

18. Lujan K, Cronquist A. Outbreak # 2009–43–001—*Campylobacter* outbreak associated with consumption of unpasteurized milk from a cow share operation, Montrose County 2009. State of Colorado report, November 6, 2009 [cited 2015 Feb 27]. <http://www.realrawmilkfacts.com/PDFs/Montrose-raw-dairy-report-Final.pdf>
19. Angelo KM, Chu A, Anand M, Nguyen TA, Bottichio L, Wise M, et al. Outbreak of *Salmonella* Newport infections linked to cucumbers—United States, 2014. *MMWR Morb Mortal Wkly Rep*. 2015;64:144–7.
20. Slayton RB, Turabelidze G, Bennett SD, Schwensohn CA, Yaffee AQ, Khan F, et al. Outbreak of Shiga toxin–producing *Escherichia coli* (STEC) O157:H7 associated with romaine lettuce consumption, 2011. *PLoS ONE*. 2013;8:e55300. <http://dx.doi.org/10.1371/journal.pone.0055300>
21. Centers for Disease Control and Prevention. Outbreak of *Salmonella* Heidelberg infections linked to a single poultry producer—13 states, 2012–2013. *MMWR Morb Mortal Wkly Rep*. 2013;62:553–6.
22. IJdo JW, Zhang Y, Hodzic E, Magnarelli LA, Wilson ML, Telford SR, et al. The early humoral response in human granulocytic ehrlichiosis. *J Infect Dis*. 1997;176:687–92. <http://dx.doi.org/10.1086/514091>
23. Bessen DE, Izzo MW, Fiorentino TR, Caringal RM, Hollingshead SK, Beall B. Genetic linkage of exotoxin alleles and emm gene markers for tissue tropism in group A streptococci. *J Infect Dis*. 1999;179:627–36. <http://dx.doi.org/10.1086/314631>
24. Niccolai LM, McBride V, Julian PR. Sources of information for assessing human papillomavirus vaccination history among young women. *Vaccine*. 2014;32:2945–7. <http://dx.doi.org/10.1016/j.vaccine.2014.03.059>
25. Niccolai LM, Mehta NR, Hadler JL. Racial/ethnic and poverty disparities in human papillomavirus vaccination completion. *Am J Prev Med*. 2011;41:428–33. <http://dx.doi.org/10.1016/j.amepre.2011.06.032>
26. Niccolai LM, Russ C, Julian PJ, Hariri S, Sinard J, Meek JI, et al. Individual and geographic disparities in human papillomavirus types 16/18 in high-grade cervical lesions: associations with race, ethnicity and poverty. *Cancer*. 2013;119:3052–8. <http://dx.doi.org/10.1002/ncr.28038>
27. Fischer M, Hedberg K, Cardosi P, Plikaytis BD, Hoesly FC, Steingart KR, et al. Tobacco smoke as a risk factor for meningococcal disease. *Pediatr Infect Dis J*. 1997;16:979–83. <http://dx.doi.org/10.1097/00006454-199710000-00015>
28. Swartley JS, Marfin AA, Edupuganti S, Liu LJ, Cieslak P, Perkins B, et al. Capsule switching of *Neisseria meningitidis*. *Proc Natl Acad Sci U S A*. 1997;94:271–6. <http://dx.doi.org/10.1073/pnas.94.1.271>
29. DeVries AS, Leshner L, Schlievert PM, Rogers T, Villaume LG, Danila R, et al. Staphylococcal toxic shock syndrome 2000–2006: epidemiology, clinical features, and molecular characteristics. *PLoS ONE*. 2011;6:e22997. <http://dx.doi.org/10.1371/journal.pone.0022997>
30. Ferrieri P, Lynfield R, Creti R, Flores AE. Serotype IV and invasive group B *Streptococcus* disease in neonates, Minnesota, USA, 2000–2010. *Emerg Infect Dis*. 2013;19:551–8.
31. Grijalva CG, Weinberg GA, Bennett NM, Staat MA, Craig AS, Dupont WD, et al. Estimating the undetected burden of influenza hospitalizations in children. *Epidemiol Infect*. 2007;135:951–8. <http://dx.doi.org/10.1017/S095026880600762X>
32. Vugia DJ, Meek JI, Danila RN, Jones TF, Schaffner W, Baumbach J, et al. Training in infectious disease epidemiology through the Emerging Infections Program sites. *Emerg Infect Dis*. 2015;21:1516–1519.
33. Public Welfare. Protection of Human Subjects. 45 CFR §46 102(d). 2009.

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## etymologia

### Surveillance [sər-vāl'əns]

From the French *surveiller*, “to watch over,” public health surveillance has its roots in 14th-century Europe. In an early form of surveillance, in approximately 1348, the Venetian Republic appointed guardians of public health to detect and exclude ships that carried plague-infected passengers. In 1662, English demographer John Graunt analyzed the mortality rolls in London and described a system to warn of the onset and spread of plague. Until the 1950s, “surveillance” referred to monitoring a person exposed to a disease; the current concept of surveillance as monitoring disease occurrence in populations was promoted by Alexander Langmuir of the Communicable Diseases Center (now the Centers for Disease Control and Prevention).

### Sources

1. Declich S, Carter AO. Public health surveillance: historical origins, methods and evaluation. *Bull World Health Organ*. 1994;72:285–304.
2. Dorland’s Illustrated Medical Dictionary. 32nd ed. Philadelphia: Elsevier Saunders; 2012.



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DOI: <http://dx.doi.org/10.3201/eid2109.ET2109>