Surveillance for *Staphylococcus aureus* disease on Navajo Nation

Web link: https://doi.org/10.1371/journal.pone.0213207
Background information on the germ staph

Staph is a bacteria that lives in the **nose and on the skin**, usually not causing illness. From the nose or skin, Staph can move to other parts of the body and cause disease (e.g. blood infection, pneumonia, osteomyelitis).

Staph spreads through contact with people and objects.

Staph is usually **treated with an antibiotic** called methicillin. Some staph are resistant to methicillin and are called methicillin-resistant Staphylococcus aureus (MRSA). **MRSA can be difficult to treat and can lead to death.**
Overview of Active Bacterial Surveillance

• **Why we do it:** Track changes in disease over time and evaluate the impact of interventions on disease

• **What we do:** Identify serious disease among American Indians caused by four bacteria
  - *Streptococcus pneumoniae*
  - *Haemophilus influenzae*
  - *Neisseria meningitidis*
  - *Staphylococcus aureus*

• **Where we do it:** 24 labs on and around the Navajo Nation and White Mountain Apache tribal lands
Invasive Staph disease on Navajo Nation

- Surveillance period: May 1, 2016 to April 30, 2017
- Number of cases identified: 159
- Staph cases occurred most commonly among older adults (≥50 years) with other diseases such as diabetes

Outcome of invasive Staph infection

- Drug resistant (MRSA) 33%
- Hospitalized: 86
- Amputation: 11
- Death: 6
Navajo Nation has a higher burden of MRSA disease than the general US population.
What this means for your community?

• First comprehensive and robust estimates of invasive Staph for Navajo Nation

• Staph contributes to serious disease on Navajo Nation

• Understanding the burden can help:
  – **The public health community** bring attention to this problem and plan interventions (e.g. community & provider education)
  – **Healthcare administration** plan resources
  – **Healthcare providers** manage patients by promoting earlier detection and proper treatment

• Further surveillance is needed to track the burden over time
How can you protect yourself and your family from Staph infections?

• Know the signs of a Staph infection and contact your healthcare provider if you think you have an infection
  – Most Staph skin infections appear as a bump or infected area that may be red, swollen, painful, warm to the touch, full of pus, accompanied by a fever
  – Staph infections can also present with high fever that lasts for several days without any other symptoms

• Keep cuts and scrapes clean and covered
• Encourage good hygiene such as cleaning hands regularly
• Discourage sharing of personal items, including towels and razors

For more information on Staph and MRSA infections, go to: https://www.cdc.gov/mrsa/community/patients.html

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