Invasive Bacterial Disease Surveillance in Alaska

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Summary

- Arctic Investigations Program (AIP) background
- Laboratory activities
- Surveillance program
- Global picture
AIP History

• 1948 - USPHS established the Arctic Health Research Center as part of the Alaska Native Hospital in Anchorage

• Infectious diseases, particularly TB, were the leading cause of death in Alaska

• 1973 - Arctic Health Research Center closed, staff transferred to CDC
Arctic Investigations Program

- Located on Alaska Native Tribal Health Consortium campus
- Staff includes employees from:
  - IHS
  - Tribal organizations
  - CDC
Arctic Investigations Program

- Epidemiology
  - Physician epidemiologists
  - Research nurses
  - Surveillance epidemiologist
- Laboratory
  - Microbiology
  - Molecular Diagnostics
- Computer & Statistics
- Administration
AIP Priorities

- Vaccine preventable diseases
- Antimicrobial resistance
- Eliminating health disparities
- Preparedness and response
- Emerging infectious diseases
- Leadership in circumpolar health
Surveillance Activities

• Invasive Bacterial Infections
  – *Haemophilus influenzae*
  – *Streptococcus pneumoniae*
  – *Neisseria meningitidis*
  – Groups A and B *Streptococcus*

• *Helicobacter pylori*
  – ANMC, YKHC, BBAHC, NSHC, TCC

• Respiratory viruses
  – YKHC
Surveillance Organisms

- *Haemophilus influenzae*, 1980
- *Streptococcus pneumoniae*, 1986
- *Neisseria meningitidis*, 2000
- Groups A & B *Streptococcus*, 2000
Statewide Invasive Bacterial Disease Surveillance Participating Hospital/Clinic Laboratories

Total population: 710,000
AK Native: 138,000
Methods

- Labs submit sterile site isolates
- Confirmation and serotyping
- Antimicrobial susceptibility testing
- Clinical and demographic information collected
- Annual audits for missing cases
- Yearly reports generated
Reportable Organisms

- Previously reportable
  - Hi, Nm
- Reportable since January, 2007
  - GAS, GBS, Sp
- Case reports to State DPH, Epi Section
- Isolates to CDC/AIP
National Surveillance

• Active Bacterial Core surveillance (ABCs)
• Emerging Infections Programs Network at CDC
• Active laboratory and population-based surveillance system
• 10 sites
• 38 million persons
• Six pathogens (MRSA)
International Circumpolar Surveillance
Objectives

- Establish an integrated network of hospital, public health, and reference laboratories throughout the Arctic
- Monitor infectious disease rates & trends
- Identify risk factors for disease
- Evaluate intervention options
- Monitor intervention effects
Acknowledgements

- Clinical laboratories in Alaska
- State of Alaska Public Health Laboratory
- State of Alaska Section of Epidemiology
- Arctic Investigations Program