2014;14(9):805-12.
3. Vogel U, Taha MK, Vazquez JA, Findlow J, Claus H, Stefanelli P, et al. Predicted strain coverage of a meningococcal multicomponent vaccine (4CMenB) in Europe: a qualitative and quantitative assessment. *Lancet Infect Dis*. 2013;13(5):416-25.
4. Trotter CL, Ramsay ME. Vaccination against meningococcal disease in Europe: review and recommendations for the use of conjugate vaccines. *FEMS Microbiol Rev*. 2007 Jan;31(1):101-7.
5. Wise J. Teenagers in England to be vaccinated against meningitis group W. *BMJ*. 2015 Mar 16;350:h1486.
6. European Centre for Disease Prevention and Control. Vaccine scheduler. [Internet.] Stockholm: ECDC; 2016. Available at: <http://vaccine-schedule.ecdc.europa.eu/Pages/Scheduler.aspx> .
7. Borrow R, Abad R, Trotter C, van der Klis FR, Vazquez JA. Effectiveness of meningococcal serogroup C vaccine programmes. *Vaccine*. 2013 Sep 23;31(41):4477-86.
8. Garrido-Estepa M, León-Gómez I, Herruzo R, Cano R. Changes in meningococcal C epidemiology and vaccine effectiveness after vaccine introduction and schedule modification. *Vaccine*. 2014 May 7;32(22):2604-9.
9. Hellenbrand W, Elias J, Wichmann O, Dehert M, Frosch M, Vogel U. Epidemiology of invasive meningococcal disease in Germany, 2002–2010, and impact of vaccination with meningococcal C conjugate vaccine. *J Infect*. 2013 Jan;66(1):48-56.
10. Larrauri A, Cano R, García M, Mateo Sd. Impact and effectiveness of meningococcal C conjugate vaccine following its introduction in Spain. *Vaccine*. 2005 Jul 14;23(32):4097-100.
11. Bröker M, Emonet S, Fazio C, Jacobsson S, Koliou M, Kuusi M, et al. Meningococcal serogroup Y disease in Europe continuation of high importance in some European regions in 2013. *Hum Vaccin Immunother*. 2015;11(9):2281-6.
12. Ladhani SN, Beebejaun K, Lucidarme J, Campbell H, Gray S, Kaczmarek E, et al. Increase in endemic *Neisseria meningitidis* capsular group W sequence type 11 complex associated with severe invasive disease in England and Wales. *Clin Infect Dis*. 2015 Feb 15;60(4):578-85.
13. Cohn AC, MacNeil JR, Clark TA, Ortega-Sanchez IR, Briere EZ, Meissner HC, et al. Prevention and control of meningococcal disease: recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR Recomm Rep*. 2013 Mar 22;62(RR-2):1-28.
14. Maiden MC, Ibarz-Pavón AB, Urwin R, Gray SJ, Andrews NJ, Clarke SC, et al. Impact of meningococcal serogroup C conjugate vaccines on carriage and herd immunity. *J Infect Dis*. 2008 Mar 1;197(5):737-43.

Additional information

ECDC Surveillance Atlas of Infectious Diseases

ECDC surveillance report, 2014: <http://ecdc.europa.eu/en/publications/Publications/AER-VPD-IBD-2014.pdf>

ECDC enhanced surveillance report, 2012: <http://ecdc.europa.eu/en/publications/Publications/Surveillance%20of%20IBD%20in%20Europe%202012.pdf>

ECDC external quality assurance scheme for *Neisseria meningitidis*, 2012:

<http://ecdc.europa.eu/en/publications/Publications/External%20quality%20assessment%20scheme%202012%20for%20Neisseria%20meningitidis%20-%20web.pdf>

ECDC surveillance report on invasive bacterial diseases in Europe, 2011: <http://ecdc.europa.eu/en/publications/Publications/invasive-bacterial-diseases-surveillance-2011.pdf>

ECDC surveillance report on invasive bacterial diseases in Europe, 2010: <http://ecdc.europa.eu/en/publications/Publications/invasive-bacterial-diseases-surveillance-2010.pdf>

ECDC surveillance report on invasive bacterial diseases in Europe, 2008–2009: http://ecdc.europa.eu/en/publications/Publications/1107_SUR_IBD_2008-09.pdf

ECDC surveillance report on invasive *Neisseria meningitidis* in Europe, 1999–2000:

http://ecdc.europa.eu/en/publications/Publications/0001_TER_Surveillance_network_for_Invasive_Neisseria_Meningitidis.pdf

Network background and EU-IBIS reports: http://www.ecdc.europa.eu/en/activities/surveillance/EU_IBD/background/Pages/Background.aspx

Annex

Table. Invasive meningococcal disease, surveillance systems overview, 2014

[Download Excel version](#)



* The European Surveillance System (TESSy) is a system for the collection, analysis and dissemination of data on communicable diseases. EU Member States and EEA countries contribute to the system by uploading their infectious disease surveillance data at regular intervals.