

Public Health Surveillance
Global Health Division / Epidemiology of Microbial Diseases Division 583B
Fall 2008
Yale School of Public Health

Syllabus

January 23 - Surveillance Systems - Steps in setting up, Objective, Case definition

- Teutsch & Churchill – Principles and Practice of Public Health Surveillance. Oxford University Press - Chapter 1 – Historical Developments
- Teutsch & Churchill – Chapter 13 – Public Health Surveillance in Low- and Middle-Income Countries. Pages 287-293.
- Teutsch & Churchill - Chapter 2 – Considerations in Planning a Surveillance System
- McGovern T, Smith RA. AIDS, Cased Definition of. From Encyclopedia of AIDS: A Social, Political, Cultural, and Scientific Record of the HIV Epidemic. Available at <http://www.thebody.com/encyclo/aids.html>
- CDC. Pneumocystis Pneumonia --- Los Angeles. MMWR 1981; 30(21): 1-3. Available at http://graphics.boston.com/news/special/audio_slideshows/aidsat25/aidsnotice.pdf.
- Artimos de Oliveira, S et al. Assessment of the performance of a definition of a suspected measles case: implications for measles surveillance. Pan Amer J Public Health 2006; 19(4): 229-35.
- CDC. Outbreak of SARS – Worldwide 2003. MMWR 2003; 52: 226-8.
- CDC. Updated Interim Surveillance Case Definition for SARS - - USA, MMWR 52(17): 391-393.
- CDC. Revised US Surveillance Case Definition for SARS and Update on SARS Cases – United States and Worldwide, December 2003. MMWR 2003; 52(49): 1202-1206.

January 30 - Surveillance Systems – Traditional sources of data (vital statistics, reportable disease)

- Teutsch & Churchill (**1st Edition**) – Chapter 3 – Sources of Routinely Collected Data for Surveillance. Pages 31-44
- CDC. National Vital Statistics Report 2006; 54(13). Read pages 1-15 and review the rest.
- Rodriguez SR et al. Evaluation of Death Certificates-Based Surveillance for Traumatic Brain Injury – Oklahoma 2002. Public Health Reports 2006; 121(3): 282-9.
- WHO. A Standard Verbal Autopsy Method for Investigating Causes of Death in Infants and Children. Read pages 1-10, review the rest. Available at <http://ih.jhsph.edu/chr/fhacs/verbaut.pdf>.
- Adazu K et al. Health and Demographic Surveillance in Rural Western Kenya: A Platform for Evaluating Interventions to Reduce Morbidity and Mortality From Infectious Diseases. American Journal of Tropical Medicine and Hygiene 2005; 1151-1158.
- Reportable Diseases and Laboratory Findings. Connecticut Epidemiologist 2006; 26(1):1-3. Available at http://www.dph.state.ct.us/BCH/infectiousdise/pdf/Vol26No1_FNLCLR.pdf.
- CDC. Summary of notifiable diseases – US 2004. MMWR 2006; 53(53). Read pages 1-15 and review the rest
- WHO. Cholera 2005. Weekly epidemiological record 2006; 81: 297-308.
- Vlamincx BMJ, van Pelt W, Schellekens JFP. Epidemiological Considerations following long-term surveillance of invasive group A streptococcal disease in Netherlands 1992-2003. Clin Microbiol 2005;11: 564-568.
- Baker MG, Fidler DP. Global Public Health Surveillance under New International Health Regulations. Emerging Infectious Diseases 2006; 12(7): 1058-1065.

February 6 - Surveillance Systems – Alternative and complementary sources

- Teutsch & Churchill – Chapter 12 – State and Local Public Health Surveillance. Pages 268-275
- Teutsch & Churchill – Chapter 13 – Public Health Surveillance in Low- and Middle-Income Countries. Pages 293-315.
- Degli Atti MLC et al. Pediatric sentinel surveillance of vaccine-preventable diseases in Italy. *Pediatric Infectious Diseases Journal* 2002; 21: 763-8.
- Matteelli A et al. Passive sentinel surveillance system for sexually transmitted diseases in primary healthcare sites in Ethiopia, 1991-3
- Nationwide Surveillance of HIV-1 Prevalence and Subtype in Young Thai Men. *Journal of Acquired Immune Deficiency Syndrome & Human Retrovirology* 1998; 19(2): 165-173
- Nutritional Surveillance Project Bulletin No. 19. Bangladesh Trends in child malnutrition, 1990 to 2005. Available at http://www.hki.org/research/nsp_storage/NSP%20Bulletin%2019.pdf.
 - Optional – more detail on above - Bloem MW et al. Health & Nutritional Surveillance for Development. Available at http://www.hki.org/research/pdf_zip_docs/HealthNutrSurvDevt2003.pdf.
- Huges E et al. Surveillance for Certain Health Behaviors Among States and Selected Local Areas – Behavioral Risk Factor Surveillance System, United States. *MMWR* 2006
- Parashar et al. Use of State Hospital Discharge Data to Assess the Morbidity From Rotavirus Diarrhea and to Monitor the Impact of Rotavirus Immunization Program: A Pilot study in Connecticut. *Pediatrics* 1999; 104:489-94.
- Rapid Assessment of Vectorborne Diseases During the Midwest Flood - - United States, 1993. *MMWR* 1994; 43(26): 481-3.

February 13 - Surveillance Systems - Analysis and dissemination

- Teutsch & Churchill – Chapter 6 – Descriptive Epidemiology: Analyzing and Interpreting Surveillance Data
- Teutsch & Churchill – Chapter 7 – Communicating Information for Action within the Public Health System
- CDC. Surveillance of Mortality During a Refugee Crisis – Guinea, January – May 2001. *MMWR* 50(46): 1029-1032.
- Morin GA, Hadler JL. Population-based Incidence and Characteristics of Community-Onset *Staphylococcus aureus* Infections with Bacteremia in 4 Metropolitan Connecticut Areas, 1998. *Journal of Infectious Diseases* 2001; 184: 1029-1034.
- CDC. Multistate Outbreak of *Salmonella* Serotype Typhimurium Infections Associated with Drinking Unpasteurized Milk - Illinois, Indiana, Ohio, and Tennessee, 2002-2003. *MMWR* 52(26): 613-615.
- Reporting Race and Ethnicity Data. *MMWR* 1999; 48(15): 305-312.
- CDC. Urban Community interventions to prevent Halloween arson in Detroit, Michigan 1985-1996. *MMWR* 1997; 46(14):299-304.
- CDC. Epidemiologic Notes and Reports Toxic-Shock Syndrome, United States, 1970-1982. *MMWR* 1982; 31(16):201-4.
- CDC. Race/Ethnicity Disparities in Infant Mortality. *MMWR* 2005; 54(22): 553-556.
- CDC. Measuring Childhood Asthma Prevalence Before and After the 1997 Redesign of the National Health Interview Survey --- United States. *MMWR* 2000;49(40): 908-11.

February 27 - Evaluation of a surveillance system – Amanda Durante

- Teutsch & Churchill (2nd Edition) – Chapter 8
- CDC. Updated Guidelines for Evaluating Public Health Surveillance Systems. MMWR 50(RR-13)
- Jajosky RA, Groseclose SL. Evaluation of reporting timeliness of public health surveillance systems for infectious diseases. BMC Public Health 2004; 4:29
- CDC. Evaluation of a methodology for a collaborative multiple source surveillance network for autism spectrum disorder. MMWR 56(SS1):30-40.
- Gazarian M et al. Evaluation of national surveillance unit. Arch Dis Child 1999; 80:21-27.

Surveillance applications:

March 5 - Injury Surveillance

- Robertson LS. Injury Epidemiology, pages 32-68.
- Cambodian Road Traffic Accident & Victim Information System. Annual Report 2005. Available at <http://nl.handicapinternational.be/download/RTAVISAnnualReport2005ENGFINAL.1.pdf>.
- McGeehan J et al. Escalator-Related Injuries Among Children in the United States, 1990-2002. Pediatrics 2006; 118(2): 279-285
- Claassen CA et al. Epidemiology of Nonfatal Deliberate Self-Harm in the United States as Described in Three Medical Databases. Suicide and Life-Threatening Behavior; 36(2): 192-212.

March 26 - Disaster surveillance

- Noji E. Public Health Consequences of Disaster, Chapter 3 – Surveillance and Epidemiology -
- WHO. Communicable disease control in emergencies – Chapter 3
- CDC. Surveillance for Illness and Injury After Hurricane Katrina – New Orleans, Louisiana, September 8 – 25, 2005. MMWR 54(40): 1018-21.
- CDC. MMWR 55(2): 29-41. (Set of reports on surveillance activities related to Hurricanes Katrina and Rita)

March 2 - Syndromic surveillance

- M'ikanatha NM et al. Infectious Disease Epidemiology, Chapter 26 – Implementing syndromic surveillance systems in the climate of bioterrorism.
- CDC. Syndromic Definitions for Diseases Associated with Critical Bioterrorism-associated Agents. Available at <http://www.bt.cdc.gov/surveillance/syndromedef/>
- Additional readings to be announced

April 9 - Role of surveillance in polio and other disease eradication

- M'ikanatha NM et a. Infectious Disease Surveillance, Chapter 39 – Part 1 – The use of surveillance in the eradication of smallpox and poliomyelitis.
- CDC. Poliomyelitis. Available at <http://www.cdc.gov/nip/publications/pink/polio.pdf>.
- CDC. Progress Toward Interruption of Wild Poliovirus Transmission – Worldwide January 2006 – May 2007. MMWR 2007; 56(27):682-685
- CDC. Progress Toward Polio Eradication – Pakistan & Afghanistan, January 2006 – February 2007. MMWR 2007; 56(14):340-343

- Deshpande J, Ram M, Durrani S, Wenger J. Detecting polio through surveillance for acute flaccid paralysis. *Journal of the Indian Medical Association* 2005; 103(12): 671-5.
- Warton M, Ching PLYH. Chapter 15. Surveillance Indicators. In *Vaccine Preventable Disease Surveillance Manual*. Available at http://www.cdc.gov/vaccines/pubs/surv-manual/downloads/chpt15_surv_indicators.pdf

April 16 - Foodborne Disease surveillance

- M'ikanatha NM et al. *Infectious Disease Surveillance*. Chapter 5 - Surveillance for foodborne diseases.
- Galanis E, Wong DMLF, Patrick ME, Binsztein N, Cieslik A, Chalermchaikit T et al. Web-based Surveillance and Global Salmonella Distribution, 2000-2002. *Emerging Infectious Diseases* 2006; 12(3): 318-388.
- Additional articles to be added

April 23 - Influenza surveillance

- M'ikanatha NM et al. Chapter 19 – Seasonal and pandemic influenza surveillance. In *Infectious Disease Surveillance*.
- CDC. Flu view. Available at <http://www.cdc.gov/flu/weekly/>
- Additional articles to be added