

## Publications

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## **Bacterial meningitis**

### **2000 to present**

Thigpen MC, Whitney CG, Messonnier NE, Zell ER, Lynfield R, Hadler JL, Harrison LH, Farley MM, Reingold A, Bennett NM, Craig AS, Schaffner W, Thomas A, Lewis MM, Scallan E, Schuchat A for the Emerging Infections Program Network. Bacterial Meningitis in the United States, 1998-2007. *N Engl J Med* 2011; 364(21):2016-25.

### **1995-1999:**

Schuchat A, Robinson KA, Wenger JD, Harrison LH, Farley MM, Reingold AL, Lefkowitz L, Perkins BA and the Active Surveillance Team. Bacterial meningitis in the United States in 1995. *N Engl J Med* 1997;337:970-6.

Wenger JD, Hightower AW, Facklam RR, Gaventa S, Broome CV. Bacterial meningitis in the United States, 1986: report of a multistate surveillance study. *J Infect Dis* 1990;162:1316-23.

## ***Bordetella pertussis***

### **2014 to present**

McNamara, L, Skoff, T, Faulkner A, Miller L, Kudish K, Kenyon C, Bargsten M, Zansky S, Sullivan A, Martin S, Briere E. Reduced severity of pertussis in persons with age-appropriate pertussis vaccination — United States, 2010–2012. *Clin Infect Dis*. 2017 Sep 1;65(5):811-818

Weigand M, Peng Y, Loparev V, et al. The history of *Bordetella pertussis* genome plasticity and conserved rearrangement. *J Bacteriol*. 2017 Mar 28; 199(8).

Blain AE, Lewis M, Banerjee E, et al. An assessment of the cocooning strategy for preventing infant pertussis: United States, 2011. *Clin Infect Dis*. 2016;63(Suppl 4):S221–S226.

Cassiday PK, Skoff TH, Jawahir S, Tondella ML. Changes in the predominance of pulsed-field gel electrophoresis profiles of *Bordetella pertussis* isolates, United States, 2000–2012. *Emerging Infect Dis*. 2016;22(3):442-8.

Williams MM, Sen K, Weigand MR, et al. *Bordetella pertussis* strain lacking pertactin and pertussis toxin. *Emerg Infect Dis*. 2016;22(2):319-22.

Martin SW, Pawloski L, Williams M, Weening K, DeBolt C, Qin X, Reynolds L, Kenyon C, Giambrone G, Kudish K, Miller L, Selvage D, Lee A, Skoff TH, Kamiya H, Cassiday PK, Tondella ML, Clark TA. Pertactin-negative *Bordetella pertussis* strains: Evidence for a possible selective advantage. *Clin Infect Dis*. 2015 Jan 15;60(20):223-7.

Skoff TH, Baumbach J, Cieslak PR. Tracking Pertussis and Evaluating U.S. Control Measures through the Emerging Infections Program Network’s Enhanced Pertussis Surveillance System. *Emerging Infectious Diseases*. 2015; 21(9): 1568-1573.

Skoff TH; Kenyon C; Cocoros N; Liko J; Miller L; Kudish K; Baumbach J; Zansky S; Faulkner A; Martin SW. [Sources of Infant Pertussis Infection in the United States](#). *Pediatrics*. 2015 Oct;136(4):635-41. doi: 10.1542/peds.2015-1120. Epub 2015 Sep 7.

Pawloski LC, Queenan AM, Cassiday PK, Lynch AS, Harrison M, Shang W, Williams MM, Bowden KE, Burgos-Rivera B, Qin X, Messonnier N, Tondella ML. Prevalence and molecular characterization of pertactin-deficient *Bordetella pertussis* in the US. *Clin Vaccine Immunol*. 2014 Feb;21(2):119-25.

## Group A *Streptococcus*

### 2000 to present

Chochua S, Metcalf BJ, Li Z, Rivers J, Mathis S, Jackson D, Gertz Jr RE, Srinivasan V, Lynfield R, Van Beneden C, McGee L, Beall B. [Population and whole genome sequence based characterization of invasive group A streptococci recovered in the United States during 2015](#). *mBio*. 2017;8(5):e01422-17

Smeesters PR, Laho D, Beall B, Steer AC, Van Beneden CA. Seasonal, Geographic, and Temporal Trends of emm Clusters Associated with Invasive Group A Streptococcal Infections in US Multistate Surveillance. *Clin Infect Dis*. 2017 Feb 10. doi: 10.1093/cid/ciw807.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Group A *Streptococcus*, 2016. Available via the Internet: <https://www.cdc.gov/abcs/reports-findings/survreports/gas16.pdf>

Lindgren ML, McCormack L, Barnes B, Mitchel E, Jones S, Schaffner W. Assessment of Administrative Medical Claims Data for Public Health Surveillance of Invasive Group A Streptococcal Necrotizing Fasciitis in Tennessee. *Public Health Rep*. 2016 Jul-Aug; 131(4):560-5.

Nelson GE, Pondo T, Toews KA, Farley MM, Lindgren ML, Lynfield R, Aragon D, Zansky SM, Watt JP, Cieslak PR, Angeles K, Harrison LH, Petit S, Beall B, Van Beneden CA. Epidemiology of Invasive Group A Streptococcal Infections in the United States 2005-2012. *Clin Infectious Dis* 2016, doi: 10.1093/cid/ciw248

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Group A *Streptococcus*, 2015. Available via the Internet: <https://www.cdc.gov/abcs/reports-findings/survreports/gas15.pdf>

Langley G, Hao Y, Pondo T, Miller L, Petit S, Thomas A, Lindgren ML, Farley MM, Dumyati G, Como-Sabetti K, Harrison LH, Baumbach J, Watt J, Van Beneden C. The Impact of Obesity and Diabetes on the Risk of Disease and Death due to Invasive Group A *Streptococcus* Infections in Adults. *Clin Infect Dis*. (2015); doi: 10.1093/cid/civ1032

Zhu L, Olsen RJ, Nasser W, Beres SB, Vuopio J, Kristinsson KG, Gottfredsson M, Porter AR, DeLeo FR, Musser JM. A molecular trigger for intercontinental epidemics of group A *Streptococcus*. *J Clin Invest*. 2015;125(9):3545-3559. doi:10.1172/JCI82478.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Group A *Streptococcus*, 2014. Available via the Internet: <https://www.cdc.gov/abcs/reports-findings/survreports/gas14.pdf>

Nasser W, Beres SB, Olsen RJ, Dean MA, Rice KA, Wesley Long S, Kristinsson KG, Gottfredsson M, Vuopio J, Raisanen K, Caugant DA, Steinbakk M, Low DE, McGeer A, Darenberg J, Henriques-Normark B, Van Beneden CA, Hoffmann S, Musser JM. Evolutionary pathway to increased virulence and epidemic group A *Streptococcus* disease derived from 3,615 genome sequences. *Proc Natl Acad Sci* 2014;111(17):E1768-76. Epub 2014 Apr 14.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Group A *Streptococcus*, 2013. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/gas13.pdf>.

Dooling KL, Crist MB, Nguyen DB, Bass J, Lorentzson L, Toews KA, Pondo T, Stone ND, Beall B, Van Beneden C. Investigation of a prolonged group a streptococcal outbreak among residents of a skilled nursing facility, Georgia, 2009-2012. *Clin Infect Dis*. 2013 Dec;57(11):1562-7. Epub 2013 Sep 9.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Group A *Streptococcus*, 2012. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/gas12.pdf>.

Fittipaldi N, Olsen RJ, Beres SB, Van Beneden C, Musser JM. Genomic analysis of *emm59* group A *Streptococcus* invasive strains, United States. *Emerg Infect Dis* 2012;18(4):650-2.

Olsen RJ, Laucirica DR, Watkins ME, Feske ML, Garcia-Bustillos JR, Vu C, Cantu C, Shelburne SA 3rd, Fittipaldi N, Kumaraswami M, Shea PR, Flores AR, Beres SB, Lovgren M, Tyrrell GJ, Efstratiou A, Low DE, Van Beneden C, Musser JM. Polymorphisms in Regulator of Protease B (RopB) Alter Disease Phenotype and Strain Virulence of Serotype M3 Group A *Streptococcus*. *J Infect Dis* 2012; 205(11):1719-29.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Group A *Streptococcus*, 2011. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/gas11.pdf>.

Angeles K, Nichols M, Baretta J, Baumbach J. Invasive Group A Streptococcal: New Mexico, 2004-2009. *New Mexico Epidemiology*. 2010; 2010(9).

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Group A *Streptococcus*, 2010. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/gas10.pdf>.

Ahmad Y, Gertz RE, Jr., Li Z, Sakota V, Broyles LN, Van Beneden C, Facklam R, Shewmaker PL, Reingold A, Farley MM, Beall BW. Genetic relationships deduced from *emm* and multilocus sequence typing of invasive *Streptococcus dysgalactiae* subsp. *equisimilis* and *S. canis* recovered from isolates collected in the United States. *J Clin Microbiol* 2009;47 (7): 2046-54.

Broyles LN, Van Beneden C, Beall B, Facklam R, Shewmaker PL, Malpiedi P, Daily P, Reingold A, Farley MM. Population-based study of invasive disease caused by beta-hemolytic streptococci of groups other than A and B. *Clin Infect Dis* 2009;48(6):706-12.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Group A *Streptococcus*, 2009. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/gas09.pdf>.

Lauth X, von Kockritz-Blickwede M, McNamara CW, Myskowski S, Zinkernagel AS, Beall B, Ghosh P, Gallo RL, and Nizet V. M1 protein allows group A Streptococcal survival in phagocyte extracellular traps through Cathelicidin inhibition. *J Innate Immun* 2009; 1:202-14.

Steer AC, Law I, Matatolu L, Beall BW, Carapetis JR. Global *emm* type distribution of group A streptococci: systematic review and implications for vaccine development. *Lancet Infect Dis* 2009;10:611-6.

Centers for Disease Control and Prevention. Group A streptococcal M protein gene database. Downloadable FTP databases; updated 12/18/08. Available via the internet: <http://www.cdc.gov/ncidod/biotech/strep/strepblast.html>

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Group A *Streptococcus*, 2008. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/gas08.pdf>.

Rainbow J, Jewell B, Danilla RN, Boxrud D, Beall B, Van Beneden C, Lynfield. Invasive Group A Streptococcal Disease in Nursing Homes, Minnesota, 1995-2006. *Emerg Infect Dis* 2008;14(5):772-77.

Woodbury RL, Klammer KA, Xiong Y, Bailiff T, Glennen A, Bartkus JM, Lynfield R, Van Beneden C, and Beall BW for the ABCs Team. Plasmid-borne *erm(t)* from invasive, macrolide-resistant *Streptococcus pyogenes* Strains. *Antimicrob Agents Chemother* 2008;52(3):1140-3.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Group A *Streptococcus*, 2007. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/gas07.pdf>.

O'Loughlin RE, Roberson A, Cieslak PR, Lynfield R, Gershman K, Craig A, Albanese BA, Farley MM, Barrett NL, Spina NL, Beall B, Harrison LH, Reingold A, and Van Beneden C for ABCs Team. The epidemiology of invasive group A streptococcal infection and potential vaccine implications: United States, 2000-2004. *Clin Infect Dis* 2007; 45:853-61.

Thigpen MC, Richards CL, Lynfield R, Barrett NL, Harrison LH, Arnold KE, Reingold A, Bennett NM, Craig AS, Gershman K, Cieslak PR, Lewis P, Greene CM, Beall B, and Van Beneden CA for ABCs/EIP. Invasive group A streptococcal infection in older adults in long-term care facilities and the community, United States, 1998-2003. *Emerg Infect Dis* 2007;13:1852-59.

Arnold KE, Schweitzer JL, Wallace B, Salter M, Neeman R, Hlady WG, Beall B. Tightly clustered outbreak of group A streptococcal disease at a long-term care facility. *Infect Control Hosp Epidemiol* 2006;12:1377-84.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Group A *Streptococcus*, 2006. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/gas06.pdf>

Johnson DR, Kaplan EL, VanGheem A, Facklam RR, Beall B. Characterization of group A streptococci (*Streptococcus pyogenes*): correlation of M-protein and *emm*-gene type with T-protein agglutination pattern and serum opacity factor. J Med Microbiol. 2006;55:157-64.

Persson J, Beall B, Linse S, Lindhal G. Extreme sequence divergence but conserved ligand-binding specificity in *Streptococcus pyogenes* M protein. PLoS Pathog 2006; 2(5):e47.

Pletz MW, McGee L, Van Beneden CA, Petit S, Bardsley M, Barlow M, Klugman KP. The emergence of fluoroquinolone-resistance in invasive *Streptococcus pyogenes* isolates due to spontaneous mutation and horizontal gene transfer. Antimicrob Agents Chemother. 2006;50:943-8.

Sakota V, Fry AM, Lietman TM, Facklam RR, Li Z, Beall B. Genetically diverse group A streptococci from children in far-western Nepal share high genetic relatedness with isolates from other countries. J Clin Microbiol 2006;44(6):2160-6.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Group A *Streptococcus*, 2005. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/gas05.pdf>

Dale JB, Penfound T, Chiang EY, Long V, Shulman ST, Beall B. Multivalent group A streptococcal vaccine elicits bactericidal antibodies against variant M subtypes. Clin Diagn Lab Immunol. 2005;12:833-6.

Factor SH, Levine OS, Harrison LH, Farley MM, McGeer A, Skoff T, Wright T, Schwartz B, Schuchat A. Risk factors for pediatric invasive group A streptococcal disease. Emerg Infect Dis 2005;11(7):1062-6.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Group A *Streptococcus*, 2004. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/gas04.pdf>

Shulman ST, Tanz RR, Kabat K, Cederlund E, Patel D, Li Z, Sakota V, Dale JB, Beall B. Group A streptococcal pharyngitis serotype surveillance in North America, 2000-2002. Clin Infect Dis 2004;39:325-32.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Group A *Streptococcus*, 2003. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/gas03.pdf>

Espinosa LE, Li Z, Rodriguez RS, Facklam R, Beall B. M-protein gene type distribution within group A streptococcal clinical isolates recovered in Mexico during years 1991-2000: Overlap with type distribution within the United States. J. Clin Microbiol 2003;41:373-8.

Factor SH, Levine OS, Schwartz B, Harrison LH, Farley MM, McGeer A, et al. Invasive group A streptococcal disease: risk factors for adults. Emerg Infect Dis 2003;9(8):970-7.

Igwe EI, Shewmaker PL, Facklam RR, Farley MM, Van Beneden C, Beall B. Identification of superantigen genes *speM*, *ssa*, and *smeZ* in invasive strains of beta-hemolytic group C and G streptococci recovered from humans. FEMS Microbiol Lett 2003;229(2):259-64.

Jeng A, Sakota V, Li Z, Datta V, Beall B, Nizet V. Molecular genetic analysis of a group A *Streptococcus* operon encoding serum opacity factor and a novel fibronectin-binding protein, SfbX. *J Bacteriol* 2003;185(4):1208-17.

Li Z, Sakota V, Jackson D, Franklin AR, Beall B; Active Bacterial Core Surveillance/Emerging Infections Program Network. Array of M protein gene subtypes in 1064 recent invasive group A streptococcus isolates recovered from the active bacterial core surveillance. *J Infect Dis* 2003;188(10):1587-92.

Passaro DJ, Smith DS, Hett EC, Reingold AL, Daily P, Van Beneden CA, Vugia DJ. Invasive Group A Streptococcal Infections in the San Francisco Bay Area, 1989-1999. *Epidemiol Infect* 2003;129(3):471-8.

Robinson KA, Rothrock G, Phan Q, Sayler B, Stefonek K, Van Beneden C, Levine OS. Active Bacterial Core Surveillance/Emerging Infections Program Network. Risk for severe group A streptococcal disease among patients' household contacts. *Emerg Infect Dis* 2003;9(4):443-7.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Group A *Streptococcus*, 2002. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/gas02.pdf>

Chuang I, Van Beneden C, Beall B, Schuchat A and the ABCs/EIP Network. Population-based surveillance for postpartum invasive group A streptococcal infections, 1995-2000. *Clin Infect Dis* 2002;35:665-70.

Espinosa LE, Li Z, Rodriguez RS, Facklam R, Beall B. M protein gene type distribution within group A streptococcal clinical isolates recovered in Mexico during years 1991-2000: Overlap with type distribution within the United States. *J Clin Microbiol* 2002;41:373-8.

Facklam RF, Martin DR, Lovgren M, Johnson DR, Efstraiou A, Thompson TA, Gowan S, Kriz P, Tyrrell GJ, Kaplan E, and Beall B. Extension of the classification for group A streptococci by addition of 22 new M protein gene sequence types from clinical isolates: *emm*103 to *emm*104. *Clin Infect Dis* 2002;34:28-38.

Hu MC, Walls MA, Stroop S, Reddish M, Beall B, and Dale JB. Immunogenicity of a 26-valent group A streptococcal vaccine. *Infect Immun* 2002;70:2171-77.

O'Brien K, Beall B, Barrett NL, Cieslak, Ringold A, Farley MM, Danila, Zell ER, Facklam R, Schwartz B, Schuchat A. Epidemiology of invasive group A streptococcus disease in the United States, 1995-1999. *Clin Infect Dis* 2002;35:268-76.

The Prevention of Invasive Group A Streptococcal Infections Workshop Participants. Prevention of invasive group A streptococcal disease among household contacts of case-patients and among postpartum and post-surgical patients: Recommendations from the Centers for Disease Control and Prevention. *Clin Infect Dis* 2002;35:950-9.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Group A *Streptococcus*, 2001. Available via the Internet: [http://www.cdc.gov/abcs/reports-findings/survreports/gas01\\_provis.pdf](http://www.cdc.gov/abcs/reports-findings/survreports/gas01_provis.pdf)

Stefonek KR, Maerz LL, Nielson MP, Besser RE, Cieslak PR. Group A streptococcal puerperal sepsis preceded by positive surveillance cultures. *Obstet Gynecol* 2001;98:846-48.

Beall B, Gherardi G, Lovgren M, Forwick B, Facklam R, and Tyrrell G. *emm* and *sof* gene sequence variation in relation to serological typing of opacity factor positive group A streptococci. *Microbiol* 2000;146:1195-1209.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Group A *Streptococcus*, 2000. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/gas00.pdf>

Nizet V, Beall B, Bast DJ, Datta V, Kilburn L, Low DE, De Azavedo JC. Genetic locus for streptolysin S production by group A streptococcus. *Infect Immun* 2000;68(7):4245-54.

**1995-1999:**

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Group A *Streptococcus*, 1999. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/gas99.pdf>

Facklam R, Beall B, Efstratiou A, Fischetti V, Johnson D, Kaplan E, Kriz P, Lovgren M, Martin D, Schwartz B, Totolian A, Bessen D, Hollingshead S, Rubin F, Scott J, Tyrrell, G. Demonstration of *emm* typing and validation of provisional M types for group A streptococci. *Emerg Infect Dis* 1999;5:247-53.

Hoe NP, Nakashima K, Lukomski S, Grigsby D, Liu M, Kordari P, Dou SJ, Pan X, Vuopio-Varkila J, Salmenlinna S, McGeer A, Low DE, Schwartz B, Schuchat A, Naidich S, DeLorenzo D Yun-Xin F, Musser JM. Rapid selection of structural variants of group A streptococcus complement-inhibiting protein sustains and enlarges serotype M1 epidemic waves. *Nat Med* 1999;5:924-9.

York MK, Gibbs L, Perdreau-Remington F, Brooks GF. Characterization of antimicrobial resistance in *Streptococcus pyogenes* isolates from the San Francisco Bay area of Northern California. *J Clin Microbiol* 1999;37(6):1727-31.

Beall B, Facklam R, Elliott JA, Franklin AR, Hoenes T, Jackson D, Laclaire L, Thompson T, Viswanathan R. Streptococcal *emm* types associated with T agglutination patterns and the use of conserved *emm* gene restriction fragment patterns for sub-typing group A streptococci. *J Med Microbiol* 1998;47:893-8.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Group A *Streptococcus*, 1998. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/gas98.pdf>

The Working Group on Prevention of Invasive Group A Streptococcal Infections. Prevention of invasive group A streptococcal disease among household contacts of case-patients. *JAMA* 1998;279:1206-10.

Zurawski CA, Bardsley M, Beall B, Elliott JA, Facklam RR, Schwartz B, Farley M. Invasive group A streptococcal disease in metropolitan Atlanta: a population-based assessment. *Clin Infect Dis* 1998;27:150-7.



Beall B, Facklam R, Hoenes T, Schwartz B. A survey of *emm* gene sequences from systemic *Streptococcus pyogenes* infection isolates collected in San Francisco, California; Atlanta, Georgia; and Connecticut in 1994 and 1995. *J Clin Microbiol* 1997;35:1231-5.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Group A *Streptococcus*, 1997. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/gas97.pdf>

Fiorentino TR, Beall B, Mshar P, Bessen DE. A genetic-based evaluation of principal tissue reservoir for group A streptococci isolated from normally sterile sites. *J Infect Dis* 1997;176:177-82.

Beall B, Facklam R, Thompson T. Sequencing *emm*-specific PCR products for routine and accurate typing of group A streptococci. *J Clin Microbiol* 1996;34:953-58.

## Group B *Streptococcus*

### 2000 to present:

Hawkins PA, Law CS, Metcalf BJ, Chochua S, Jackson D, Westblade LF, Jerris R, Beall B, McGee L. Cross-resistance to lincosamides, streptogramins A and pleuromutilins in *Streptococcus agalactiae* isolates from the USA. *J Antimicrob Chemother.* 2017 Jul 1;72(7):1886-1892.

Metcalf BJ, Chochua S, Gertz RE Jr, Hawkins PA, Ricaldi J, Li Z, Walker H, Tran T, Rivers J, Mathis S, Jackson D, Glennen A, Lynfield R, McGee L, Beall B; Active Bacterial Core surveillance team. [Short-read whole genome sequencing for determination of antimicrobial resistance mechanisms and capsular serotypes of current invasive \*Streptococcus agalactiae\* recovered in the United States.](#) *Clin Microbiol Infect.* 2017 Aug;23(8).

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Group B *Streptococcus*, 2016. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/surveys/gbs16.pdf>

Schrag SJ, Farley MM, Petit S, Reingold A, Weston EJ, Pondo T, Hudson Jain J, Lynfield R. Epidemiology of Invasive Early-Onset Neonatal Sepsis, 2005-2014. *Pediatrics*, Dec 2016; 138(6): e20162013-e20162013.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Group B *Streptococcus*, 2015. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/surveys/gbs15.pdf>

Smith EM, Khan MA, Reingold A, Watt JP. Group B streptococcus infections of soft tissue and bone in California adults, 1995-2012. *Epidemiol Infect.* 2015 Nov;143(15):3343-50.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Group B *Streptococcus*, 2014. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/surveys/gbs14.pdf>

Kim SY, Russell L, Park J, Verani JR, Madhi SA, Cutland CL, Schrag SJ, Sinha. Cost-effectiveness of a potential group B streptococcal vaccine program for pregnant women in South Africa. *Vaccine.* 2014; 32(17):1954-63.

Park C, Nichols M., Schrag, SJ. Two Cases of Invasive Vancomycin-Resistant Group B *Streptococcus* Infection. *New Engl J Med* 2014; 370(9):885-86.

Verani J, Spina NL, Lynfield R, Schaffner W, Harrison LH, Holst A, Thomas S, Garcia JM, Scherzinger K, Aragon D, Petit S, Thompson J, Pasutti L, Carey R, McGee L, Weston E, Schrag SJ. Early-Onset Group B Streptococcal Disease in the United States: Potential for Further Reduction. *Obstet Gynecol.* 2014; 123(4): 828-37.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Group B *Streptococcus*, 2013. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/surveys/gbs13.pdf>.

Fairlie, T, Zell, ER, Schrag, SJ. Effectiveness of Intrapartum Antibiotic Prophylaxis for Prevention of Early-Onset Group B Streptococcal Disease. *Obstetrics and Gynecology*, 2013; 121(3): 570-7.

Madhi SA, Dangor Z, Heath PT, Schrag S, Izu A, Sobanjo-Ter Meulen A, Dull PM. Considerations for a phase-III trial to evaluate a group B *Streptococcus* polysaccharide-protein conjugate vaccine in pregnant women for the prevention of early- and late-onset invasive disease in young-infants. *Vaccine*. 2013 Aug 28;31 Suppl 4:D52-7. doi: 10.1016/j.vaccine.2013.02.029.

Schrag SJ, Verani JR. Intrapartum antibiotic prophylaxis for the prevention of perinatal group B streptococcal disease: Experience in the United States and implications for a potential group B streptococcal vaccine. *Vaccine*. 2013 Aug 28;31 Suppl 4:D20-6.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Group B *Streptococcus*, 2012. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/gbs12.pdf>.

Koumans EH, Rosen J, Van Dyke MK, Zell E, Phares CR, Taylor A, Loft J, and Schrag S for the ABCs and DHAP/RTI team. Prevention of mother-to-child transmission of infections during pregnancy: implementation of recommended interventions, United States, 2003-2004. *Am J of Obstet Gynecology*. 2012 Feb; 206(2):158.e1-158.e11.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Group B *Streptococcus*, 2011. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/gbs11.pdf>.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Group B *Streptococcus*, 2010. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/gbs10.pdf>.

Centers for Disease Control and Prevention. Prevention of Perinatal Group B Streptococcal Disease — Revised Guidelines from CDC, 2010. *Morb Mortal Wkly Rep*, 2010; Vol 59:RR-10.

Centers for Disease Control and Prevention. Trends in perinatal group B streptococcal disease – United States, 2000-2006. *Morb Mortal Wkly Rep* 2009;58(5):109-12.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Group B *Streptococcus*, 2009. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/gbs09.pdf>.

Kothari NJ, Morin CA, Glennen A, Jackson D, Harper J, Schrag SJ, Lynfield R. Invasive group B streptococcal disease in the elderly, Minnesota, USA, 2003-2007. *Emerg Infect Dis* 2009;15(8):1279-81.

Skoff TH, Farley MM, Petit S, Craig AS, Schaffner W, Gershman K, Harrison LH, Lynfield R, Mohle-Boetani J, Zansky S, Albanese BA, Stefonek K, Zell ER, Jackson D, Thompson T, Schrag SJ. Increasing burden of invasive group B streptococcal disease in nonpregnant adults, 1990-2007. *Clin Infect Dis* 2009;49(1):85-92.

Van Dyke MK, Phares CR, Lynfield R, Thomas AR, Arnold KE, Craig AS, Mohle-Boetani J, Gershman K, Schaffner, Petit S, Zansky SM, Morin CA, Spina NL, Wymore K, Harrison LH, Shutt KA, Bareta J, Bulens SN, Zell ER, Schuchat A, Schrag SJ. Evaluation of Universal Antenatal Screening for Group B *Streptococcus*. *New Engl J Med* 2009; 360(25):2626-36.

Castor ML, Whitney CG, Como-Sabetti K, Facklam R, Ferrieri P, Bartkus J, Juni B, Cieslak P, Farley M, Dumas N, Schrag SJ, and Lynfield R. Antibiotic Resistance Patterns in Invasive Group B Streptococcal Isolates. *Infect Dis Obstet Gynecol* 2008;727505,2008.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Group B *Streptococcus*, 2008. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/gbs08.pdf>.

Dahesh S, Hensler ME, Van Sorge NM, Gertz RE Jr, Schrag S, Nizet V, Beall BW. Point Mutation in the Group B Streptococcal pbp2x Gene Conferring Decreased Susceptibility to Beta-Lactam Antibiotics. *Antimicrob Agents Chemother* 2008;52(8):2915-8.

Jordan, HT, Farley, MM, Craig, A, Mohle-Boetani, J, Harrison, LH, Petit, S, Lynfield, R, Thomas, A., Zansky, S, Gershman, K., Albanese, BA, Schaffner, W., Schrag, SJ. Revisiting the Need for Vaccine Prevention of Late-Onset Neonatal Group B Streptococcal Disease: A Multi-State, Population-Based Analysis. *Ped Infect Dis J* 2008;27:1057-64.

Phares, CR, Lynfield, R, Farley, MM, Mohle-Boetani, J, Harrison, LH, Petit, S, Craig, AS, Schaffner, W, Zansky, SM, Gershman, K, Stefonek, KR, Albanese, BA, Zell, ER, Schuchat, A, Schrag, SJ. Epidemiology of Invasive Group B Streptococcal Disease in the United States, 1999-2005. *JAMA* 2008;299(17):2056-65.

Phares, CR, Schuchat, A, Schrag S.J. Invasive group B streptococcal disease in the United States. *JAMA*. 2008;300(14):1650.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Group B *Streptococcus*, 2007. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/gbs07.pdf>.

Phares CR, Lynfield R, Farley MM, Mohle-Boetani J, Harrison LH, Petit S, Craig AS, Schaffner W, Zansky SM, Gershman K, Stefonek KR, Albanese BA, Zell ER, Schuchat A, Schrag SJ. Epidemiology of invasive group B streptococcal disease in the United States, 1999-2005. *JAMA* 2007; 299(17):2056-65.

Centers for Disease Control and Prevention. Perinatal group B streptococcal disease after universal screening recommendations --- United States, 2003-2005. *Morb Mortal Wkly Rep* 2007;56(28):701-5.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Group B *Streptococcus*, 2006. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/gbs06.pdf>

Schrag SJ, Hadler J, Arnold KE, et al. Risk factors for invasive perinatal Escherichia coli sepsis in the era of widespread intrapartum antibiotic use. *Pediatrics* 2006;118(2):570-6.

Schrag SJ, Stoll BJ. Early-onset neonatal sepsis in the era of wide-spread intrapartum chemoprophylaxis. *Ped Infect Dis J* 2006;25(10):939-40.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Group B *Streptococcus*, 2005. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/gbs05.pdf>

Centers for Disease Control and Prevention. Early-Onset and Late-Onset Neonatal Group B Streptococcal Disease – United States, 1996-2004. MMWR Morb Mortal Wkly Rep 2005;54(47):1205-8.

Eisenberg E, Craig AS, Gautam S et al. Prevention Strategies for perinatal group B streptococcal disease: beyond screening. Ped Infect Dis J 2005;24:520-4.

Law, MR , Palomaki, G , Alfirevic, Z, Gilbert, R, Heath, P, McCartney, C, Reid, T and Schrag, S. The prevention of neonatal group B streptococcal disease: a report by a working group of the Medical Screening Society. J Med Screen 2005;12:60-8.

Morin CA, White K, Schuchat A, Danila RN, Lynfield R. Perinatal group B streptococcal disease prevention, Minnesota. Emerg Infect Dis 2005;11(9):1467-9.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Group B *Streptococcus*, 2004. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/gbs04.pdf>

Centers for Disease Control and Prevention. Diminishing Racial disparities in early-onset neonatal group B streptococcal disease, United States, 2000 - 2003. MMWR Morb Mortal Wkly Rep 2004; 53 (No.RR-23): 502-5.

Centers for Disease Control and Prevention. Laboratory Practices for Prenatal Group B Streptococcal Disease. MMWR Morb Mortal Wkly Rep 2004; 53 (No.RR-23): 506-9.

Balter S, Zell ER, O'Brien K, Roome A, Noga H, Thayu M, Schuchat A. Impact of intrapartum antibiotics on the care and evaluation of the newborn. Pediatr Infect Dis 2003;22:853-7.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Group B *Streptococcus*, 2003. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/gbs03.pdf>

Moore MR. Schrag SJ. Schuchat A. Effects of intrapartum antimicrobial prophylaxis for prevention of group-B-streptococcal disease on the incidence and ecology of early-onset neonatal sepsis. Lancet Infect Dis 2003;3(4):201-13.

Schrag SJ, Arnold KE, Mohle-Boetani JC, Lynfield R, Zell ER, Stefonek K, Noga H, Craig AS, Sanza LT, Smith G, Schuchat A. Prenatal Screening for Infectious Diseases and Opportunities for Prevention. Obstet Gynecol 2003;102:753-60.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Group B *Streptococcus*, 2002. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/gbs02.pdf>

Centers for Disease Control and Prevention. Prevention of perinatal group B streptococcal disease. MMWR Morb Mortal Wkly Rep 2002;51(No.RR-11):1-22.

Hyde TB, Hilger TM, Reingold A, Farley MM, O'Brien KL, and Schuchat A for the Active Bacterial Core surveillance (ABCs) of the Emerging Infections Program Network. Trends in the incidence and antimicrobial resistance of early-onset sepsis: population-based surveillance in San Francisco and Atlanta. *Pediatrics* 2002;110(4):690-5.

Schrag SJ, Zell ER, Lynfield R, Roome A, Arnold KE, Craig A, Harrison LH, Reingold A, Stefonek K, Smith G, Gamble M, Schuchat A. A population-based comparison of strategies to prevent early onset group B streptococcal disease in neonates. *New Engl J Med* 2002;347:233-9.

Schuchat A, Roome A, Zell ER, Linardos H, Zywicki S, O'Brien KL. Integrated monitoring of a new group B streptococcal disease prevention program and other perinatal infections. *Maternal Child Health J* 2002;6(2):107-14.

Baltimore RS, Huie SM, Meek JI, Schuchat A, O'Brien KL. Early-onset neonatal sepsis in the era of group B streptococcal prevention. *Pediatrics* 2001;108(5):1094-8.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Group B *Streptococcus*, 2001. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/gbs01.pdf>

Farley MM. Group B Streptococcal Infections in Nonpregnant Adults. *Clin Infect Dis* 2001;33:556-61. Henning KJ, Hall EL, Dwyer DM, Billmann L, Schuchat A, Johnson JA, Harrison LH. Invasive group B streptococcal disease in Maryland nursing home residents. *J Infect Dis* 2001;183:1138-42.

Schuchat A. Group B streptococcal infections: from trials and tribulations to triumph and trepidation. *Clin Infect Dis* 2001;33:751-6.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Group B *Streptococcus*, 2000. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/gbs00.pdf>.

Centers for Disease Control and Prevention. Adoption of perinatal group B streptococcal disease prevention recommendations by prenatal-care providers- Connecticut and Minnesota. *MMWR Morb Mortal Wkly Rep* 2000; 49(11):228-32.

Centers for Disease Control and Prevention. Early-onset group B streptococcal disease, United States, 1998-1999. *MMWR Morb Mortal Wkly Rep* 2000;49(35):793-6.

Centers for Disease Control and Prevention. Hospital-based policies for prevention of perinatal group B streptococcal disease, United States 1999. *MMWR Morb Mortal Wkly Rep* 2000; 49(41):936-40.

Factor SH, Whitney CG, Zywicki SS, Schuchat A for the Active Bacterial Core Surveillance Team. Effects of hospital policies based on 1996 group B streptococcal disease consensus guidelines. *Obstet Gynecol* 2000;95:377-82.

Hager WD, Schuchat A, Gibbs R, Sweet R, Mead P, Larsen JW. Prevention of perinatal group B streptococcal infection: addressing current controversies. *Obstet Gynecol* 2000;96:141-5.

Schrag S, Whitney CG, Schuchat A. Neonatal group B streptococcal disease: How infection control teams can contribute to prevention efforts. *Infect Control Hosp Epidemiol* 2000;473-83.

Schrag SJ, Zywicki S, Farley M, Reingold A, Harrison L, Lefkowitz L, Hadler J, Danila R, Cieslak P, Schuchat A. Group B streptococcal disease in the era of intrapartum antibiotic prophylaxis. *N Engl J Med* 2000;342:15-20.

Schuchat A, Schrag S. Group B Streptococcus: from emerging infection to prevention success story. *In:* Scheld WM, Craig WA, Hughes JM. *Emerging Infections 4*. Washington, DC: American Society for Microbiology; 2000:107-20.

**1995-1999:**

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Group B *Streptococcus*, 1999. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/surveys/gbs99.pdf>

Centers for Disease Control and Prevention. Laboratory practices for prenatal group B streptococcal screening and reporting. *MMWR Morb Mortal Wkly Rep* 1999;48(20):426-8.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Group B *Streptococcus*, 1998. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/surveys/gbs98.pdf>

Centers for Disease Control and Prevention. Adoption of hospital policies for prevention of perinatal group B streptococcal disease – United States, 1997. *MMWR Morb Mortal Wkly Rep* 1998;47(32):665-70.

Harrison LH, Elliot JA, Libonati JP, Billmann L, Schuchat A, Dwyer DM, and the Maryland Bacterial Invasive Disease Surveillance Group. Serotype distribution of invasive group B streptococcal isolates in Maryland: implications for vaccine formulation. *J Infect Dis* 1998;177:998-1002.

Wessels MR, Kasper DL, Johnson KD, Harrison LH. Antibody responses in invasive group B streptococcal infection in adults. *J Infect Dis* 1998;178:569-72.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Group B *Streptococcus*, 1997. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/surveys/gbs97.pdf>

Centers for Disease Control and Prevention. Decreasing incidence of perinatal group B streptococcal disease -- United States, 1993-1995. *MMWR Morb Mortal Wkly Rep* 1997;46(21):473-7.

Rosenstein NE, Schuchat A, and the Neonatal Group B Streptococcal Disease Study Group. Opportunities for prevention of perinatal group B streptococcal disease: a multi-state surveillance analysis. *Obstet Gynecol* 1997;90:901-6.

Whitney C, Plikaytis BD, Gozansky W, Schuchat A, Neonatal group B streptococcal disease study group. Prevention practices for perinatal group B streptococcal disease: a multistate surveillance analysis. *Obstet Gynecol* 1997;89:28-32.

Blumberg HM, Stephens DS, Modansky M, Erwin M, Elliott J, Facklam RR, Schuchat A, Baughman W, Farley MM. Invasive group B streptococcal disease: the emergence of serotype V. *J Infect Dis* 1996;173:365-73.

Jackson L, Farley M, Schuchat A. Adult group B streptococcal disease. *Ann Int Med* 1996;125:152-3.

Schuchat A, Whitney C, Zangwill K. Prevention of perinatal group B streptococcal disease: a public health perspective. *MMWR Morb Mortal Wkly Rep* 1996;45 (RR-7):1-24.

Farley MM. Group B Streptococcal Infection in Older Patients: Spectrum of Disease and Management Strategies. *Drugs and Aging* 1995;6:293-300.

Harrison LH, Ali A, Dwyer DM, et al. Relapsing invasive group B streptococcal infection in adults. *Ann Intern Med* 1995;123:421-7.

Jackson L, Hilsdon R, Farley M, Harrison L, Reingold A, Wenger JD, Schuchat A. Risk factors for group B streptococcal disease in adults. *Ann Intern Med* 1995;123:415-20.

**1992 - 1994:**

Schuchat A, Deaver-Robinson K, Plikaytis BD, Zangwill KM, Mohle-Boetani J, Wenger JD. Multistate case-control study of maternal risk factors for neonatal group B streptococcal disease. *Pediatr Infect Dis J* 1994;13:623-9.

Farley MM, Harvey RC, Stull T, Smith JD, Schuchat A, Wenger JD, Stephens DS. A population-based assessment of invasive disease due to group B streptococcus in nonpregnant adults. *N Engl J Med* 1993;328:1807-11.

Mohle-Boetani JC, Schuchat A, Plikaytis BD, Smith JD, Broome CV. Comparison of prevention strategies for neonatal group B streptococcal infection: A population-based economic analysis. *JAMA* 1993;270:1442-8.

Zangwill KM, Schuchat A, Wenger JD, and the Group B Streptococcal Disease Study Group. Group B streptococcal disease in the United States: Report from a multistate active surveillance system. *MMWR Morb Mortal Wkly Rep* 1992; 41 [No. SS-6]:25-32.



***Haemophilus influenzae***

2000 to present:

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Haemophilus influenzae*, 2016. Available via the Internet:

<https://www.cdc.gov/abcs/reports-findings/survreports/hib16.pdf>

Hu F, Rishishwar L, Sivadas A, Mitchell GJ, Jordan IK, Murphy TF, Gilsdorf JR, Mayer LW, Wang X.. Comparative genomic analysis of *Haemophilus haemolyticus* and non-typeable *Haemophilus influenzae* and a new testing scheme for their discrimination. *J Clin Microbiol*. 2016 Dec;54(12):3010-3017.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Haemophilus influenzae*, 2015. Available via the Internet:

<https://www.cdc.gov/abcs/reports-findings/survreports/hib15.pdf>

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Haemophilus influenzae*, 2014. Available via the Internet:

<https://www.cdc.gov/abcs/reports-findings/survreports/hib14.pdf>

Blain A, MacNeil J, Wang X, Bennett N, Farley MM, Harrison LH, Lexau C, Miller L, Nichols M, Petit S, Reingold A, Schaffner W, Thomas A, Clark T, Cohn A, Briere E. Invasive *Haemophilus influenzae* Disease in Adults  $\geq 65$  Years, United States, 2011. *Open Forum Infect Dis*. 2014; 1(2): ofu044. doi: 10.1093/ofid/ofu044. eCollection 2014 Sep.

Briere EC, Rubin L, Moro PL, Cohn A, Clark T, Messonnier N. Prevention and Control of *Haemophilus influenzae* Type b Disease: Recommendations of the Advisory Committee on Immunization Practices (ACIP). *Morb Mortal Wkly Rep* 2014; 63(RR01):1-14.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Haemophilus influenzae*, 2013. Available via the Internet:

<http://www.cdc.gov/abcs/reports-findings/survreports/hib13.pdf>.

Anderson R, Wang X, Briere EC, Katz LS, Cohn AC, Clark TA, Messonnier NE, Mayer LW. *Haemophilus haemolyticus* isolates causing clinical disease. *J Clin Microbiol*. 2012 Jul; 50(7): 2462-5.

Briere EC, Jackson M, Shah SG, Cohn AC, Anderson RD, MacNeil JR, Coronado FM, Mayer LW, Clark TA, Messonnier NE. *Haemophilus influenzae* type b disease and vaccine booster dose deferral, United States, 1998-2009. *Pediatrics* 2012; 130(3):414-20.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Haemophilus influenzae*, 2012. Available via the Internet:

<http://www.cdc.gov/abcs/reports-findings/survreports/hib12.pdf>.

Jackson ML, Rose CE, Cohn A, Coronado F, Clark TA, Wenger JD, Bulkow L, Bruce MG, Messonnier NE, Hennessy TW. Modeling insights into *Haemophilus influenzae* type b disease, transmission, and vaccine programs. *Emerg Infect Dis* 2012;18:13-20.

Livorsi DJ, MacNeil JR, Cohn AC, Bareta J, Zansky S, Petit S, Gershman K, Harrison LH, Lynfield R, Reingold A, Schaffner W, Thomas A, Farley MM. Invasive *Haemophilus influenzae* in the United States, 1999-2008: Epidemiology and Outcomes. *J Infect* 2012 Dec; 65(6):496-504.

Lowther SA, Shinoda N, Juni BA, Theodore MJ, Wang X, Jawahir SL, Jackson ML, Cohn A, Danila R, Lynfield R. *Haemophilus influenzae* type b infection, vaccination, and *H. influenzae* carriage in children in Minnesota, 2008-2009. *Epidemiol Infect.* March 2012;140(3):566-74.

Theodore MJ, Anderson RD, Wang X, Katz LS, Vuong JT, Bell ME, Juni BA, Lowther SA, Lynfield R, MacNeil JR, Mayer LW. Evaluation of new biomarker genes for differentiating *Haemophilus influenzae* from *Haemophilus haemolyticus*. *J Clin Microbiol* 2012; 50(4): 1422-24.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Haemophilus influenzae*, 2011. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/hib11.pdf>.

Jordan IK, Conley AB, Antonov IV, Arthur RA, Cook ED, Cooper GP, Jones BL, Knipe KM, Lee KJ, Liu X, Mitchell GJ, Pande PR, Petit RA, Qin S, Rajan VN, Sarda S, Sebastian A, Tang S, Thapliyal R, Varghese NJ, Ye T, Katz LS, Wang X, Rowe L, Frace M, and Mayer LW. Genome Sequences for Five Strains of the Emerging Pathogen *Haemophilus haemolyticus*. *J Bacteriol* 2011; 193:5879-5880.

Lowther SA, Shinoda N, Juni BA, Theodore MJ, Wang X, Lawahir SL, Jackson ML, Cohn A, Danila R, Lynfield R. *Haemophilus influenzae* type b infection, vaccination, and *H. influenzae* carriage in children in Minnesota, 2008-2009. *Epidemiology and Infection*, Available on CJO 2011 doi:10.1017/S0950268811000793.

MacNeil JR, Cohn AC, Farley M, Mair R, Baumbach J, Bennett N, Gershman K, Harrison LH, Lynfield R, Petit S, Reingold A, Schaffner W, Thomas A, Coronado F, Zell ER, Mayer LW, Clark TA, Messonnier NE. Current epidemiology and trends in invasive *Haemophilus influenzae* disease -- United States, 1989-2008. *Clin Infect Dis* 2011;53:1230-6.

Wang X, Mair R, Hatcher C, Theodore J, Edmond K, Wu HM, Harcourt BH, Carvalho M, Pimenta F, Mendisaihan J, Nymadawa P, Altantsetsg D, Kirsch M, Satola SW, Messonnier NE, and Mayer LW. Detection of Bacterial Pathogens in Mongolia Meningitis Surveillance with a New Real-time PCR Assay to Detect *Haemophilus influenzae*. *IJMM* 2011; 301: 303-309

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Haemophilus influenzae*, 2010. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/hib10.pdf>.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Haemophilus influenzae*, 2009. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/hib09.pdf>.

Erwin AL, Sandstedt SA, Bonthuis PJ, Geelhood JL, Nelson KL, Unrath W CT, Diggle MA, Theodore MJ, Pleatman CR, Mothershed EA, Sacchi CT, Mayer LW, Gilsdorf JR, Smith AL. Analysis of Genetic Relatedness of *Haemophilus influenzae* Isolates by Multilocus Sequence Typing. *J Bacteriol* 2008;190(4):1473-83.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Haemophilus influenzae*, 2008. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/hib08.pdf>.

Centers for Disease Control and Prevention. Update: Continued *Haemophilus influenzae* type b vaccine shortage and surveillance for invasive *H. influenzae* disease — United States, 2007-2008. *Morb Mortal Wkly Rep* 2008;57(46):1252-5.

Satola SW, Napier B, Farley MM. Association of IS1016 with the *hia* adhesion gene and biotype V and I in invasive nontypeable *Haemophilus influenzae*. *Infect Immun* 2008;76(11):5221-7.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Haemophilus influenzae*, 2007. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/hib07.pdf>

Satola SW, Collins JT, Napier R, Farley MM. Capsule gene analysis of invasive *Haemophilus influenzae*: accuracy of serotyping and prevalence of IS1016 among nontypeable isolates. *J Clin Microbiol* 2007;45(10):3230-8.

Triden L, Glennen A, Juni B, Lynfield R. Invasive *Haemophilus influenzae* disease and antibiotic susceptibility of invasive isolates in Minnesota, 2002-2005. *Infect Dis Clin Pract*. November 2007;15(6):373-6.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Haemophilus influenzae*, 2006. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/hib06.pdf>

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Haemophilus influenzae*, 2005. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/hib05.pdf>

Kapogiannis BG, Satola S, Keyserling HL, Farley MM. Invasive Infections with *H. influenzae* Serotype a Containing an IS1016-*bexA* Partial Deletion: Possible Association with Virulence. *Clin Infect Dis* 2005; 41:e97-103.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Haemophilus influenzae*, 2004. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/hib04.pdf>

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Haemophilus influenzae*, 2003. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/hib03.pdf>

LaClaire LL, Tondella MLC, Beall DS, Nobel CA, Raghunatnan PL, Rosenstein NE, Popovic T, and the ABCs Team Members. Identification of *Haemophilus influenzae* serotypes by standard slide agglutination serotyping and PCR-based capsule typing. *J Clin Microbiol* 2003;41:1:393-6.

Centers for Disease Control and Prevention. 2002. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Haemophilus influenzae*, 2002. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/hib02.pdf>

Ohuabunwo C, Bath S, Bisgard K, Murphy T, Shutt K, Rosenstein N. Progress Toward Elimination of *Haemophilus influenzae* Type b Invasive Disease Among Infants and Children, United States, 1998--2000. MMWR Morb Mortal Wkly Rep 2002; 51(11); 234-7.

Raghunathan PL, LaClaire LL, Tondella ML, Beall DS, Noble CS, Rosenstein NE, Popovic T. Serotyping discrepancies in *Haemophilus influenzae* type b disease, United States, 1998—1999. MMWR Morb Mortal Wkly Rep 2002;51(32);706-7.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Haemophilus influenzae*, 2001. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/hib01.pdf>.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Haemophilus influenzae*, 2000. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/hib00.pdf>.

**1995-1999:**

Centers for Disease Control and Prevention. Achievements in Public Health, 1900-1999 Impact of Vaccines Universally Recommended for Children – United States, 1990-1999. MMWR Morb Mortal Wkly Rep 1999;48(12);243-8.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Haemophilus influenzae*, 1999. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/hib99.pdf>

Jafari HS, Adams WG, Robinson KA, Plikaytis BD, Wenger JD. Efficacy of *Haemophilus influenzae* type b conjugate vaccines and persistence of disease in disadvantaged populations. The *Haemophilus Influenzae* Study Group. Am J Public Health 1999;89:364-8.

Bisgard K, Kao A, Leake J, Strebel PM, Perkins BA, Wharton M. *Haemophilus influenzae* disease in the United States, 1994-1995: Near disappearance of a vaccine-preventable childhood disease. Emerg Infect Dis 1998;4:229-37.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Haemophilus influenzae*, 1998. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/hib98.pdf>.

Centers for Disease Control and Prevention. Progress Toward Elimination of *Haemophilus influenzae* Type b Disease Among Infants and Children -- United States, 1987-1997. MMWR Morb Mortal Wkly Rep 1998;47:993-8.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Haemophilus influenzae*, 1997. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/hib97.pdf>

Centers for Disease Control and Prevention. Progress Toward Elimination of *Haemophilus influenzae* type b disease among infants and children -- United States, 1987-1995. MMWR Morb Mortal Wkly Rep 1996;45(42):901-6.

Urwin G, Krohn JA, Deaver-Robinson K, Wenger JD, Farley MM, and the *H. Influenzae* study group. Invasive *Haemophilus influenzae* serotype f disease: Clinical and epidemiological characteristics in the Hib vaccine era. Clin Inf Dis 1996;22:1069-76.

Centers for Disease Control and Prevention. Progress toward elimination of *Haemophilus influenzae* Type b disease among infants and children—United States, 1993-1994. MMWR Morb Mortal Wkly Rep 1995;44(29):545-50.

#### 1988 – 1994:

Centers for Disease Control and Prevention. Progress Toward elimination of *Haemophilus influenzae* type b disease among infants and children--United States, 1987-1993. MMWR 1994;43(8):144-8.

Adams WG, Deaver KA, Cochi SL, Plikaytis BD, Zell ER, Broome CV, Wenger JD. Decline of childhood *Haemophilus influenzae* Type b (Hib) disease in the Hib vaccine era. JAMA 1993;269:221-6.

Farley MM, Stephens DS, Brachman PS Jr, Harvey RC, Smith JD, Wenger JD. Invasive *Haemophilus influenzae* Disease in Adults: Population-Based Surveillance. Ann Intern Med 1992; 116:806-12.

Farley MM, Stephens DS, Harvey RC, Sikes RK, Wenger JD, and the CDC Meningitis Surveillance Group. Incidence and Clinical Characteristics of Invasive *Haemophilus influenzae* in Adults. J Infect Dis 1992;165:S42-3.

Wenger JD, Pierce R, Deaver K, Franklin R, Bosley G, Pigott N, Broome CV. Invasive *Haemophilus influenzae* disease: A population-based evaluation of the role of capsular polysaccharide serotype. J Infect Dis 1992;165 [Suppl. 1]:S34-5.

Wenger JD, Pierce R, Deaver KA, Plikaytis BD, Facklam RR, Broome CV, and the *Haemophilus influenzae* Vaccine Efficacy Study Group. Efficacy of *Haemophilus influenzae* type b polysaccharide-diphtheria toxoid conjugate vaccine in US children aged 18-59 months. Lancet 1991;338:395-8.

Wenger JD, Harrison LH, Hightower A, Broome CV. Day care characteristics associated with *Haemophilus influenzae* disease. Am J Public Health 1990;80:1455-8.

Harrison LH, Broome CV, Hightower AW. *Haemophilus influenzae* type b polysaccharide vaccine: an efficacy study. Pediatrics 1989;84:255-61.

Harrison LH, Broome CV, Hightower AW, Hoppe CC, Makintubee S, Sitze SL, Taylor JA, Gaventa S, Wenger JD. A day care-based study of the efficacy of *Haemophilus b* polysaccharide vaccine. JAMA 1988;260:1413-8.

## Legionellosis

### 2014 to present:

Dooling KL, Toews KA, Hicks LA, Garrison, Bachaus, Zansky, Carpenter, Schaffner, Parker, Petit, Thomas, Thomas, Mansmann, Morin, White, Langley. Active Bacterial Core Surveillance for Legionellosis - United States, 2011-2013. MMWR Morb Mortal Wkly Rep. 2015;64(42):1190-3. doi: 10.15585/mmwr.mm6442a2.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Legionellosis, 2015. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/leg15.pdf>.

Garrison LE, Shaw KM, McCollum JT, Dexter C, Vagnone PM, Thompson JH, Giambrone G, White B, Thomas S, Carpenter LR, Nichols M, Parker E, Petit S, Hicks LA, Langley GE. On-site availability of legionella testing in acute care hospitals, United States. Infect Control Hosp Epidemiol. 2014 Jul;35(7):898-900. doi: 10.1086/676871. Epub 2014 May 7.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Legionellosis, 2014. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/leg14.pdf>.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Legionellosis, 2013. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/leg13.pdf>.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Legionellosis, 2012. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/leg12.pdf>.

## **Methicillin-resistant *Staphylococcus aureus* (MRSA)**

For updated information on the MRSA surveillance program, please visit:

<http://www.cdc.gov/hai/eip/index.html>

### **2005 -2014 (9-site surveillance):**

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Methicillin-Resistant *Staphylococcus aureus*, 2014. Available via the Internet:

<http://www.cdc.gov/abcs/reports-findings/survreports/mrsa14.html>

Johnson NB, Hayes LD, Hoo EC, Ethier KA. CDC National Health Report: Leading Causes of Morbidity and Mortality and Associated Risk and Protective Factors – United States, 2005-2013. *Morb Mortal Wkly Rep Supplements* 2014; 63(04):3-27.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Methicillin-Resistant *Staphylococcus aureus*, 2013. Available via the Internet:

<http://www.cdc.gov/abcs/reports-findings/survreports/mrsa13.html>

Dantes R, Mu Y, Belflower R, Aragon D, Dumyati G, Harrison LH, Lessa FC, Lynfield R, Nadle J, Petit S, Ray SM, Schaffner W, Townes J, Fridkin S; Emerging Infections Program–Active Bacterial Core Surveillance MRSA Surveillance Investigators. National burden of invasive methicillin-resistant *Staphylococcus aureus* infections, United States, 2011. *JAMA Intern Med.* 2013 Nov 25;173(21):1970-8.

Duffy J, Dumyati G, Bulens S, Namburi S, Gellert A, Fridkin SK, Lessa FC. Community-onset invasive methicillin-resistant *Staphylococcus aureus* infections following hospital discharge. *Am J Infect Control.* 2013;41(9):782-6.

Iwamoto M, Mu Y, Lynfield R, Bulens, SN, Nadle J, Aragon D, Petit S, Ray SM, Harrison LH, Dumyati G, Townes JM, Schaffner W, Gorwitz RJ, Lessa FC. Trends in Invasive Methicillin-Resistant *Staphylococcus aureus* infections. *Pediatrics* 2013; 132(40):e817-24.

Nguyen DB, Lessa FC, Belflower R, Mu Y, Wise M, Nadle J, Bamberg WM, Petit S, Ray SM, Harrison LH, Lynfield R, Dumyati G, Thompson J, Schaffner W, Patel PR; for the Active Bacterial Core surveillance (ABCs) MRSA Investigators of the Emerging Infections Program. Invasive Methicillin-Resistant *Staphylococcus aureus* Infections Among Chronic Dialysis Patients in the United States, 2005-2011. *Clin Infect Dis.* 2013 Aug 19; 57:1393-400.

Tosh PK, Bulens SN, Nadle J, Dumyati G, Lynfield R, Schaffner W, Ray S, Seema J, Fridkin SK, Sievert DM. Characterization of Hospitalized Community-Onset *Staphylococcus aureus* Lower Respiratory Tract Infections Among Generally Healthy Persons 50 years of Age or Younger. *Infectious Diseases in Clinical Practice.* 2013; 21:359-365.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Methicillin-Resistant *Staphylococcus aureus*, 2012. Available via the Internet:

<http://www.cdc.gov/abcs/reports-findings/survreports/mrsa12.pdf>

Bender JB, Waters KC, Nerby J, Olsen KE, Jawahir S. Methicillin-resistant *Staphylococcus aureus* (MRSA) isolated from pets living in households with MRSA-infected children. *Clin Infect Dis*. February 2012;54(3):449-50.

Hadler JL, Petit S, Mandour M, Cartter ML. Trends in Invasive Infection with Methicillin-Resistant *Staphylococcus aureus*, Connecticut, 2001-2010. *Emerg Infect Dis*. 2012 June; 18(6):917-924.

Lessa FC, Mu Y, Ray SM, Dumyati G, Bulens S, Gorwitz RJ, Fosheim G, Devries A, Schaffner W, Nadle J, Gershman K, Fridkin SK for the Active Bacterial Core surveillance (ABCs) MRSA Investigators of the Emerging Infections Program. Impact of USA300 Methicillin-Resistant *Staphylococcus aureus* on Clinical Outcomes of Patients with Pneumonia or Central Line-Associated Bloodstream Infections. *Clin Infect Dis*. 2012 Jul; 55(2): 232-41.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Methicillin-Resistant *Staphylococcus aureus*, 2011. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/mrsa11.pdf>

DeVries A, Leshner L, Schlievert PM, Rogers T, Gomez-Villaume L, Danila R, Lynfield R. Staphylococcal toxic shock syndrome 2000-2006: Epidemiology, clinical features, and molecular characteristics. *PLoS One*. 2011; 6(8):e22997.

Nerby JM, Gorwitz R, Leshner L, Juni B, Jawahir S, Lynfield R, Harriman K. Risk factors for household transmission of community-associated methicillin-resistant *Staphylococcus aureus*. *Pediatr Infect Dis J*. 2011;30(11):927-932.

Satola SW, Lessa FC, Ray SM, Bulens SN, Lynfield R, Schaffner W, Dumyati G, Nadle J, Patel JB. Clinical and laboratory characteristics of invasive infections due to methicillin-resistant *Staphylococcus aureus* isolates demonstrating a vancomycin MIC of 2 micrograms per milliliter: Lack of effect of heteroresistant vancomycin-intermediate *S. aureus* phenotype. *J Clin Microbiol*. 2011;49(4):1583-87.

Satola SW, Farley MM, Anderson KF, Patel JB. Comparison of detection methods for heteroresistant vancomycin-intermediate *Staphylococcus aureus*, with the population analysis profile method as the reference method. *J Clin Microbiol*. 2011;49(1):177-83.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Methicillin-Resistant *Staphylococcus aureus*, 2010. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/mrsa10.pdf>

Como-Sabetti KJ, Harriman KH, Fridkin SK, Jawahir SL, Lynfield R. Risk factors for community-associated *Staphylococcus aureus* infections: Results from parallel studies including methicillin-resistant and methicillin-sensitive *S. aureus* compared to uninfected controls. *Epidemiol Infect* 2010; 1:1-11.

Kallen A, Mu Y, Bulens S, Reingold A, Petit S, Gershman K, Ray SM, Harrison LH, Lynfield R, Dumyati G, Townes JM, Schaffner W, Patel PR, Fridkin SK for the Active Bacterial Core surveillance (ABCs) MRSA Investigators of the Emerging Infections Program. Healthcare-Associated Invasive MRSA Infections, 2005-2008. *JAMA* 2010; 304(6):641-48.



Kempker RR, Farley MM, Ladson JL, Satola S, Ray SM. Association of methicillin-resistant *Staphylococcus aureus* (MRSA) USA300 genotype with mortality in MRSA Bacteremia. *Journal of Infection* 2010; 61:372-81.

Lessa FC, Mu Y, Davies J, Murray M, Lillie M, Pearson A, Fridkin S for the Emerging Infections Program/Active Bacterial Core surveillance MRSA investigators and the Health Protection Agency Team. Comparison of Incidence of Bloodstream Infection with Methicillin-Resistant *Staphylococcus aureus* between England and United States, 2006-2007. *Clin Infect Dis* 2010;51(8):925-28.

Shukla SK, Karow ME, Brady JM, Stemper ME, Kislow J, Moore N, Wroblewski K, Chyou PH, Warshauer DM, Reed KD, Lynfield R, Schwan WR. Virulence genes and genotypic associations in nasal carriage, community-associated methicillin-susceptible and methicillin-resistant USA400 *Staphylococcus aureus* isolates. *J Clin Microbiol*. October 2010;48(10):3582-92.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Methicillin-Resistant *Staphylococcus aureus*, 2009. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/mrsa09.pdf>

Limbago B, Fosheim GE, Schoonover V, Crane CE, Nadle J, Petit S, Heltzel D, Ray SM, Harrison LH, Lynfield R, Dumyati G, Townes JM, Schaffner W, Mu Y, Fridkin SK. Characterization of methicillin-resistant *Staphylococcus aureus* isolates collected in 2005 and 2006 from patients with invasive disease: a population-based analysis. *J Clin Microbiol* 2009;47(5):1344-51.

Lucero CA, Hageman J, Zell ER, Bulens S, Nadle J, Petit S, Gershman K, Ray S, Harrison LH, Lynfield R, Dumyati G, Townes JM, Schaffner W, Fridkin SK for ABCs MRSA Investigators. Evaluating the potential public health impact of a *Staphylococcus aureus* vaccine through the use of population-based surveillance for invasive methicillin-resistant *S. aureus* disease in the United States. *Vaccine* 2009;27(37):5061-68.

Buck JM, Harriman KH, Juni BA, Gall K, Boxrud DJ, Glennen A, Danila R, Lynfield R. No change in methicillin-resistant *Staphylococcus aureus* nasal colonization rates among Minnesota school children during 2 study periods. *Infect Dis Clin Pract* 2008;16(3):163-5.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Methicillin-Resistant *Staphylococcus aureus*, 2008. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/mrsa08.pdf>

Tenover FC, McAllister S, Fosheim G, McDougal LK, Carey RB, Limbago B, Lonsway D, Patel JB, Kuehnert MJ, Gorwitz R. Characterization of *Staphylococcus aureus* Isolates from Nasal Cultures Collected from Individuals in the United States in 2001 to 2004. *J Clin Microbiol* 2008;46(9):2837-41.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Methicillin-Resistant *Staphylococcus aureus*, 2007. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/mrsa07.pdf>

Klevens MR, Morrison MA, Nadle J, Petit S, Gershman K, Ray S, Harrison LH, Lynfield R, Dumyati G, Townes JM, Craig AS, Zell ER, Fosheim GE, McDougal LK, Carey RB, Fridkin SK for ABCs MRSA Investigators. Invasive Methicillin-Resistant *Staphylococcus aureus* Infections in the United States. JAMA 2007; 298(15):1763-71.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Methicillin-Resistant *Staphylococcus aureus*, 2006. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/mrsa06.pdf>

Klevens MR, Morrison MA, Fridkin SK, Reingold A, Petit S, Gershman K, Ray S, Harrison LH, Lynfield R, Dumyati R, Townes JM, Craig AS, Fosheim G, McDougal LK, Tenover FC, for ABCs/EIP. Community-associate Methicillin-resistant *Staphylococcus aureus* and Healthcare Risk Factors. Emerg Infect Dis 2006;12:1991-3.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, Methicillin-Resistant *Staphylococcus aureus*, 2005. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/mrsa05.pdf>

*Early phase ABCs MRSA (4-site surveillance):*

Buck JM, Como-Sabetti K, Harriman KH, Danila RN, Boxrud DJ, Glennen A, Lynfield R. Community-associated Methicillin-resistant *Staphylococcus aureus*, Minnesota, 2000-2003. Emerg Infect Dis 2005;11(10):1532-8.

Fridkin SK, Hageman JC, Morrison M, Sanza LT, Como-Sabetti K, Jernigan JA, Harriman K, Harrison LH, Lynfield R, Farley MM for the Active Bacterial Core Surveillance Program of The Emerging Infections Program Network. Methicillin-resistant *Staphylococcus aureus* disease in three communities. N Engl J Med 2005;352:1436-44.

Naimi TS, LeDell KH, Como-Sabetti K, Borchardt SM, Boxrud DJ, Etienne J, Johnson SK, Vandenesch F, Fridkin S, O'Boyle C, Danila RN, Lynfield R. Comparison of community and health care-associated methicillin-resistant *Staphylococcus aureus* infection. JAMA 2003;290:2976-84.

Morin C, Hadler JL. Population-based incidence and characteristics of community-onset *Staphylococcus aureus* infections with bacteremia in four metropolitan areas in Connecticut, 1998. J Infect Dis 2001;184:1029-34.

## ***Neisseria meningitidis***

### **2000 to present:**

MacNeil JR, Blain AE, Wang X, Cohn AC. [Current epidemiology and trends in meningococcal disease — United States, 1996–2015](#). *Clin Infect Dis*. 2018 Apr 3;66(8): 1276-1281

Cohn AC, MacNeil JR, Harrison LH, Lynfield R, Reingold A, Schaffner W, Zell ER, Plikaytis B, Wang X, Messonnier NE; Active Bacterial Core Surveillance (ABCs) Team and MeningNet Surveillance Partners. Effectiveness and Duration of Protection of One Dose of a Meningococcal Conjugate Vaccine. *Pediatrics*. 2017 Feb; 139(2).

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Neisseria meningitidis*, 2016. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/mening16.pdf>

Harris CM, Wu HM, Li J, Hall HI, Lee A, Zell E, Harrison LH, Petit S, Farley MM, Miller L, Nichols M, Reingold A, Schaffner W, Thomas A, MacNeil JR, Clark TA, Cohn AC, Meningococcal Disease in Patients With Human Immunodeficiency Virus Infection: A Review of Cases Reported Through Active Surveillance in the United States, 2000-2008. *Open Forum Infectious Diseases*. 2016 Dec 20;3(4)

Blain A, Mandal S, Wu H, MacNeil J, Harrison LH, Farley MM, Lynfield R, Miller L, Nichols M, Petit S, Reingold A, Schaffner W, Thomas A, Zansky SM, Anderson R, Harcourt BH, Mayer LW, Clark TA, Cohn AC. Penicillin Use in Meningococcal Disease Management, Active Bacterial Core Surveillance (ABCs) Sites, 2009. *Open Forum Infectious Diseases*. 2016 Jul

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Neisseria meningitidis*, 2015. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/mening15.pdf>

Harcourt BH, Anderson RD, Wu HM, Cohn AC, MacNeil JR, Taylor TH, Wang X, Clark TA, Messonnier NE, Mayer LW. [Population-Based Surveillance of \*Neisseria meningitidis\* Antimicrobial Resistance in the United States](#). *Open Forum Infect Dis*. 2015 Aug 13;2(3):ofv117. doi: 10.1093/ofid/ofv117. eCollection 2015 Sep.

MacNeil JR, Bennett N, Farley MM, Harrison LH, Lynfield R, Nichols M, Petit S, Reingold A, Schaffner W, Thomas A, Pondo T, Mayer LW, Clark TA, Cohn AC. Epidemiology of infant meningococcal disease in the United States, 2006-2012. *Pediatrics*. 2015 Feb;135(2):e305-11. doi: 10.1542/peds.2014-2035. Epub 2015 Jan 12.

Wang X, Shutt KA, Vuong JT, Cohn A, MacNeil J, Schmink S, Plikaytis B, Messonnier NE, Harrison LH, Clark TA, Mayer LW. Changes in the Population Structure of Invasive *Neisseria meningitidis* in the United States After Quadrivalent Meningococcal Conjugate Vaccine Licensure. *J Infect Dis* 2015 Jan 2 pii:jiu842 [Epub ahead of print].

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Neisseria meningitidis*, 2014. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/mening14.pdf>

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Neisseria meningitidis*, 2013. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/mening13.pdf>.

Harrison LH, Shutt KA, Arnold KE, Stern EJ, Pondo T, Kiehlauch JA, Myers RA, Hollick RA, Schmink S, Vello M, Stephens DS, Messonnier NE, Mayer L, Clark TA. Meningococcal carriage among Georgia and Maryland high school students. *J Infect Dis*. 2014 Dec 11. pii: jiu679. [Epub ahead of print].

Centers for Disease Control and Prevention. Prevention and Control of Meningococcal Disease: Recommendations of the Advisory Committee on Immunization Practices (ACIP). *Morb Mortal Wkly Rep* 2013; 62 (RR-2).

MacNeil JR, Rubin L, McNamara L, Briere EC, Clark TA, Cohn AC. Use of MenACWY-CRM Vaccine in Children Aged 2 Through 23 Months at Increased Risk for Meningococcal Disease: Recommendations of the Advisory Committee on Immunization Practices, 2013. *Morb Mortal Wkly Rep* 2014; 63(24):527-30.

Wiringa AE, Shutt KA, Marsh JW, Cohn AC, Messonnier NE, Zansky SM, Petit S, Farley MM, Gershman K, Lynfield R, Reingold A, Schaffner W, Thompson J, Brown ST, Lee BY, Harrison LH. Geotemporal Analysis of *Neisseria meningitidis* Clones in the United States: 2000-2005. *PLoS One*. 2013 Dec 12;8(12):e82048.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Neisseria meningitidis*, 2012. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/mening12.pdf>.

Centers for Disease Control and Prevention. Comparison of Meningococcal Disease Surveillance Systems – United States, 2005-2008. *Morb Mortal Wkly Rep* 2012;61(17):306-08.

Krauland MG, Dunning Hotopp JC, Riley DR, Daugherty SC, Marsh JW, Messonnier NE, Mayer LW, Tettelin H, Harrison LH. Whole genome sequencing to investigate the emergence of clonal complex 23 *Neisseria meningitidis* serogroup Y disease in the United States. *PLoS One*. 2012; 7(4): e35699.

Wang X, Theodore MJ, Mair R, Trujillo-Lopez E, du Plessis M, Wolter N, Baughman AL, Hatcher C, Vuong J, Lott L, von Gottberg A, Sacchi C, McDonald JM, Messonnier NE, and Mayer LW. 2012. Clinical validation of multiplex real-time PCR assays for detection of bacterial meningitis pathogens. *J Clin Microbiol* 2012; 50:702-708.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Neisseria meningitidis*, 2011. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/mening11.pdf>.

Centers for Disease Control and Prevention. Recommendations of the Advisory Committee on Immunization Practices (ACIP) for use of quadrivalent meningococcal conjugate vaccine (MenACWY-D) among children aged 9 through 23 months at increased risk for invasive meningococcal disease. *Morb Mortal Wkly Rep* 2011;60(40):1391-2.

Centers for Disease Control and Prevention. Updated recommendations for use of meningococcal conjugate vaccines – Advisory Committee on Immunization Practices (ACIP), 2010. *Morb Mortal Wkly Rep* 2011;60(3):72-6.

Katz LS, Sharma NV, Harcourt BH, Thomas JD, Wang X, Mayer LW, Jordan IK. Using Single Nucleotide Polymorphisms to Discriminate Disease Associated from Carried Genomes of *Neisseria meningitidis*. *Journal of Bacteriology* 2011; 193: 3633-41.

Katz LS, Humphrey JC, Conley AB, Nelakuditi V, Kislyuk AO, Agrawal S, Jayaraman P, Harcourt BH, Olsen-Rasmussen MA, Frace M, Sharma NV, Mayer LW, Jordan IK. Neisseria Base: A comparative genomics database for *Neisseria meningitidis*. *Database*, 2011; Sep 18;:bar035.

MacNeil JR, Cohn AC, Zell ER, Schmink S, Miller E, Clark T, Messonnier NE for the Active Bacterial Core surveillance (ABCs) Team and MeningNet Surveillance Partners. Early Estimate of the Effectiveness of Quadrivalent Meningococcal Conjugate Vaccine. *Pediatr Infect Dis J*. 2011; 30(6):451-5.

Thomas, JD, Hatcher CP, Satterfield DA, Theodore MJ, Bach MC, Linscott KB, Zhao X, Wang X, Mair R, Schmink S, Arnold KE, Stephens DS, Harrison LH, Hollick RA, Andrade AL, Lamaro-Cardoso J, de Lemos APS, Gritzfeld J, Gordon S, Soysal A, Bakir M, Sharma D, Jain S, Satola SW, Messonnier NE, and Mayer LW. *sodC*-based Real-time PCR for Detection of *Neisseria meningitidis*. *PLoS ONE*, 6(5): e19361, 2011.

Wang X, Cohn A, Comanducci M, Andrew L, Zhao X, MacNeil JR, Schmink S, Muzzi A, Bambini S, Rappuoli R, Pizza M, Murphy E, Hoiseith SK, Jansen KU, Anderson AS, Harrison LH, Clark TA, Messonnier NE, Mayer LW. Prevalence and Genetic Diversity of Candidate Vaccine Antigens Among Invasive *Neisseria meningitidis* Isolates in the United States. *Vaccine*. 2011;29(29-30):4739-44.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Neisseria meningitidis*, 2010. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/mening10.pdf>.

Cohn AC, MacNeil JR, Harrison LH, Theodore J, Schmidt M, Pondo T, Arnold KE, Baumbach J, Bennett N, Craig AS, Farley M, Gershman K, Petit S, Lynfield R, Reingold A, Schaffner W, Shutt KA, Zell ER, Mayer LW, Clark T, Stephens D, Messonnier NE. Changes in *Neisseria meningitidis* Disease Epidemiology in the United States, 1998-2007: Implications for Prevention of Meningococcal Disease. *Clin Infect Dis* 2010; 50(2):184-91.

Harrison LH, Shutt KA, Schmink SE, Marsh JW, Harcourt BH, Wang X, Whitney AM, Stephens DS, Cohn AC, Messonnier NER, Mayer LW. Population structure and capsular switching of invasive *Neisseria meningitidis* isolates in the pre-meningococcal conjugate vaccine era, United States, 2000-2005. *J Infect Dis* 2010; 201(8):1208-24.

Kislyuk AO, Katz LS, Agrawal S, Hagen MS, Conley AB, Jayaraman P, Nelakuditi V, Humphrey JC, Sammons SA, Govil D, Mair RD, Tatti KM, Tondella ML, Harcourt BH, Mayer LW, Jordan IK. A computational genomics pipeline for microbial sequencing projects. *Bioinformatics*, 2010; 26: 1819-26.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Neisseria meningitidis*, 2009. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/mening09.pdf>.

Wu, HM, Harcourt BH, Wei S, Hatcher CP, Novak RT, Wang, X, Juni B, Boxrud D, Rainbow J, Schmink S, Mair RD, Theodore MJ, Sander M, Miller T, Kruger K, Mayer LW, Cohn A, Clark TA, Messonnier N, and Lynfield R. Emergence of ciprofloxacin-resistant *Neisseria meningitidis* in North America. *N Engl J Med* 2009;360:886-892.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Neisseria meningitidis*, 2008. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/mening08.pdf>.

Centers for Disease Control and Prevention. Report from ACIP: Decision Not to Recommend Routine Vaccination of All Children Aged 2-10 Years with MCV4. *Morb Mortal Wkly Rep* 2008;57(17):462-5.

Harrison LH, Kreiner CJ, Shutt KA, O'Leary M, Messonnier NER, Stefonek KR, Lin H, Lynfield R, Barrett NL, Arnold KE, Jones TF, Montero JT. Risk factors for meningococcal disease in students in grades 9-12. *Ped Infect Dis J* 2008;27:193-199.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Neisseria meningitidis*, 2007. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/mening07.pdf>

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Neisseria meningitidis*, 2006. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/mening06.pdf>

Borrow R, Carlone GM, Rosenstein N, Blake M, Feavers I, Martin D, Zollinger W, Stephens DS, and The Meningococcal Working Group. *Neisseria meningitidis* group B correlates of protection and assay standardization – International Meeting Report, Emory University, Atlanta, Georgia, United States, 16-17 March 2005. *Vaccine* 2006;24:5093-107.

Harrison LH, Jolley KA, Shutt KA, Marsh JW, O'Leary M, Thomson Sanza L, Maiden MCJ. Antigenic shift and the incidence of meningococcal infection. *J Infect Dis* 2006;193(9):1266-74.

Harrison LH, Maiden MC. Reply to Tsang et al. *J Infect Dis* 2006;194:1792-3.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Neisseria meningitidis*, 2005. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/mening05.pdf>

Centers for Disease Control and Prevention. Prevention and Control of Meningococcal Disease: Recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR* 2005; 54(RR-7):1-21.

Dull P, Abdelwahab J, Sacchi C, Becker M, Noble C, Kaiser R, Mayer L, Whitney A, Schmink S, Dolan-Livengood J, Stephens DS, Ajello G, Creton M, Popovic T, Rosenstein N. Serogroup W-135 *Neisseria meningitidis* carriage among U.S. travelers to the 2001 Hajj. *J Infect Dis* 2005;191:33-9.

- Rainbow J, Cebelinski E, Bartkus J, Glennen A, Boxrud D, Lynfield R. Rifampin-resistant meningococcal disease. *Emerg Infect Dis* 2005;11(6):977-9.
- Sejvar JJ, Johnson D, Popovic T, Miller JM, Downes F, Somsel P, Weyant R, Stephens DS, Perkins B, Rosenstein NA. Assessing the risk of laboratory-acquired meningococcal disease in the United States, 1996-2000. *J Clin Microbiol* 2005;24:4811-4.
- Shepard CW, Ortega-Sanchez IR, Scott RD, Rosenstein NE, ABCs Team. Cost-effectiveness of conjugate meningococcal vaccination strategies in the United States. *Pediatrics* 2005;115(5):1220-32.
- Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Neisseria meningitidis*, 2004. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/mening04.pdf>
- McEllistrem MC, Kolano JA, Pass MA, Caugant DA, Mendelsohn A, Pacheco AGF, Shutt KA, Razeq J, Harrison LH. Epidemiologic trends and genotypes causing meningococcal disease, Maryland. *Emerg Infect Dis* 2004;10:451-6.
- Mothershed EA, Sacchi CT, Whitney AM, Barnett GA, Ajello GW, Schmink S, Mayer LW, Phelan M, Taylor TH, Bernhardt SA, Rosenstein NE, Popovic T. Use of real-time PCR to resolve slide agglutination discrepancies in serogroup identification of *Neisseria meningitidis*. *J Clin Microbiol* 2004; 42:320-8.
- Raghunathan PL, Bernhardt SA, Rosenstein NE. Opportunities for control of meningococcal disease in the United States. *Ann Rev Med* 2004;55:333-53.
- Zimmer S, Stephens DS. Meningococcal conjugate vaccine. *Expert Opin Pharmacother* 2004;4:855-63.
- Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Neisseria meningitidis*, 2003. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/mening03.pdf>
- Dolan-Livengood JM, Miller YK, Kahler CM, Reeves M, Ajello G, Stephens DS. Genetic basis for nongroublable *Neisseria meningitidis*. *J Infect Dis* 2003;187:1616-28.
- Shepard CW, Rosenstein NE, Fischer M, and the Active Bacterial Core Surveillance Team. Neonatal meningococcal disease in the United States, 1990-1999. *Pediatr Infect Dis J*, 2003;22:418-22.
- Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Neisseria meningitidis*, 2002. Available via the internet: <http://www.cdc.gov/abcs/reports-findings/survreports/mening02.pdf>
- Kellerman S, McCombs K, Ray M, Farley MM, Rosenstein N, Popovic T, Blake P, Stephens DS, and the Georgia Emerging Infections Program. Genotype-specific carriage of *Neisseria meningitidis* in Georgia counties with hyper- and hyposporadic rates of meningococcal disease. *J Infect Dis* 2002;186:40-8.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Neisseria meningitidis*, 2001. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/mening01.pdf>

Finn R, Groves C, Coe M, Pass M, Harrison LH. A cluster of serogroup C meningococcal disease associated with attendance at a party. *South Med J* 2001;94(12):1192-4.

Harrison LH, Pass MA, Mendelsohn AB, Egri M, Pass M, Rosenstein NE, Razeq J, Roche JC. Invasive meningococcal disease in adolescents and young adults. *JAMA* 2001;286:694-9.

Lingappa JR, Rosenstein N, Zell ER, Shutt KA, Schuchat A, Perkins BA and the Active Bacterial Core Surveillance (ABCs) Team. Surveillance for meningococcal disease and strategies for use of conjugate meningococcal vaccines in the United States. *Vaccine* 2001;19(31):4566-75.

Popovic T, Schmink S, Rosenstein NA, Ajello GW, Reeves MW, Plikaytis B, Hunter SB, Ribot EM, Boxrud D, Tondella ML, Kim C, Noble C, Mothershed E, Besser J, Perkins BA. Evaluation of pulsed-field gel electrophoresis in epidemiological investigations of meningococcal disease outbreaks caused by *Neisseria meningitidis* serogroup C. *J Clin Microbiol* 2001;39(1):75-85.

Rosenstein NE, Perkins BA, Stephens DS, Popovic T, Hughes JM. Meningococcal disease. *N Engl J Med* 2001;344:1378-88.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Neisseria meningitidis*, 2000. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/mening00.pdf>.

Rosenstein NE, Stocker SA, Popovic T, Tenover FC, Perkins BA, and the Active Bacterial Core Surveillance Team. Antimicrobial resistance of *Neisseria meningitidis* in the United States, 1997. *Clin Infect Dis* 2000;30:212-3.

Sacchi CT, Whitney AM, Popovic T, Beall DS, Reeves MW, Plikaytis BD, Rosenstein NE, Perkins BA, Tondella MLC, Mayer LW. Diversity and prevalence of PorA types in *Neisseria meningitidis* serogroup B in the United States, 1992-1998. *J Infect Dis* 2000;182:1169-76.

Tondella M, Popovic T, Rosenstein N, Lake D, Carlone G, Perkins B. Distribution of *Neisseria meningitidis* serogroup B serosubtypes and serotypes circulating in the United States. *J Clin Microbiol* 2000;38:3323-8.

1995-1999:

Centers for Disease Control and Prevention. 1999. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Neisseria meningitidis*, 1999. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/mening99.pdf>

Diermayer M, Hedberg K, Hoesly F, Fischer M, Perkins B, Reeves M, Fleming D. Epidemic serogroup B meningococcal disease in Oregon: the evolving epidemiology of the ET-5 strain. *JAMA*. 1999;281(16):1493-7.



Harrison LH, Dwyer DM, Maples CT, Billmann L. The risk of meningococcal infection in college students. *JAMA* 1999;281:1906-10.

Rosenstein NE, Perkins BA, Stephens D, Lefkowitz L, Cartter ML, Danila R, Cieslak P, Shutt KA, Popovic T, Schuchat A, Harrison LH, Reingold AL, and the Active Bacterial Core Surveillance Team. The changing epidemiology of meningococcal disease in the United States, 1992-1996. *J Infect Dis* 1999;180:1894-1901.

Yusuf HR, Rochat RW, Baughman WS, Gargiullo PM, Perkins BA, Brantley MD, Stephens DS. Maternal cigarette smoking and invasive meningococcal disease: a cohort study among young children in metropolitan Atlanta, 1989-1996. *Am J Public Health* 1999;89:712-7.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Neisseria meningitidis*, 1998. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/mening98.pdf>

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Neisseria meningitidis*, 1997. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/mening97.pdf>

Centers for Disease Control and Prevention. Control and prevention of meningococcal disease: recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR Morb Mortal Wkly Rep* 1997;46 (No. RR-5):1-10.

Centers for Disease Control and Prevention. Control and prevention of serogroup C meningococcal disease: evaluation and management of suspected outbreaks: recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR Morb Mortal Wkly Rep* 1997;46 (No. RR-5):13-21.

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.

Raymond NJ, Reeves M, Ajello G, Baughman W, Gheesling LL, Carlone GM, Wenger JD, Stephens DS. Molecular epidemiology of sporadic (endemic) serogroup C meningococcal disease. *J Infect Dis* 1997;176:1277-84.

Swartley JS, Marfin AA, Edupuganti S, Liu LJ, Cieslak P, Perkins B, Wenger JD, Stephens DS. Capsule switching of *Neisseria meningitidis*. *Proc Natl Acad Sci* 1997; 94:271-6.

Zangwill K, Schuchat A, Riedo FX, Pinner RW, Koo DT, Reeves MW, Wenger JD. School-based clusters of meningococcal disease in the United States: descriptive epidemiology and a case-control analysis. *JAMA* 1997;277:389-95.

Centers for Disease Control and Prevention. Serogroup Y meningococcal disease--Illinois, Connecticut, and selected areas, United States, 1989-1996. *MMWR Morb Mortal Wkly Rep* 1996;45:1010-13.

Centers for Disease Control and Prevention. Serogroup B Meningococcal Disease -- Oregon 1994. *MMWR Morb Mortal Wkly Rep* 1995;44:121-4.

Jackson LA, Schuchat A, Gorsky RD, Wenger JD. Should college students be vaccinated against meningococcal disease? A cost-benefit analysis. *Am J Public Health* 1995;85:843-5.

Jackson LA, Schuchat A, Reeves MW, Wenger JD. Serogroup C meningococcal outbreaks in the United States: An emerging threat. *JAMA* 1995;273:383-9.

Reeves MW, Perkins BA, Diermayer M, Wenger JD. Epidemic-associated *Neisseria meningitidis* detected by multilocus enzyme electrophoresis. *Emerg Infect Dis* 1995;1:53-4.

Stephens DS, Hajjeh RA, Baughman WS, Harvey CH, Wenger JD, Farley MM. Sporadic meningococcal disease in adults: results of a 5-year population-based study. *Ann Intern Med* 1995;123:937-40.

*1988 - 1994:*

Jackson LA, Tenover FC, Baker C, Plikaytis BD, Reeves MW, Stocker SA, Weaver RE, Wenger JD, and the Meningococcal Disease Study Group. Prevalence of *Neisseria meningitidis* relatively resistant to penicillin in the United States, 1991. *J Infect Dis* 1994;169: 338-41.

Jackson LA, Wenger JD. Laboratory-based surveillance for meningococcal disease in selected counties, United States, 1989-1991. *MMWR Morb Mortal Wkly Rep* 1993;42:21-30.

Pinner RW, Gellin BG, Bibb WF, Baker CN, Weaver R, Hunter SB, Waterman SH, Mocca LF, Frasch CE, Broome CV, and the Meningococcal Disease Study Group. Meningococcal disease in the United States - 1986. *J Infect Dis* 1991;164:368-74.

***Streptococcus pneumoniae***

2000 to present:

Link-Gelles R, Westreich D, Aiello AE, Shang N, Weber DJ, Rosen JB, Motala T, Mascola L, Eason J, Scherzinger K, Holtzman C, Reingold AL, Barnes M, Petit S, Schaffner W, McGee L, Whitney CG, Moore MR. [Generalisability of vaccine effectiveness estimates: An analysis of cases included in a postlicensure evaluation of 13-valent pneumococcal conjugate vaccine in the USA](#). *BMJ Open*. 2017;7(8):e017715.

Chochua S, Metcalf BJ, Li Z, Walker H, Tran T, Tran T, McGee L, Beall B. Emergent invasive serotype 35B pneumococci in the United States during ongoing surveillance (2015-2016) and identification of an expanding serotype switch lineage. *Emerg Infect Dis*. 2017;23(6):922–30.

Warren JL, Pingali SC, Weinberger DM. Spatial Variability in the Persistence of Pneumococcal Conjugate Vaccine-targeted Pneumococcal Serotypes Among Adults. *Epidemiology*. 2017 Jan; 28(1):119-126.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Streptococcus pneumoniae*, 2016. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/spneu16.html>

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Streptococcus pneumoniae*, 2015. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/spneu15.html>

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance, Emerging Infections Program Network, Trends by Serotype Group - *Streptococcus pneumoniae*, 1998-2015. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/spneu-types.html>

Link-Gelles R, Westreich D, Aiello AE, Shang N, Weber DJ, Holtzman C, Scherzinger K, Reingold A, Schaffner W, Harrison LH, Rosen JB, Petit S, Farley M, Thomas A, Eason J, Wigen J, Barnes M, Thomas O, Zansky S, Beall B, Whitney CG, Moore MR. Bias with respect to socioeconomic status: A closer look at zip code matching in a pneumococcal vaccine effectiveness study. *SSM-Population Health*. 2016 Dec; 2: 587-594.

Metcalf BJ, Chochua S, Gertz RE Jr, Li Z, Walker H, Tran T, Hawkins PA, Glennen A, Lynfield R, Li Y, McGee L, Beall B; Active Bacterial Core surveillance team. Using whole genome sequencing to identify resistance determinants and predict antimicrobial resistance phenotypes for year 2015 invasive pneumococcal disease isolates recovered in the United States. *Clin Microbiol Infect*. 2016 Dec;22(12):1002.

Kim L., McGee L, Tomczyk S, Beall B. Biological and Epidemiological Features of Antibiotic-Resistant *Streptococcus pneumoniae* in pre- and post-Conjugate Vaccine eras: a United States Perspective. *Clin Microbiol Rev*. 2016 Jul;29(3):525-52.

Li Y, Metcalf BJ, Chochua S, Li Z, Gertz RD, Walker H, Hawkins PA, Tran T, Whitney CG, McGee L, Beall B, on behalf of Active Bacterial Core surveillance team. Penicillin-Binding Protein Transpeptidase Signatures for Tracking and Predicting  $\beta$ -Lactam Resistance Levels in *Streptococcus pneumoniae*. *mBio*. 2016 May-Jun; 7(3): e00765-16.

Nichols MC, Bareta J, Coyle A, Landen M. Using Hospital Inpatient Discharge Data to Supplement Active Surveillance for Invasive Pneumococcal Disease: Is Extract Worth the Exertion? *Public Health Rep.* 2016 May-Jun; 131(3):404-10.

De St Maurice A, Schaffner W, Griffin MR, Halasa N, Grijalva CG. Persistent gender disparities in invasive pneumococcal diseases in the conjugate era. *J Infect Dis.* 2016 May 30. [Epub].

Matthew R. Moore, Ruth Link-Gelles, William Schaffner, Ruth Lynfield, Corinne Holtzman, Lee H. Harrison, Shelley M. Zansky, Jennifer B. Rosen, Arthur Reingold, Karen Scherzinger, Ann Thomas, Ramon E. Guevara, Tasneem Motala, Jeffrey Eason, Meghan Barnes, Susan Petit, Monica Farley, Lesley McGee, James H. Jorgensen, Cynthia G. Whitney. Effectiveness of 13-valent pneumococcal conjugate vaccine for prevention of invasive pneumococcal disease in children in the USA: a matched case-control study. *Lancet Resp Med.* 2016. [in press]

Metcalf BJ, Gertz RE Jr, Gladstone RA, Walker H, Sherwood LK, Jackson D, Li Z, Hawkins PA, Chochua S, Sheth M, Rayamajhi N, Bentley SD, Kim L, Whitney CG, McGee L, Beall B; Active Bacterial Core surveillance team. Strain features and distributions in pneumococci from children with invasive disease before and after 13-valent conjugate vaccine implementation in the USA. *Clin Microbiol Infect.* 2016 Jan; 22(1); 60. E9-60.

Moore MR, Whitney CG. Use of Pneumococcal Disease Epidemiology to Set Policy and Prevent Disease during 20 years of the Emerging Infections Program. *Emerg Infect Dis.* 2015 Sep;21(9):1551-6.

Kobayashi M, Bennett NM, Gierke R, Almendares O, Moore MR, Whitney CG, Pilishvili T. Intervals Between PCV13 and PPSV23 Vaccines: Recommendations of the Advisory Committee on Immunization Practices (ACIP). *Morb Mortal Wkly Rep* 2015; 64(34):944-947.

Hawkins PA, Chochua S, Jackson D, Beall B, McGee L. Mobile Elements and Chromosomal Changes Associated with MLS Resistance Phenotypes of Invasive Pneumococci Recovered in the United States. *Microb Drug Resist.* 2015 Apr;21(2):121-9.

Moore MR, Link-Gelles R, Schaffner W, Lynfield R, Lexau C, Bennett NM, Petit S, Zansky SM, Harrison LH, Reingold A, Miller L, Scherzinger K, Thomas A, Farley MM, Zell ER, Taylor TH Jr, Pondo T, Rodgers L, McGee L, Beall B, Jorgensen JH, Whitney CG. Effect of use of 13-valent pneumococcal conjugate vaccine in children on invasive pneumococcal disease in children and adults in the USA: analysis of multisite, population-based surveillance. *Lancet Infect Dis.* 2015;15:301-9.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Streptococcus pneumoniae*, 2014. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/spneu14.html>

Croucher NJ, Hanage WP, Harris SR, McGee L, van der Linden M, de Lencastre H, Sá-Leão R, Song JH, Ko KS, Beall B, Klugman KP, Parkhill J, Tomasz A, Kristinsson KG, Bentley SD. Variable recombination dynamics during the emergence, transmission and 'disarming' of a multidrug-resistant pneumococcal clone. *BMC Biol.* 2014 Jun 23;12:49.

Croucher NJ, Chewapreecha C, Hanage WP, Harris SR, McGee L, van der Linden M, Song JH, Ko KS, de Lencastre H, Turner C, Yang F, Sá-Leão R, Beall B, Klugman KP, Parkhill J, Turner P, Bentley SD. Evidence for soft selective sweeps in the evolution of pneumococcal multidrug resistance and vaccine escape. *Genome Biol Evol.* 2014 Jun 10;6(7):1589-602.

Dong W, Chochua S, McGee L, Jackson D, Klugman KP, Vidal JE. Mutations within the rplD Gene of Linezolid-Nonsusceptible *Streptococcus pneumoniae* Strains Isolated in the United States. *Antimicrob Agents Chemother*. 2014;58(4):2459-62.

Park IH, Geno KA, Sherwood LK, Nahm MH, Beall B. Population-based analysis of invasive nontypeable pneumococci reveals that most have defective capsule synthesis genes. *PLoS One*. 2014 May 15;9(5):e97825. doi: 10.1371/journal.pone.0097825. eCollection 2014.

Reynolds, C. A., J. A. Finkelstein, G. T. Ray, M. R. Moore, and S. S. Huang. "Attributable Healthcare Utilization and Cost of Pneumonia Due to Drug-Resistant *Streptococcus pneumoniae*: A Cost Analysis." [In eng]. *Antimicrob Resist Infect Control* 3 (2014): 16.

Spicer JO, Thomas S, Holst A, Baughman W, Farley MM. Socioeconomic and Racial Disparities of Pediatric Invasive Pneumococcal Disease After the Introduction of the 7-valent Pneumococcal Conjugate Vaccine. *Pediatr Infect Dis J*. 2014 Feb;33(2):158-64.

Tomczyk S, Bennett NM, Stoecker C, Gierke R, Moore MR, Whitney CG, Hadler S, Pilishvili T. Use of 13-Valent Pneumococcal Conjugate Vaccine and 23-Valent Pneumococcal Polysaccharide Vaccine Among Adults Aged  $\geq 65$  Years: Recommendations of the Advisory Committee on Immunization Practices (ACIP). *Morb Mortal Wkly Rep* 2014; 63(27): 822-25.

Wortham JM, Zell E, Pondo T, Harrison L, Schaffner W, Lynfield R, Thomas A, Reingold A, Bennett N, Petit S, Aragon D, Bareta J, Juni B, Farley M, Beall B, Moore M. Racial Disparities in Invasive *Streptococcus pneumoniae* Infections, 1998-2009. *Clin Infect Dis*. 2014; 58(9): 1250-7.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Streptococcus pneumoniae*, 2013. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/spneu13.pdf>.

Centers for Disease Control and Prevention. Use of 13-Valent Pneumococcal Conjugate Vaccine and 23-Valent Pneumococcal Polysaccharide Vaccine Among Children Aged 6-18 Years with Immunocompromising Conditions: Recommendations of the Advisory Committee on Immunization Practices (ACIP). *Morb Mortal Wkly Rep*, 2013; 62(25):521-24.

Cho BH, Stoecker C, Link-Gelles R, Moore MR. Cost-effectiveness of administering 13-valent pneumococcal conjugate vaccine in addition to 23-valent pneumococcal polysaccharide vaccine to adults with immunocompromising conditions. *Vaccine*, 2013 Dec 5;31(50):6011-21. doi: 10.1016/j.vaccine.2013.10.024. Epub 2013 Oct 19.

Dallas SD, McGee L, Limbago B, Patel JB, McElmeel ML, Fulcher LC, Lonsway DR, Jorgensen JH. Development of doxycycline MIC and disk diffusion interpretive breakpoints and revision of tetracycline breakpoints for *Streptococcus pneumoniae*. *J Clin Microbiol*. 2013 Jun;51(6):1798-802.

Feikin DR, Kagucia EW, Loo JD, Link-Gelles R, Puhan MA, Cherian T, Levine OS, Whitney CG, O'Brien KL, Moore MR; Serotype Replacement Study Group. Serotype-specific changes in invasive pneumococcal disease after pneumococcal conjugate vaccine introduction: a pooled analysis of multiple surveillance sites. *PLoS Med*. 2013;10(9):e1001517. doi: 10.1371/journal.pmed.1001517. Epub 2013 Sep 24.

Fleming-Dutra KE, Taylor T, Link-Gelles R, et al. Effect of the 2009 Influenza A(H1N1) Pandemic on Invasive Pneumococcal Pneumonia. *J Infect Dis* 2013. doi:10.1093/infdis/jit008

Link-Gelles R, Taylor T, Moore MR; for the Active Bacterial Core Surveillance Team. Forecasting invasive pneumococcal disease trends after the introduction of 13-valent pneumococcal conjugate vaccine in the United States, 2010-2020. *Vaccine* 2013 Apr 11. [Epub ahead of print]

Link-Gelles R, Thomas A, Lynfield R, Petit S, Schaffner W, Harrison L, Farley MM, Aragon D, Nicols M, Kirley PD, Zansky S, Jorgensen J, Juni BA, Jackson D, Moore MR, Lipsitch M. Geographic and temporal trends in antimicrobial nonsusceptibility in *Streptococcus pneumoniae* in the post-vaccine era in the United States. *J Infect Dis*. 2013 Oct 15;208(8):1266-73. doi: 10.1093/infdis/jit315.

Payne AB, Link-Gelles R, Azonobi I, Hooper WC, Beall BW, Jorgensen JH, Juni B, Moore M; for the Active Bacterial Core Surveillance Team. Invasive Pneumococcal Disease among Children with and without Sickle Cell Disease in the United States, 1998-2009. *Pediatr Infect Dis J* 2013 Jun 27. [Epub ahead of print]

Stoecker C, Hampton LM, Link-Gelles R, Messonnier ML, Zhou F, Moore MR. Cost-effectiveness of using 2 vs 3 primary doses of 13-valent pneumococcal conjugate vaccine. *Pediatrics*. 2013 Aug;132(2):e324-32. doi: 10.1542/peds.2012-3350. Epub 2013 Jul 1.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Streptococcus pneumoniae*, 2012. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/spneu12.pdf>.

Centers for Disease Control and Prevention. Licensure of 13-Valent Pneumococcal Conjugate Vaccine for Adults Aged 50 Years and Older. *Morb Mortal Wkly Rep*, 2012; 61(21): 394-95.

Cohen AL, Taylor T, Farley MM, Schaffner W, Leshner LJ, Gershman KA, Bennett NM, Reingold A, Thomas A, Baumbach J, Harrison LH, Petit S, Beall B, Zell E, Moore M. An assessment of the screening method to evaluate vaccine effectiveness: the case of 7-valent pneumococcal conjugate vaccine in the United States. *PLoS One*. 2012;7(8):e41785. Epub 2012 Aug 1.

De Serres G, Pilishvili T, Link-Gelles R, Reingold A, Gershman K, Petit S, Farley MM, Harrison LH, Lynfield R, Bennett NM, Baumbach J, Thomas A, Schaffner W, Beall B, Whitney C, Moore M. Use of surveillance data to estimate the effectiveness of the 7-valent conjugate pneumococcal vaccine in children less than 5 years of age over a 9-year period. *Vaccine*. 2012 Jun 8; 30(27):4067-72.

Golubchik T, Brueggemann AB, Street T, Gertz RE Jr, Spencer CC, Ho T, Giannoulatou E, Link-Gelles R, Harding RM, Beall B, Peto TE, Moore MR, Donnelly P, Crook DW, Bowden R. Pneumococcal genome sequencing tracks a vaccine escape variant formed through a multi-fragment recombination event. *Nature genetics* 2012;44:352-5.

Hampton LM, Farley MM, Schaffner W, Thomas A, Reingold A, Harrison LH, Lynfield R, Bennett NM, Petit S, Gershman K, Baumbach J, Beall B, Jorgensen J, Glennen A, Zell ER, Moore M. Prevention of antibiotic-nonsusceptible *Streptococcus pneumoniae* with conjugate vaccines. *J Infect Dis*. February 2012;205(3):401-11.

Hampton LM, Zell ER, Schrag S, Cohen AL. Sentinel versus population-based surveillance of pneumococcal conjugate vaccine effectiveness. *Bull World Health Organ*. 2012 Aug 1; 90(8):568-77.

Muhammad RD, Oza-Frank R, Zell E, Link-Gelles R, Narayan KM, Schaffner W, Thomas A, Lexau C, Bennett NM, Farley MM, Reingold A, Hadler J, Beall B, Klugman KP, Moore MR. Epidemiology of Invasive Pneumococcal Disease among High-Risk Adults since Introduction of Pneumococcal Conjugate Vaccine for Children. *Clin Infect Dis*. 2012 Nov 15 [Epub ahead of print].

Nelson GE, Gershman KA, Swerdlow DL, Beall BW, Moore MR. Invasive pneumococcal disease and pandemic (H1N1) 2009, Denver, Colorado, USA. *Emerg Infect Dis*. 2012 Feb; 18(2):208-16.

Wroe PC, Finkelstein JA, Ray GT, Linder JA, Johnson KM, Rifas-Shiman S, Moore MR, Huang SS. Aging population and future burden of pneumococcal pneumonia in the United States. *J Infect Dis* 2012;205:1589-92.

Beall BW, Gertz RE, Hulkower RL, Whitney CG, Moore MR, Bruegeemann AB. Shifting Genetic Structure of Invasive Serotype 19A Pneumococci in the United States. *J Infect Dis*. 2011; 203(10):1360-8.

Calix JJ, Oliver MB, Sherwood LK, Beall BW, Hollingshead SK, Nahm MH. *Streptococcus pneumoniae* serotype 9A isolates contain diverse mutations to *wcjE* that result in variable expression of serotype 9V-specific epitope. *J Infect Dis*. 2011 Nov 15;204(10):1585-95.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Streptococcus pneumoniae*, 2011. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/spneu11.pdf>.

Centers for Disease Control and Prevention. Invasive Pneumococcal Disease and 13-Valent Pneumococcal Conjugate Vaccine (PCV13) Coverage Among Children Aged  $\leq 59$  Months – Selected U.S. Regions, 2010-2011. *Morb Mortal Wkly Rep*, 2011; 60(43): 1477-81.

Costa MA, Huang SS, Moore M, Kulldorff M, Finkelstein JA. New Approaches to Estimating National Rates of Invasive Pneumococcal Disease. *Am J Epidemiol*. 2011; 174(2):234-42.

Hampton LM, Farley MM, Schaffner W, Thomas A, Reingold A, Harrison LH, Lynfield R, Bennett NM, Petit S, Gershman K, Baumbach J, Beall B, Jorgensen J, Glennen A, Zell ER, Moore M. Prevention of Antibiotic-Nonsusceptible *Streptococcus pneumoniae* with Conjugate Vaccine. *J Infect Dis* 2012 Feb 1;205(3):401-11. Epub 2011 Dec 7.

Hicks LA, Chien YW, Taylor TH Jr, Haber M, Klugman KP, on behalf of the Active Bacterial Core surveillance (ABCs) Team. Outpatient antibiotic prescribing and nonsusceptible *Streptococcus pneumoniae* in the United States, 1996-2003. *Clin Infect Dis* 2011;53:631-9.

Lingappa JR, Dumitrescu L, Zimmer SM, Lynfield R, McNicholl JM, Messonnier NE, Whitney CG, Crawford DC. Identifying host genetic risk factors in the context of public health surveillance for invasive pneumococcal disease. *PLoS One*. 2011;6(8):e23413.

Petit S, Altier H, Marquez C, Mandour M. Invasive Pneumococcal Disease, Connecticut, 1998-2009. *Connecticut Epidemiologist*. 2011; 31(4): 9-10.

Rosen JB, Thomas AR, Lexau CA, Reingold A, Hadler JL, Harrison LH, Bennett NM, Schaffner W, Farley MM, Beall BW, Moore MR. Geographic Variation in Invasive Pneumococcal Disease Following Pneumococcal Conjugate Vaccine Introduction in the United States. *Clin Infect Dis*. 2011;53(2):137-43.

Srinivasan V, du Plessis M, Beall BW, McGee L. Quadriplex real-time polymerase chain reaction (lytA, mef, erm, pbp2b(wt)) for pneumococcal detection and assessment of antibiotic susceptibility. *Diagn Microbiol Infect Dis*. 2011 Dec;71(4):453-6.

Soto K, Petit S, Hadler JL. Changing disparities in invasive pneumococcal disease by socioeconomic status and race/ethnicity, 1998-2008. *Public Health Reports*. 2011 Supp 3;126:81-88.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Streptococcus pneumoniae*, 2010. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/spneu10.pdf>.

Centers for Disease Control and Prevention. Invasive Pneumococcal Disease in Young Children Before Licensure of 13-Valent Pneumococcal Conjugate Vaccine – United States, 2007. *Morb Mortal Wkly Rep*, 2010; 59(10): 253-257.

Centers for Disease Control and Prevention. Licensure of a 13-Valent Pneumococcal Conjugate Vaccine (PCV13) and Recommendations for Use Among Children – Advisory Committee on Immunization Practices (ACIP). *Morb Mortal Wkly Rep*, 2010; 59(9): 258-261.

Centers for Disease Control and Prevention. Prevention of Pneumococcal Disease Among Infants and Children — Use of 13-Valent Pneumococcal Conjugate Vaccine and 23-Valent Pneumococcal Polysaccharide Vaccine. *Morb Mortal Wkly Rep*, 2010; 59: RR-11.

Centers for Disease Control and Prevention. Updated Recommendations for Prevention of Invasive Pneumococcal Disease Among Adults Using the 23-Valent Pneumococcal Polysaccharide Vaccine (PPSV23). *Morb Mortal Wkly Rep*, 2010; 59(34):1102-6.

Cohen AL, Harrison LH, Farley MM, Reingold AL, Hadler J, Schaffner W, Lynfield R, Thomas AR, Campsmith M, Li J, Schuchat A, Moore MR; Active Bacterial Core surveillance Team. Prevention of Invasive Pneumococcal Disease Among HIV-Infected Adults in the Era of Childhood Pneumococcal Immunization. *AIDS* 2010; 24(14):2253-62.

Gertz RE, Zhongya L, Pimenta FC, Jackson D, Carvalho MG, Beall BW. Increased penicillin-nonsusceptibility of non-vaccine serotype (other than 19A and 6A) invasive pneumococci in post 7-valent conjugate vaccine. *J Infect Dis* 2010; 201(5):770-5.

Park SY, Van Beneden CA, Pilishvili T, Martin MT, Facklam RR, Whitney CG, for the Active Bacterial Core surveillance Team. When Pneumococcal Conjugate Vaccines Do Not Work: A Case Series of Invasive Infections among Vaccinated Children in the United States. *J Pediatr* 2010; 156:478-83.

Pilishvili T, Zell ER, Farley MM, Schaffner W, Lynfield R, Nyquist AC, Vazquez M, Bennett NM, Reingold A, Thomas A, Jackson D, Schuchat A, Whitney CG. Risk factors for invasive pneumococcal disease in children in the era of conjugate vaccine use. *Pediatrics* 2010;126(1):e9-e17.

Pilishvili T, Lexau C, Farley MM, Halder J, Harrison LH, Bennett NM, Reingold A, Thomas A, Schaffner W, Craig AS, Smith PJ, Beall BW, Whitney CG, Moore MR. Sustained reductions in invasive pneumococcal disease in the era of conjugate vaccine. *J Infect Dis* 2010;201(1):32-41.



Poehling KA, Sims L, Snively BM, Halasa NB, Mitchel E, Rhodes M, Schaffner W, Craig AS, Griffin MR. Sick cell trait, hemoglobin C trait and invasive pneumococcal disease. *Epidemiology* 2010; 21(3):340-6.

Walter ND, Taylor TH, Shay DK, Thompson WW, Brammer L, Dowell SF, et al. Influenza circulation and the burden of invasive pneumococcal pneumonia during a non-pandemic period in the United States. *Clin Infect Dis* 2010;50(2):175-83.

Carvalho Mda G, Pimenta FC, Gertz RE Jr, Joshi HH, Trujillo AA, Keys LE, Findley J, Moura IS, Park IH, Hollingshead SK, Pilishvili T, Whitney CG, Nahm MH, Beall BW. ABCs Team. PCR -based quantitation and clonal diversity of the current prevalent invasive serogroup 6 pneumococcal serotype, 6C, in the United States in 1999 and 2006 to 2007. *J Clin Microbiol* 2009;47(3):554-9.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Streptococcus pneumoniae*, 2009. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/spneu09.pdf>.

Hsu HE, Shutt KA, Moore MR, Beall B, Bennett NM, Craig AS, Farley MM, Jorgensen JH, Lexau CA, Petit S, Reingold A, Thomas A, Whitney CG, Harrison LH. Effect of pneumococcal conjugate vaccine on pneumococcal meningitis. *N Engl J Med* 2009;360(3):244-56.

McGee L, Biek D, Ge Y, Klugman M, du Plessis M, Smith AM, Beall B, Whitney CG, Klugman KP. In vitro evaluation of the antimicrobial activity of ceftaroline against cephalosporin-resistant isolates of *Streptococcus pneumoniae*. *Antimicrob Agents Chemother* 2009;53(2):552-6.

Pimenta FC, Gertz RE Jr, Roundtree A, Yu J, Nahm MH, McDonald RR, Carvalho Mda G, Beall BW. Rarely occurring 19A-like cps locus from a serotype 19F pneumococcal isolate indicates continued need of serology-based quality control for PCR-based serotype determinations. *J Clin Microbiol* 2009;47(7):2353-4.

Ray GT, Pelton SI, Klugman KP, Strutton DR, Moore MR. Cost-effectiveness of pneumococcal conjugate vaccine: an update after 7 years of use in the United States. *Vaccine* 2009;27(47):6483-94.

Walter ND, Taylor TH, Dowell SF, Mathis S, Moore ME. Holiday spikes in pneumococcal disease among older adults due to pediatric serotypes. *N Engl J Med* 2009;361(26):2584-85.

Adamkiewicz TV, Silk B, Howgate J, Baughman W, Strayhorn G, Sullivan K, Farley MM. Effectiveness of the seven-valent pneumococcal conjugate vaccine in children with sickle cell disease in the first decade of life. *Pediatrics* 2008;121(3):562-9.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Streptococcus pneumoniae*, 2008. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/spneu08.pdf>.

Centers for Disease Control and Prevention. Effects of New Penicillin Susceptibility Breakpoints for *Streptococcus pneumoniae* – United States, 2006-2007. *Morb Mortal Wkly Rep*, 2008;57(50):1353-55.

Centers for Disease Control and Prevention. Invasive Pneumococcal Disease in Children 5 Years After Conjugate Vaccine Introduction – Eight States, 1998-2005. *Morb Mortal Wkly Rep* 2008;57(6):144-148.

Centers for Disease Control and Prevention. Pneumococcal PCR-based serotyping. Updated Oct. 17, 2008. Available via internet: <http://www.cdc.gov/ncidod/biotech/strep/pcr.htm>.

Moore MR, Gertz RE, Barkocy-Gallagher GA, Schaffner W, Lexau C, Gershman K, Reingold A, Farley M, Harrison LH, Hadler JL, Bennett NM, Thomas AR, McGee L, Pilishvili T, Brueggemann AB, Whitney CG, Jorgensen JH, Beall B. Population snapshot of emergent *Streptococcus pneumoniae* Serotype 19A in the United States, 2005. *J Infect Dis* 2008;197(7):1016-27.

Park IH, Moore MR, Treanor JJ, Pelton SI, Pilishvili T, Beall B, Shelly MA, Mahon BE, Nahm MH; the Active Bacterial Core surveillance team. Differential effects of pneumococcal vaccines against serotypes 6A and 6C. *J Infect Dis* 2008; 198(12):1818-22.

Yu J, Carvalho Mda G, Beall B, Nahm MH. A rapid pneumococcal serotyping system based on monoclonal antibodies and PCR. *J Med Microbiol* 2008;57(Pt 2):171-8.

Albrich WC, Baughman W, Schmotzer B, Farley MM. Changing characteristics of invasive pneumococcal disease in metropolitan Atlanta after introduction of a 7-valent pneumococcal conjugate vaccine. *Clin Infect Dis* 2007;44:1569-76.

Brueggemann AB, Pai R, Crook DW, Beall B. Vaccine escape recombinants after pneumococcal vaccination in the United States. *PLoS Pathog* 2007;3(11):e168.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Streptococcus pneumoniae*, 2007. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/spneu07.pdf>

Hicks LA, Harrison LH, Flannery B, Hadler JL, Schaffner W, Craig AS, Jackson D, Thomas A, Beall B, Lynfield R, Reingold A, Farley MM, Whitney CG, ABCs/EIP. Incidence of Pneumococcal Disease Due to Non-Pneumococcal Conjugate Vaccine (PCV7) Serotypes in the United States during the era of widespread PCV7 vaccination, 1998-2004. *J Infect Dis* 2007;196(9):1346-54.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Streptococcus pneumoniae*, 2006. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/spneu06.pdf>

Barzilay EJ, O'Brien KL, Kwok YS, Hoekstra RM, Zell ER, Reid R, Santosham M, Whitney CG, Feikin DR. Could a single dose of pneumococcal conjugate vaccine in children be effective? Modeling the optimal age of vaccination. *Vaccine* 2006;24(7):904-13.

Beall B, McEllistrem MC, Gertz RE, Wedel S, Boxrud DJ, Gonzalez AL, Medina MJ, Pai R, Thompson TA, Harrison LH, McGee L, Whitney CG, and the ABCs Team. Pre- and post-vaccination clonal compositions of invasive pneumococcal serotypes for isolates collected in the United States in 1999, 2001, and 2002. *J Clin Microbiol* 2006;44(3):999-1017.

Flannery B, Heffernan RT, Harrison LH, Ray SM, Reingold AL, Hadler J, Schaffner W, Lynfield R, Thomas AR, Li J, Campsmith M, Whitney CG, Schuchat A. Changes in invasive pneumococcal disease among HIV-infected adults living in the era of childhood pneumococcal immunization. *Ann Intern Med* 2006;144:1-9.

Greene CM, Kyaw MH, Ray SM, Schaffner W, Lynfield R, Barrett NL, Long C, Gershman K, Pilishvili, Roberson A, Zell ER, Whitney CG, Bennett NM for the Active Bacterial Core Surveillance Program of the Emerging Infections Program Network. Preventability of Invasive Pneumococcal Disease and Assessment of Current Polysaccharide Vaccine Recommendations for Adults: United States, 2001-2003. *Clin Infect Dis* 2006;43:141-50.

Kyaw MH, Greene CM, Schaffner W, Ray SM, Shapiro M, Barrett NL, Gershman K, Craig AS, Roberson A, Zell ER, Schuchat A, Bennett NM, Whitney CG; Active Bacterial Core Surveillance Program of the Emerging Infections Program Network. Adults with invasive pneumococcal disease: missed opportunities for vaccination. *Am J Prev Med*. 2006;31:286-92.

Kyaw MH, Lynfield R, Schaffner W, Craig AS, Halder J, Reingold A, Thomas AR, Harrison LH, Bennett NM, Farley MM, Facklam RR, Jorgensen JH, Besser J, Zell ER, Schuchat A, Whitney CG; Active Bacterial Core Surveillance Program of the Emerging Infections Program Network. Effect of introduction of the pneumococcal conjugate vaccine on drug-resistant *Streptococcus pneumoniae*. *N Eng J Med* 2006; 354(14):1455-63.

Mahon BE, Hsu K, Karumuri S, Kaplan SL, Mason EO, Pelton SI. Effectiveness of abbreviated and delayed 7-valent pneumococcal conjugate vaccine dosing regimens. *Vaccine* 2006;24:2514-20.

Pai R, Gertz RE, Beall B. Sequential Multiplex PCR approach for determining capsular serotypes of *Streptococcus pneumoniae* isolates. *J Clin Microbiol*. 2006;44(1):124-31.

Pletz M, Shergill A, McGee L, Beall B, Whitney CG, Klugman KP. Active Bacterial Core Surveillance Team. Prevalence of first-step mutants among levofloxacin-susceptible invasive isolates of *Streptococcus pneumoniae* in the United States. *Antimicrob Agents Chemother*; 2006; 50:1561-3.

Poehling KA, Talbot TR, Griffin MR, Craig AS, Whitney CG, Zell E, Lexau CA, Thomas AR, Harrison LH, Reingold AL, Hadler JL, Farley MM, Anderson BJ, Schaffner W. Invasive Pneumococcal Disease Among Infants Before and After Introduction of the Pneumococcal Conjugate Vaccine. *JAMA* 2006;295(14):1668-74.

Ray GT, Whitney CG, Fireman BH, Ciruryla V, Black SB. Cost-effectiveness of pneumococcal conjugate vaccine: evidence from the first 5 years of use in the United States incorporating herd effects. *Pediatr Infect Dis J*. 2006;25(6):494-501.

Whitney CG, Pilishvili T, Farley MM, Schaffner W, Craig AS, Lynfield R, Nyquist AC, Gershman KA, Vazquez M, Bennett NM, Reingold A, Thomas A, Glode MP, Zell ER, Jorgensen JH, Beall B, Schuchat A. Effectiveness of seven-valent pneumococcal conjugate vaccine against invasive pneumococcal disease: a matched case-control study. *Lancet*. 2006;368(9546):1495-502.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Streptococcus pneumoniae*, 2005. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/spneu05.pdf>

Centers for Disease Control and Prevention. Direct and indirect effects of routine vaccination of children with 7-valent pneumococcal conjugate vaccine on incidence of invasive pneumococcal disease, United States, 1998-2003. *MMWR Morb Mortal Wkly Rep* 2005;54(36): 893-7.

Feikin DR, Klugman KP, Facklam RR, Zell ER, Schuchat A, Whitney CG, ABCs/EIP. Increased prevalence of pediatric pneumococcal serotypes in elderly adults. *Clin Infect Dis* 2005;41(4):481-7.

Heffernan RT, Barrett NL, Gallagher KM, Hadler JL, Harrison LH, Reingold AL, Khoshnoon K, Holford TR, Schuchat A. Declining incidence of invasive *Streptococcus pneumoniae* infections among persons with AIDS in an era of highly active antiretroviral therapy, 1995-2000. *J Infect Dis* 2005;191(12):2038-45.

Kyaw MH, Rose CE Jr, Fry AM, Singleton JA, Moore Z, Zell ER, Whitney CG; Active Bacterial Core Surveillance Program of the Emerging Infections Program Network. The influence of chronic illnesses on the incidence of invasive pneumococcal disease in adults. *J Infect Dis* 2005;192(3):377-86.

Lexau CA, Lynfield R, Danila R, Pilishvili T, Facklam R, Farley MM, Harrison LH, Schaffner W, Reingold A, Bennett NM, Hadler J, Cieslak PR, Whitney CG, for the ABCs Team. Changing epidemiology of invasive pneumococcal disease among older adults in the era of pediatric pneumococcal conjugate vaccine. *JAMA* 2005;294(16):2043-51.

Lipsitch, M, Whitney CG, Zell E, Kaijalainen T, Dagan R, Malley R. Are anticapsular antibodies the primary mechanism of protection against invasive pneumococcal disease? *PLoS Med* 2005; 2(1): e15.

McEllistrem MC, Adams JM, Shutt K, Sanza LT, Facklam RR, Whitney CG, Jorgensen JH, Harrison LH. Erythromycin-nonsusceptible *Streptococcus pneumoniae* in children, 1999-2001. *Emerg Infect Dis* 2005;11(6):969-72.

Pai R, Gertz RE, Whitney CG, Beall B. Clonal association between *Streptococcus pneumoniae* serotype 23A, circulating within the United States, and an internationally dispersed clone of serotype 23F. *J Clin Microbiol* 2005;43(11):5440-4.

Pai R, Moore MR, Pilishvili T, Gertz RE, Whitney CG, Beall B, Active Bacterial Core Surveillance Team. Post-vaccine genetic structure of *Streptococcus pneumoniae* serotype 19A from children in the United States. *J Infect Dis* 2005;192(11):1988-95.

Pai R, Limor J, Beall B. Use of pyrosequencing to differentiate *Streptococcus pneumoniae* serotypes 6A and 6B. *J Clin Microbiol* 2005;43(9):4820-2.

Pettigrew MM, Fennie KP. Genomic subtraction followed by dot blot screening of *Streptococcus pneumoniae* clinical and carriage isolates identifies genetic differences associated with strains that cause otitis media. *Infect Immun* 2005;73:2805-11.

Pletz MW, McGee L, Beall B, Whitney CG, Klugman KP. Interspecies recombination in type II topoisomerase genes is not a major cause of fluoroquinolone resistance in invasive *Streptococcus pneumoniae* isolates in the United States. *Antimicrob Agents Chemother* 2005;49(2):779-80.

Stephens DS, Zughaiyer SM, Whitney CG, Baughman WS, Barker L, Gay K, Jackson D, Orenstein WA, Arnold K, Schuchat A, Farley MM and the Georgia Emerging Infections Program. Incidence of macrolide resistance in *Streptococcus pneumoniae* after introduction of the pneumococcal conjugate vaccine: population-based assessment. *Lancet* 2005;365:855-63.

Talbot TR, Hartert TV, Mitchel E, Halasa NB, Arbogast PG, Poehling KA, Schaffner W, Craig AS, Griffin MR. Asthma is an independent risk factor for invasive pneumococcal disease. *N Engl J Med* 2005;352:2082-90.

Wolter N, Smith AM, Farrell DJ, Schaffner W, Moore M, Whitney CG, Jorgensen JH, Klugman KP. Novel mechanism of resistance to oxazolidinones, macrolides, and chloramphenicol in ribosomal protein L4 of the pneumococcus. *Antimicrob Agents Chemother* 2005;49(8): 3554-7.

Yu J, Lin J, Benjamin WH Jr, Waites KB, Lee CH, Nahm MH. Rapid multiplex assay for serotyping pneumococci with monoclonal and polyclonal antibodies. *J Clin Microbiol* 2005;43:156-62.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Streptococcus pneumoniae*, 2004. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/spneu04.pdf>

Centers for Disease Control and Prevention. Effect of New Susceptibility Breakpoints on Reporting of Resistance in *Streptococcus pneumoniae* --- United States, 2003. *MMWR Morb Mortal Wkly Rep* 2004;53(07):152-4.

Flannery B, Schrag S, Bennett NM, Lynfield R, Harrison LH, Reingold A, Cieslak PR, Hadler J, Farley MM, Facklam RR, Zell ER, Whitney CG. ABCs/EIP Impact of childhood vaccination on racial disparities in invasive *Streptococcus pneumoniae* infections. *JAMA* 2004;291(18):2197-203.

Jorgensen JH, Crawford SA, McElmeel ML, Whitney CG. Comparative activities of Cethromycin and Telithromycin against recent North American isolates of *Streptococcus pneumoniae*. *Antimicrob Agents Chemother* 2004;48:605-7.

Jorgensen JH, Crawford SA, McElmeel ML, Whitney CG. Detection of resistance to Gatifloxacin and Moxifloxacin in *Streptococcus pneumoniae* with the VITEK 2 instrument. *J Clin Microbiol* 2004;42:5928-30.

Klugman KP. Vaccination: A Novel Approach to Reduce Antibiotic Resistance. Editorial Commentary. *Clin Infect Dis* 2004;39(5):649.

Mavroidi A, Godoy D, Aanensen DM, Robinsom DA, Hollingshead SK, Spratt BG. Evolutionary genetics of the capsular locus of serogroup 6 pneumococci. *J Bacteriol* 2004;186(24):8181-92 .

McEllistrem MC, Noller AC, Visweswaran S, Adams JM, Harrison LH. Serotype 14 variants of the France 9V<sup>-3</sup> clone from Baltimore, Maryland, can be differentiated by the *cpsB* gene. *J Clin Microbiol* 2004;42:250-6.

Pletz MW, McGee L, Jorgensen J, Beall B, Facklam RR, Whitney CG, Klugman KP. Levofloxacin-Resistant Invasive *Streptococcus pneumoniae* in the United States: Evidence for Clonal Spread and the Impact of Conjugate Pneumococcal Vaccine. *Antimicrob Agents Chemother* 2004;48(9):3491-7.

Schrag, SJ, McGee, L, Whitney, CG, Beall, B., Craig, AS, Choate, ME, Jorgensen, JH, Facklam, RR, Klugman, KP and the ABCs Team. Emergence of *Streptococcus pneumoniae* with very-high-level resistance to penicillin. *Antimicrob Agents Chemother* 2004; 48:3016–23.

Talbot TR, Poehling KA, Hartert TV, Arbogast PG, Halasa NB, Mitchel E, Schaffner W, Craig AS, Edwards KM, Griffin MR. Reduction in High Rates of antibiotic-nonsusceptible invasive pneumococcal disease in Tennessee after Introduction of the Pneumococcal Conjugate Vaccine. *Clin Infect Dis* 2004;39(5):641-8.

Talbot TR, Poehling KA, Hartert TV, Arbogast PG, Halasa NB, Mitchel E, Schaffner W, Craig AS, Edwards KH, Griffin MR. Elimination of racial differences in invasive pneumococcal disease in young children after introduction of the conjugate pneumococcal vaccine. *Pediatr Infect Dis J* 2004;23:726-31.

Adamkiewicz TV, Sarnaik S, Buchanan GR, Iyer RV, Miller ST, Pegelow CH, Rogers ZR, Vichinsky E, Elliott J, Facklam RR, O'Brien KL, Schwartz B, Van Beneden CA, Cannon MJ, Eckman JR, Keyserling H, Sullivan K, Wong W, Wang W. Invasive pneumococcal infections in children with sickle cell disease in the era of penicillin prophylaxis, antibiotic resistance, and 23-valent pneumococcal polysaccharide vaccination. *J. Pediatr* 2003;143(4):438-44.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Streptococcus pneumoniae*, 2003. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/spneum03.pdf>

Dowell SF, Whitney CG, Wright C, Rose CE, and Schuchat A. Seasonal Patterns of Invasive Pneumococcal Disease. *Emerg Infect Dis* 2003;9(5):573-9.

Fry AM, Facklam RR, Whitney CG, Plikaytis BD and Schuchat A. Multistate evaluation of invasive pneumococcal diseases in adults with HIV infection: serotype and antimicrobial resistance patterns in the United States. *J Infect Dis* 2003;188(5):643-52.

Gertz, RE, McEllistrem MC, Boxrud DJ, Li Z, Sakota V, Thompson TA, Facklam RR, Besser JM, Harrison LH, Whitney CG, Beall B. Clonal distribution of invasive pneumococcal isolates from children and selected adults in the United States prior to 7-valent conjugate vaccine introduction. *J Clin Microbiol* 2003;41(9):4194-216.

King MD, Whitney CG, Parekh FM, and Farley MM. Recurrent invasive pneumococcal disease: a population-based assessment. *Clin Infect Dis* 2003;37:1029-36.

Kupronis BA, Richards JC, Whitney CG, Team ABCS: Invasive pneumococcal disease among older adults residing in long-term care facilities and in the community. *J Am Geriatr Soc* 2003;51(11):1520-25.

McCormick AW, Whitney CG, Farley MM, Lynfield R, Harrison LH, Bennett NM, Schaffner W, Reingold A, Hadler J, Cieslak P, Samore MH, Lipsitch M. geographic diversity and temporal trends of antimicrobial resistance in *Streptococcus pneumoniae* in the United States. *Nat Med* 2003;9(4):424-30.

Restrepo MI, Velez JA, Mcelmeel ML, Whitney CG, Jorgensen JH. Activity of daptomycin against recent North American isolates of *Streptococcus pneumoniae*. *Antimicrob Agents Chemother* 2003;47(9):2974-7.

Sisk JE, Whang W, Butler JC, Sneller VP, Whitney CG: Cost-effectiveness of vaccination against invasive pneumococcal disease among people 50 through 64 years of age: role of co morbid conditions and race. *Ann Intern Med* 2003; 138(12): 960-8.

Thomas DM, Ray SM, Morton FJ, Shevlin JD, Offutt G, Whitney C, Jacobson T. Patient education strategies to improve pneumococcal vaccination rates: a randomized trial. *J Invest Med* 2003;51(3):141-8.

Van Beneden CA, Lexau C, Baughman W, Barnes B, Bennett N, Cassidy PM, et al. Aggregated antibiograms and monitoring of drug-resistant *Streptococcus pneumoniae*. *Emerg Infect Dis* 2003;9(9):1089-95.

Whitney CG, Farley MM, Hadler J, Harrison LH, Bennett NM, Lynfield R, Reingold A, Cieslak PR, Pilishvili T, Jackson D, Facklam RR, Jorgensen JH, Schuchat A, Active Bacterial Core Surveillance of the Emerging Infections Program Network. Decline in invasive pneumococcal disease after the introduction of protein-polysaccharide conjugate vaccine. *New Engl J Med* 2003;348(18):1737-46.

Albanese BA, Roche JC, Pass M, Whitney CG, McEllistrem MC, Harrison LH. Geographic, demographic, and seasonal differences in penicillin-resistant *Streptococcus pneumoniae* in Baltimore. *Clin Infect Dis* 2002;34(1):15-21.

Beall B, McEllistrem MC, Gertz RE Jr, Boxrud DJ, Besser JM, Harrison LH, Jorgensen JH and Whitney CG, for the Active Bacterial Core Surveillance/ Emerging Infections Program Network. Emergence of a novel penicillin resistant clone of serotype 35B *Streptococcus pneumoniae* in the United States. *J Infect Dis* 2002;186:118-22.

Braum SE, Crawford SA, McEneel ML, Whitney CG, Jorgensen JH. Comparative activities of the oxazolidinone AZD2563 and linezolid against selected recent North American isolates of *Streptococcus pneumoniae*. *Antimicrob Agents Chemother* 2002;46(9):3094-5.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Streptococcus pneumoniae*, 2002. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/spneu02.pdf>

Centers for Disease Control and Prevention. Assessment of Susceptibility Testing Practices for *Streptococcus pneumoniae* – United States, February 2000. *MMWR Morb Mortal Wkly Rep* 2002;51(18):392-4.

Fry AM, Zell ER, Schuchat A, Butler JC Whitney CG. Comparing potential benefits of new pneumococcal vaccines with the current polysaccharide vaccine in the elderly. *Vaccine* 2002;21:303-11.

McEllistrem MC, Mendelsohn AB, Elliott JA, Whitney CG, Albanese BA, Harrison LH. Distribution of penicillin-nonsusceptible pneumococcal clones in the Baltimore metropolitan area and variables associated with drug resistance. *Clin Infect Dis* 2002;34(5):704-7.

McEllistrem MC, Mendelsohn AB, Pass MA, Elliott JA, Whitney CG, Kolano JA, Harrison LH. Recurrent invasive pneumococcal disease in individuals with human immunodeficiency virus infection. *J Infect Dis* 2002;185:1364-8.

Morita JY, Zell ER, Danila R, Farley MM, Hadler J, Harrison LH, Lefkowitz L, Reingold A, Kupronis BA, Schuchat A, Whitney CG. Association between antimicrobial resistance among pneumococcal isolates and burden of invasive pneumococcal disease in the community. *Clin Infect Dis* 2002;35:420-7.

Schrag SJ, Zell E, Schuchat A, Whitney CG. Evaluation of sentinel surveillance for drug-resistant *Streptococcus pneumoniae*. *Emerg Inf Dis* 2002;8(5):496-502.

Shelvin JD, Summers-Bean C, Thomas D, Whitney CG, Todd D, Ray SM. A symptomatic approach for increasing pneumococcal vaccination rates at an inner-city hospital. *Am J Prev Med* 2002;22(2):92-7.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Streptococcus pneumoniae*, 2001. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/spneu01.pdf>

Centers for Disease Control and Prevention. Resistance of *Streptococcus pneumoniae* to Fluoroquinolones ---United States, 1995--1999. *MMWR Morb Mortal Wkly Rep* 2001;50(37):800-4.

Ehresmann KR, Ramesh A, Como-Sabetti K, Peterson DC, Whitney CG, Moore KA. Factors associated with self-reported pneumococcal immunization among adults 65 years of age or older in the Minneapolis-St. Paul metropolitan area. *Prev Med* 2001;32(5):409-15.

Hyde TB, Gay K, Stephens DS, Vugia DJ, Pass M, Johnson S, Barrett NL, Schaffner W, Cieslak PR, Maupin PS, Zell ER, Jorgensen JH, Facklam RR, Whitney CG. Active Bacterial Core Surveillance/Emerging Infections Program Network. Macrolide resistance among invasive *Streptococcus pneumoniae* isolates. *JAMA* 2001;286(15):1857-62.

Moroney JF, Fiore AE, Harrison LH, Patterson JE, Farley M, Jorgensen JH, Phelan M, Facklam RR, Cetron MS, Breiman RF, Kolczak M, Schuchat A. Clinical outcomes of invasive pneumonia caused by *Streptococcus pneumoniae* in the era of antibiotic resistance. *Clin Infect Dis* 2001;33:797-805.

Robinson K, Baughman W, Rothrock G, Barrett N, Pass M, Lexau C, Damaske B, Stefonek K, Barnes B, Patterson J, Zell E, Schuchat A, Whitney C. Epidemiology of *Streptococcus pneumoniae* infections in the U.S., 1995-1998 – Opportunities for prevention in the conjugate vaccine era. *JAMA* 2001;285:1729-35.

Beall B, Gherardi G, Facklam R, and Hollingshead S. Pneumococcal *psp A* sequence types of prevalent multi-resistant strains in the United States and of internationally disseminated pneumococcal clones. *J Clin Microbiol* 2000;38:3663-9.

Breiman RF, Keller DW, Phelan M, Sniadack D, Stephens DS, Rimland D, Farley MM, Schuchat A, Reingold A. Evaluation of effectiveness of the 23-valent pneumococcal capsular polysaccharide vaccine for HIV-infected patients. *Arch Intern Med*. 2000;160:2633-8.

Centers for Disease Control and Prevention. 2000. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Streptococcus pneumoniae*, 2000. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/spneu00.pdf>



Centers for Disease Control and Prevention. Preventing pneumococcal disease among infants and young children: recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR Morb Mortal Wkly Rep 2000;49(No.RR-9):1-35.

Feikin DR, Schuchat A, Kolczak M, Barrett NL, Harrison LH, Lefkowitz L, McGeer A, Farley MM, Vugia DJ, Lexau C, Stefonek KR, Patterson JE, Jorgensen JH. Mortality from invasive pneumococcal pneumonia in the era of antibiotic resistance, 1995-1997. Am J Public Health 2000;90:223-9.

Fiore AE, Moroney JF, Farley MM, Harrison LH, Patterson JE, Jorgensen M, Kolczak MS, Breiman RF, Schuchat A. Clinical outcomes of meningitis caused by *Streptococcus pneumoniae* in the era of antibiotic resistance. Clin Infect Dis 2000;30:71-7.

Gay K, Baughman W, Miller Y, Jackson D, Whitney CG, Schuchat A, Farley MM, Tenover F, Stephens DS. The emergence of *Streptococcus pneumoniae* resistant to macrolide antimicrobial agents: a 6-year population-based assessment. J Infect Dis 2000;182(5):1417-24.

Gherardi G, Whitney CG, Facklam RR, Beall B. Major related sets of antibiotic-resistant pneumococci in the United States as determined by PFGE and *pbp1a-pbp2b-pbp2x-dhf* restriction profiles. J Infect Dis 2000;181:216-29.

Harrison LH, Dwyer DM, Billmann L, Kolczak MS, Schuchat A, and the Maryland Emerging Infections Program. Invasive pneumococcal infection in Baltimore: implications for immunization policy. Arch Intern. Med 2000;160 (1):89-94.

Heffelfinger JD, Dowell SF, Jorgensen JH, Klugman KP, Mabry LR, Musher DM, Plouffe JF, Rakowsky A, Schuchat A, Whitney CG. Management of community-acquired pneumonia in the era of pneumococcal resistance: a report from the drug-resistant *Streptococcus pneumoniae* therapeutic working group. Arch Intern Med 2000;160:1399-1408.

Jorgensen JH, Weigel LM, Swenson JM, Whitney CG, Ferraro MJ, Tenover FC. Activities of clinafloxacin, gatifloxacin, gemifloxacin, and trovafloxacin against recent clinical isolates of levofloxacin-resistant *Streptococcus pneumoniae*. Antimicrob Agents Chemother 2000;44:2962-8.

McEllistrem MC, Pass M, Elliott JA, Whitney CG, Harrison LH. Clonal groups of penicillin-nonsusceptible *Streptococcus pneumoniae* in Baltimore, Maryland: A population-based, molecular epidemiologic study. J Clin Microbiol 2000;38(12):4367-72.

McEllistrem MC, Stout JE, Harrison LH. Simplified protocol for pulsed-field gel electrophoresis analysis of *Streptococcus pneumoniae*. J Clin Microbiol 2000;38:351-3.

Metlay JP, Hofmann J, Cetron MS, Fine MJ, Farley MM, Whitney C, Breiman RF. Impact of penicillin susceptibility on medical outcomes for adult patients with bacteremic pneumococcal pneumonia. Clin Infect Dis 2000;30:520-8.

Nuorti JP, Butler JC, Farley MM, Harrison LH, McGeer A, Kolczak MS, Breiman RF, and the Active Bacterial Core Surveillance Team. Cigarette smoking and invasive pneumococcal disease. N Engl J Med 2000;342:681-9.

Nuorti JP, Butler JC, Gelling L, Kool JL, Reingold AL, Vugia DJ. Epidemiologic relation between HIV and invasive pneumococcal disease in San Francisco County, California. *Ann Intern Med* 2000;132:182-90.

Whitney CG, Farley MM, Hadler J, Harrison LH, Lexau C, Reingold A, Lefkowitz L, Cieslak PR, Cetron M, Zell ER, Jorgensen JH, Schuchat A. Increasing prevalence of multidrug-resistant *Streptococcus pneumoniae* in the United States. *N Engl J Med* 2000;343:1917-24.

1995-1999:

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Streptococcus pneumoniae*, 1999. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/spneu99.pdf>

Centers for Disease Control and Prevention. Geographic variation in penicillin resistance in *Streptococcus pneumoniae*- Selected Sites, United States, 1997. *MMWR Morb Mortal Wkly Rep* 1999;48:656-61.

Jacobson T, Thomas D, Morton F, Offutt G, Shevlin J and Ray S. Use of a low-literacy patient education tool to enhance pneumococcal vaccination rates: a randomized controlled trial. *JAMA*. 1999;282:646-50.

Levine OS, Farley M, Harrison LH, Lefkowitz L, McGeer A, Schwartz B for the Active Bacterial Core Surveillance Team. Risk factors for invasive pneumococcal disease in children: a population-based case-control study in North America. *Pediatrics* 1999;103(3):e28.

Beall B, Facklam RR, Jackson DM, Starling HH. Rapid screening of penicillin-susceptibility in systemic pneumococcal isolates by restriction enzyme profiling of the *php 2B* gene. *J Clin Microbiol* 1998;36:2359-62.

Butler JC, Dowell SF, Breiman RF. Epidemiology of emerging pneumococcal drug resistance: implications for treatment and prevention. *Vaccine* 1998;16:1693-7.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Streptococcus pneumoniae*, 1998. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/spneu98.pdf>

Chen FM, Breiman RF, Farley M, Plikaytis B, Deaver K, Cetron MS. Geocoding and linking data from population-based surveillance and the US census to evaluate the impact of median household income on the epidemiology of invasive *Streptococcus pneumoniae* infections. *Am J Epidemiol* 1998;148:1212-8.

Centers for Disease Control and Prevention. Active Bacterial Core Surveillance Report, Emerging Infections Program Network, *Streptococcus pneumoniae*, 1997. Available via the Internet: <http://www.cdc.gov/abcs/reports-findings/survreports/spneu97.pdf>

Centers for Disease Control and Prevention. Assessment of National Reporting of Drug-Resistant *Streptococcus pneumoniae* -- United States, 1995-1996. *MMWR Morb Mortal Wkly Rep* 1996;45:947-59.

Hofmann J, Cetron MS, Farley MM, Baughman WS, Facklam RR, Elliott JA, Deaver KA, Breiman RF. The prevalence of drug-resistant *Streptococcus pneumoniae* in Atlanta. *N Engl J Med* 1995;333:481-6.

1988-1994:

Schuchat A, Broome CV, Hightower AW, Costa S, Parkin W. Use of surveillance for invasive pneumococcal disease to estimate the size of the immunosuppressed HIV-infected population. *JAMA* 1991;265:3275-9.

## Other

2000 to present: Li Y, Metcalf BJ, Chochua S, Li Z, Gertz RE Jr, Walker H, Hawkins PA, Tran T, McGee L, Beall BW; Active Bacterial Core surveillance team. [Validation of  \$\beta\$ -lactam minimum inhibitory concentration predictions for pneumococcal isolates with newly encountered penicillin binding protein \(PBP\) sequences](#). *BMC Genomics*. 2017;18(1):621.

Fridkin SK, Cleveland AA, See I, Lynfield R. Emerging Infections Program as Surveillance for Antimicrobial Drug Resistance. *Emerg Infect Dis*. 2015;21(9):1578-81. doi: 10.3201/eid2109.150512.

Hadler JL, Vugia DJ, Bennett NM, Moore MR. Emerging Infections Program Efforts to Address Health Equity. *Emerg Infect Dis*. 2015;21(9):1589-94. doi: 10.3201/eid2109.150275.

Hadler JL, Danila RN, Cieslak PR, et al. Emerging Infections Program--State Health Department Perspective. *Emerg Infect Dis*. 2015;21(9):1510-5. doi: 10.3201/eid2109.150428.

Langley G, Schaffner W, Farley MM, Lynfield R, Bennett NM, Reingold A, Thomas A, Harrison LH, Nichols M, Petit S, Miller L, Moore MR, Schrag SJ, Lessa FC, Skoff TH, MacNeil JR, Briere EC, Weston EJ, Van Beneden C. Twenty Years of Active Bacterial Core Surveillance. *Emerg Infect Dis* 2015; 21(9):1520-8.

Langley G, Besser J, Iwamoto M, Lessa, Cronquist, Skoff, Chaves, Boxrud, Pinner, Harrison. Effect of Culture-Independent Diagnostic Tests on Future Emerging Infections Program Surveillance. *Emerg Infect Dis*. 2015;21(9):1582-8. doi: 10.3201/eid2109.150570

Lynfield R, Schaffner W. Emerging Infections Program--20 Years of Achievements and Future Prospects. *Emerg Infect Dis*. 2015;21(9):1497-8. doi: 10.3201/eid2109.150564.

Pinner RW, Lynfield R, Hadler JL, et al. Cultivation of an Adaptive Domestic Network for Surveillance and Evaluation of Emerging Infections. *Emerg Infect Dis*. 2015;21(9):1499-509. doi: 10.3201/eid2109.150619.

Vugia DJ, Meek JI, Danila RN, et al. Training in Infectious Disease Epidemiology through the Emerging Infections Program Sites. *Emerg Infect Dis*. 2015;21(9):1516-9. doi: 10.3201/eid2109.150443.

Olsen R, Fittipalide N, Kachroo P, Sanson M, Long S, Como-Sabetti K, Valson C, Cantu C, Lynfield R, Van Beneden C, Beres S, Musser J. Clinical Laboratory Response to a Mock Outbreak of Invasive Bacterial Infections: A Preparedness Study. *J Clin Microbiol* 2014; 2(12):4210-16.

Srinivasan V, Metcalf BJ, Knipe KM, Ouattara M, McGee L, Shewmaker PL, Glennen A, Nichols M, Harris C, Brimmage M, Ostrowsky B, Park CJ, Schrag SJ, Frace MA, Sammons SA, Beall B. vanG element insertions within a conserved chromosomal site conferring vancomycin resistance to *Streptococcus agalactiae* and *Streptococcus anginosus*. *MBio*. 2014 Jul 22;5(4):e01386-14.

Whitney, C. G., F. Zhou, J. Singleton, A. Schuchat, Control Centers for Disease, and Prevention. Benefits from Immunization During the Vaccines for Children Program Era - United States, 1994-2013. *MMWR Morb Mortal Wkly Rep* 63, no. 16 (Apr 25 2014): 352-5.

Centers for Disease Control and Prevention. Antibiotic Resistance Threats in the United States, 2013. Atlanta, GA: US Department of Health and Human Services, CDC; 2013. Available at: <http://www.cdc.gov/drugresistance/threat-report-2013/index.html>

Dawood FS, Chaves SS, Pérez A, Reingold A, Meek J, Farley MM, Ryan P, Lynfield R, Morin C, Baumbach J, Bennett NM, Zansky S, Thomas A, Lindegren ML, Schaffner W, Finelli L; for the Emerging Infections Program Network. Complications and associated bacterial co-infections among children hospitalized with seasonal or pandemic influenza, United States, 2003-2010. *J Infect Dis*. 2013 Aug 28. [Epub ahead of print].

Deutscher M, Lewis M, Zell ER, Taylor TH, Van Beneden C, Schrag S for the Active Bacterial Core surveillance Team. Incidence and Severity of Invasive *Streptococcus pneumoniae*, Group A *Streptococcus*, and Group B *Streptococcus* Infections Among Pregnant and Postpartum Women. *Clin Infect Dis*. 2011; 53(2):114-23.

Weston EJ, Pondo T, Lewis MM, Martell-Cleary P, Morin C, Jewell B, Daily P, Apostol M, Petit S, Farley M, Lynfield R, Reingold A, Hansen NI, Stoll BJ, Shane AJ, Zell E, Schrag SJ. The Burden of Invasive Early-onset Neonatal Sepsis in the United States, 2005-2008. *Pediatr Infect Dis J*. 2011;30(11):937-41.

Burton DC, Flannery B, Bennett NM, Farley MM, Gershman K, Harrison LH, Lynfield R, Petit S, Reingold AL, Schaffner W, Thomas A, Plikaytis BD, Rose CE, Whiteney CG, Schuchat A. Socioeconomic and racial/ethnic disparities in the incidence of bacteremic pneumonia among US adults. *Am J Public Health*. 2010;100(10):1904-11.

Van Beneden C, Olsen S, Skoff T, Lynfield R. Active, population-based surveillance for infectious diseases. In: M'ikanatha NL, R; Van Beneden, CA; de Valk, H, ed. *Infectious Disease Surveillance*. 1st ed: Blackwell Publishers, pp. 32-43, 2007.

Begier EM, Barrett NL, Mshar PA, Johnson DG, Hadler JL, Connecticut Bioterrorism Field Epidemiology Response Team. Gram-positive rod surveillance for early anthrax detection. *Emerg Infect Dis*. 2005;11(9):1483-6.

Pinner RW, Rebmann CA, Schuchat A, Hughes JM. Disease surveillance and the academic, clinical, and public health communities. *Emerg Infect Dis* 2003;9(7):781-7.

Centers for Disease Control and Prevention. HIV testing among pregnant women, United States and Canada, 1998-2001. *Morb Mortal Wkly Rep* 2002;51(45):1013-6.

Hyde T, Hilger T, Reingold A, Farley MM, O'Brien, Schuchat A. Trends in incidence and antimicrobial resistance of early-onset sepsis: Population-based surveillance in San Francisco and Atlanta. *Pediatrics* 2002;110:690-5.

Schuchat A, Hilger T, Zell E, Farley MM, Reingold A, Harrison L, Lefkowitz L, Danila R, Stefonek K, Barrett N, Morse D and Pinner R, for the Active Bacterial Core Surveillance Team of the Emerging Infections Program Network. Update from the Active Bacterial Core Surveillance of the Emerging Infections Program Network. *Emerg Infect Dis* 2001;92-9.

Centers for Disease Control and Prevention. Laboratory capacity to detect antimicrobial resistance, 1998. *Morb Mortal Wkly Rep* 2000;48(51):1167-71.

*1995-1999:*

Mead PS, Slutsker L, Dietz V, et al. Food-related Illness and Death in the United States. *Emerg Infect Dis* 1999;5(5):607-25.