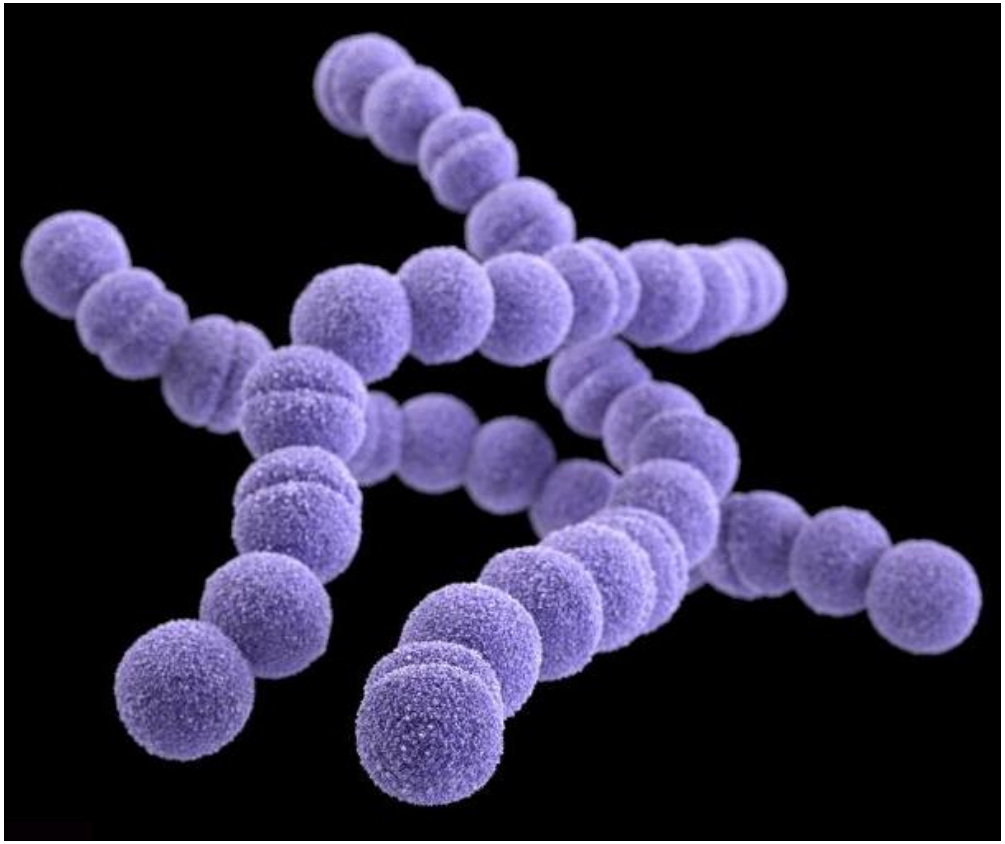
Group A Streptococcus

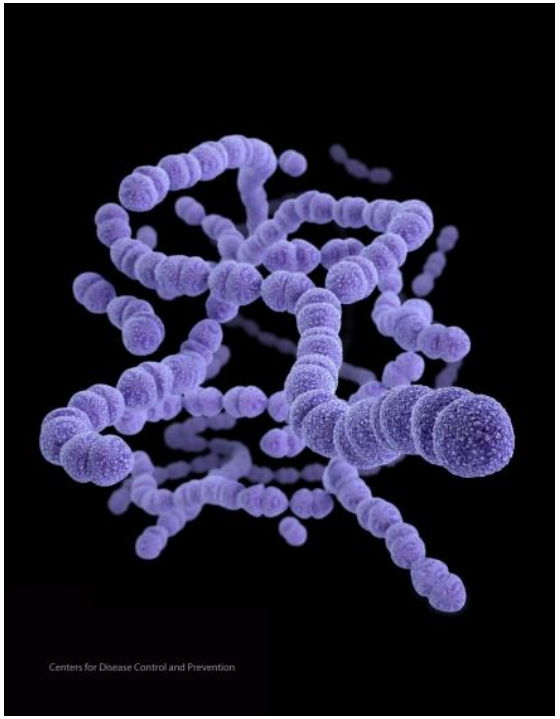


Objectives

1. Describe the types of GAS
2. Discuss the public health concern for HAI's in facilities
3. Discuss the steps of both a GAS sentinel and outbreak investigation in a healthcare facility
4. Describe methods to mitigate GAS

Group A Strep (GAS)

- A group of gram-positive bacteria
- Spherical shape and divide by fission, but remain attached and grow in beadlike chains
- Commonly found in the throat and on the skin
- Illness varies depending on site of infection



Infections Caused by GAS

- Strep throat
- Impetigo
- Scarlet fever

- Can cause severe and sometimes life-threatening (invasive) infections
  - Bacteria can invade normally sterile locations of the body, such as the blood, CSF, joint or pleural fluid
  - Post-Streptococcal Glomerulonephritis

Rare, But Deadly…

Streptococcal toxic shock syndrome (TSS) - is a rapidly progressing infection

- Usually infects people in their 20s or 30s
- Causes blood pressure to fall rapidly and organs to fail

Necrotizing fasciitis - quickly spreading infection of the flesh and muscle

- Caused by toxins released by *S. pyogenes* “Flesh-eating bacteria."

Why is GAS important to me?

- It is an infection that may be transmitted from person to person in a confined setting, which includes long term care.

The Path of GAS Spread

- Inadequate infection control
  - Improper hand hygiene
  - Inadequate environmental cleaning
- Poor wound care technique

Burden of Invasive GAS

- Invasive group A strep (e.g. cellulitis with blood infection, pneumonia, or necrotizing fasciitis)
- CDC estimates that approximately 11,000 to 13,000 cases occur annually in the US
- LTCF residence is an independent risk factor for invasive disease
- Incidence 3–8 times higher among LTCF residents

LTCF Mortality Risks

- Between 1,100 and 1,600 people *die* as a result of invasive GAS disease annually in the US
- LTCF residents 1.5 times more likely to die from invasive GAS infections than the average population
- 10-15% of LTCF residents who acquire a GAS infection will die.

Recent GAS Outbreak Vignette

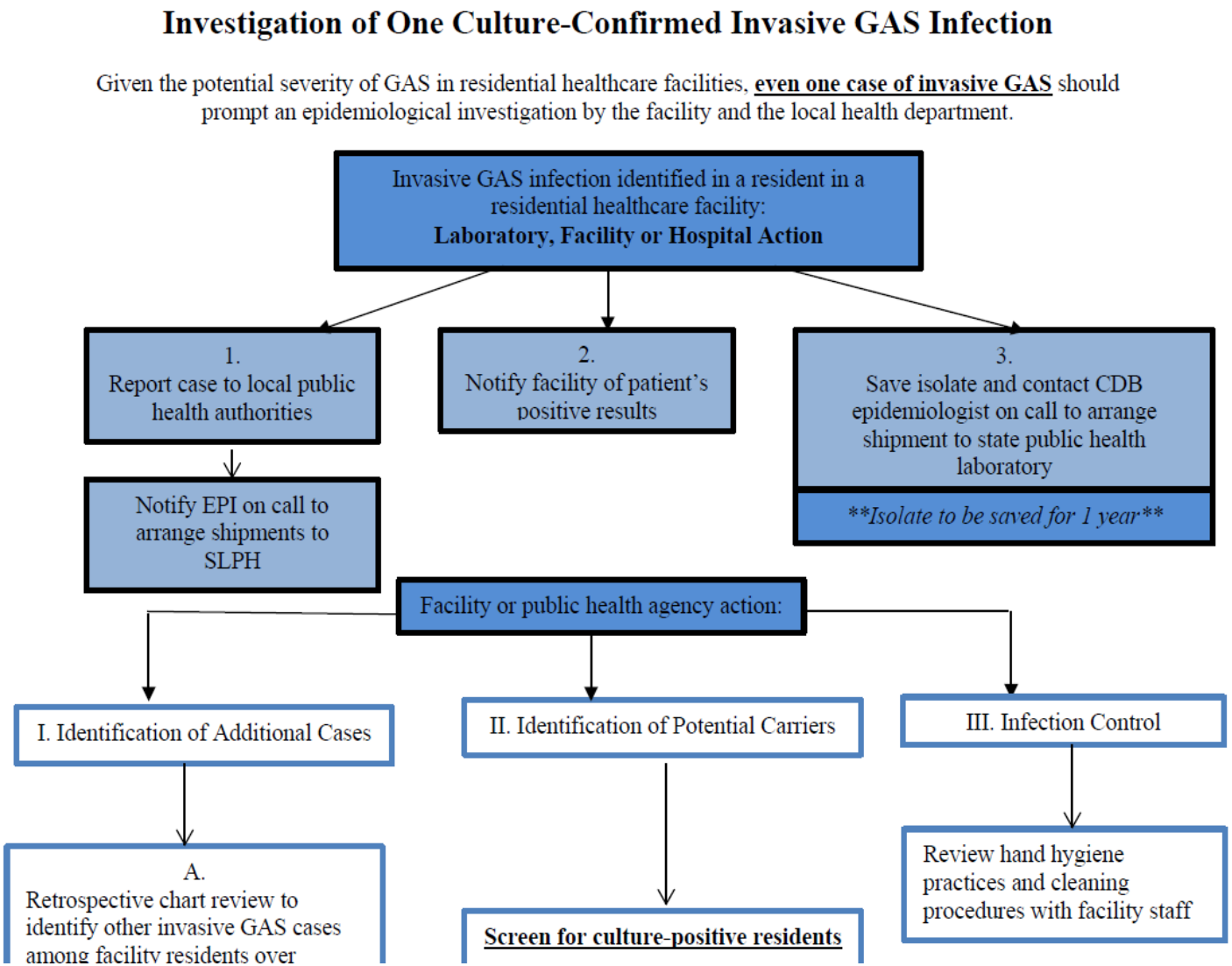
- 2 Facilities in County X, North Carolina
- 2 Healthcare workers worked at both facilities
- 24 Total cases to date
  - **Facility A:** 10 cases (among eight residents and 2 employees)
  - **Facility B:** 14 cases (among 12 residents and 2 employees)
- 6 residents died (case fatality rate 25%)

LHD Investigation Steps

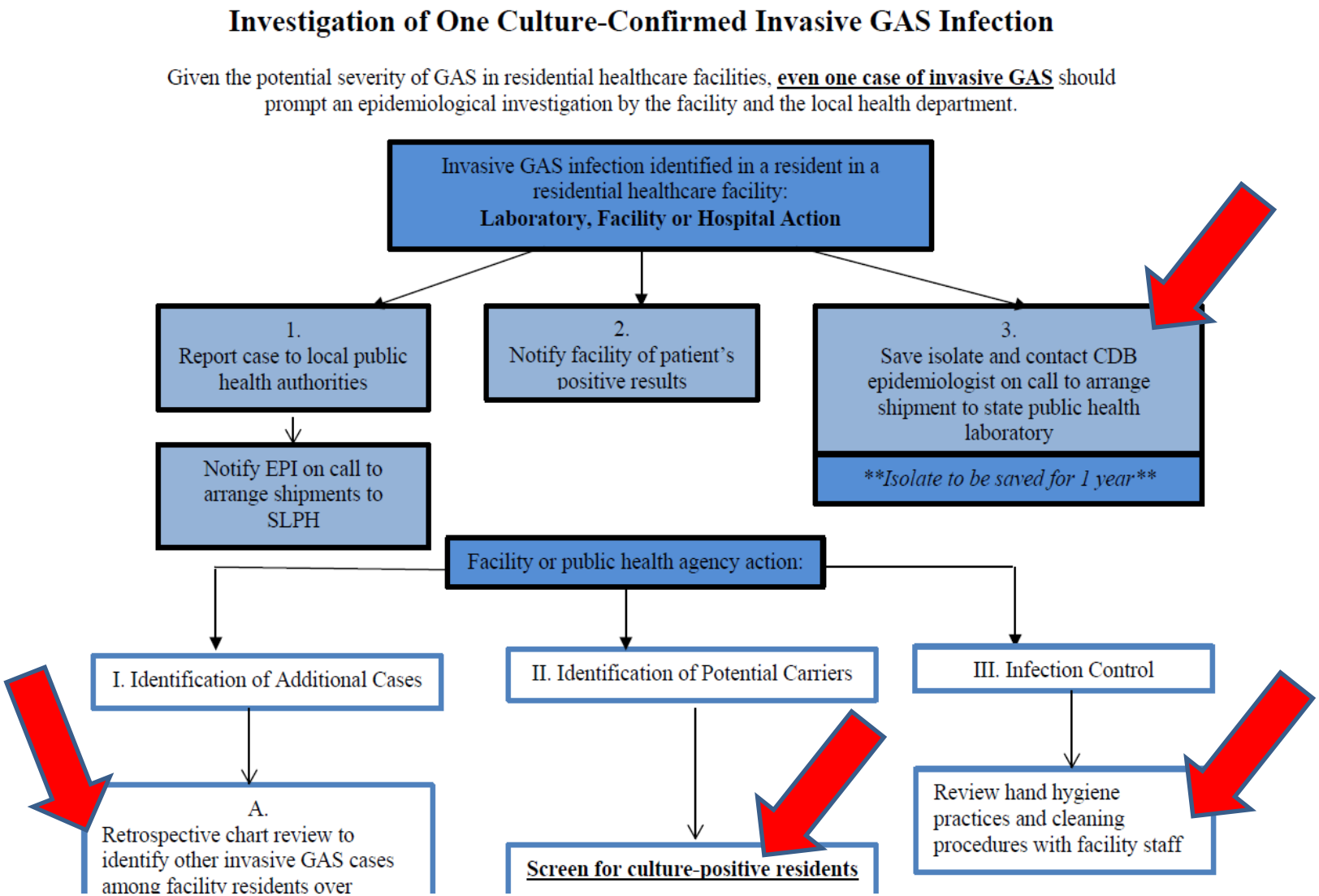
Investigation steps for single and multiple cases

- Retrospective chart review
- Survey healthcare workers for GAS symptoms
- Culture close contacts
- 4 months active surveillance

Public Health Response to GAS



The Response



GAS Prevention

Prevention is critical:

Two of the best methods to prevent the spread of this infection:

- Strict attention to hand hygiene and
- Keeping staff out while ill (i.e. sore throats)

Infection Risk Factors

- Increased staff contact linked to illness
  - Significant nursing needs
  - Non-intact skin/wound care
  - Immobility/bed baths

- Link to inadequate infection control
  - Poor hand hygiene
  - Staff working while sick

Do's & Don'ts for Wearing Gloves

- Gloves prevent contamination of healthcare worker's hands and help reduce the spread of pathogens

  only if:

  - They are used properly; **and**
  - Hand hygiene is performed ***before <u>and</u> after*** wear.

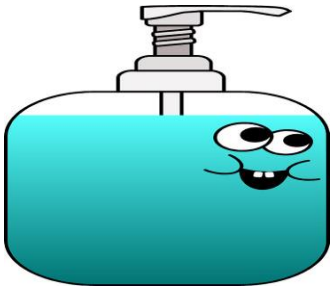
http://professionals.site.apic.org/10-ways-to-protect-patients/using-ppe-the-right-way/

Masking during wound care?

- Not required, may be best practice
- Recent outbreak linked to healthcare

Hand Hygiene

- Alcohol-based hand sanitizers are the **most effective** products for reducing the number of germs on the hands of healthcare providers.
  - They are the **preferred** method for cleaning your hands in the healthcare setting, when hands are not visibly soiled
  - Soap and water are recommended for cleaning visibly soiled hands



https://www.cdc.gov/handhygiene/providers/index.html

References

- https://www.cdc.gov/groupastrep/diseases-public/index.html
- http://professionals.site.apic.org/10-ways-to-protect-patients/using-ppe-the-right-way/
- https://www.cdc.gov/handhygiene/providers/index.html

Thank you!!

NC SHARPPS Team