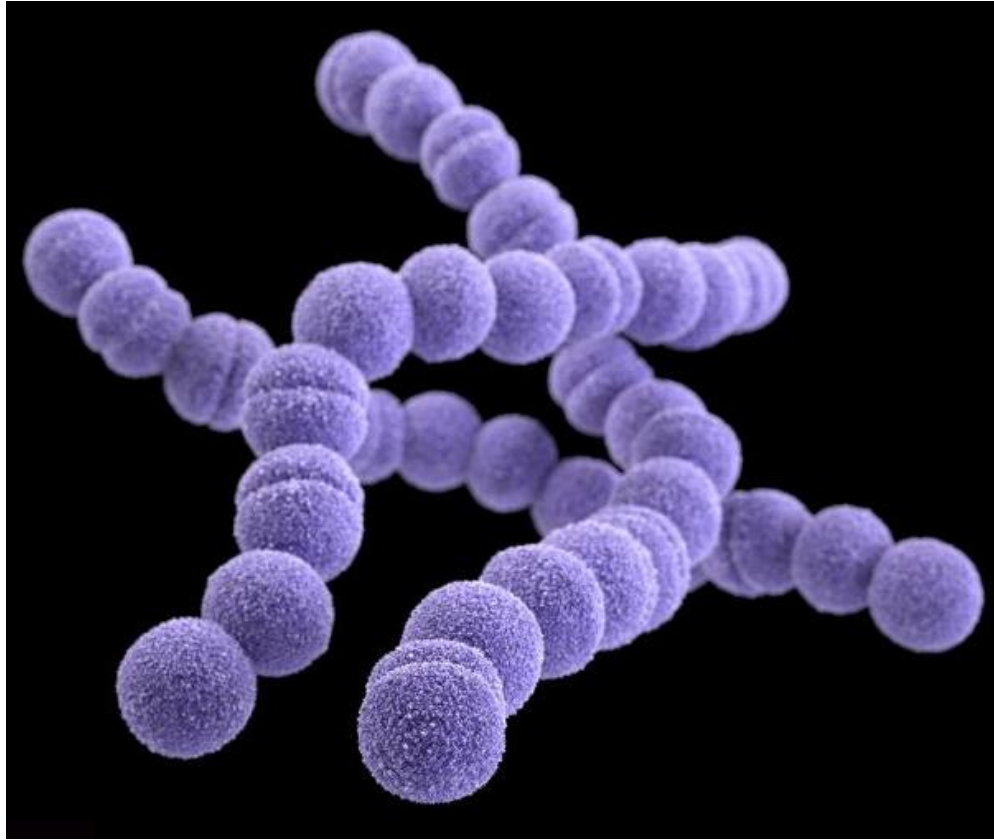


# *Group A Streptococcus*

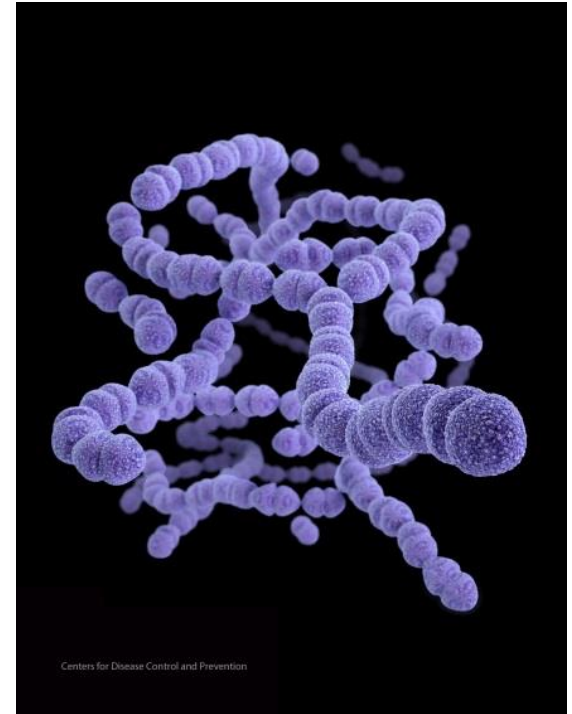


# *Objectives*

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

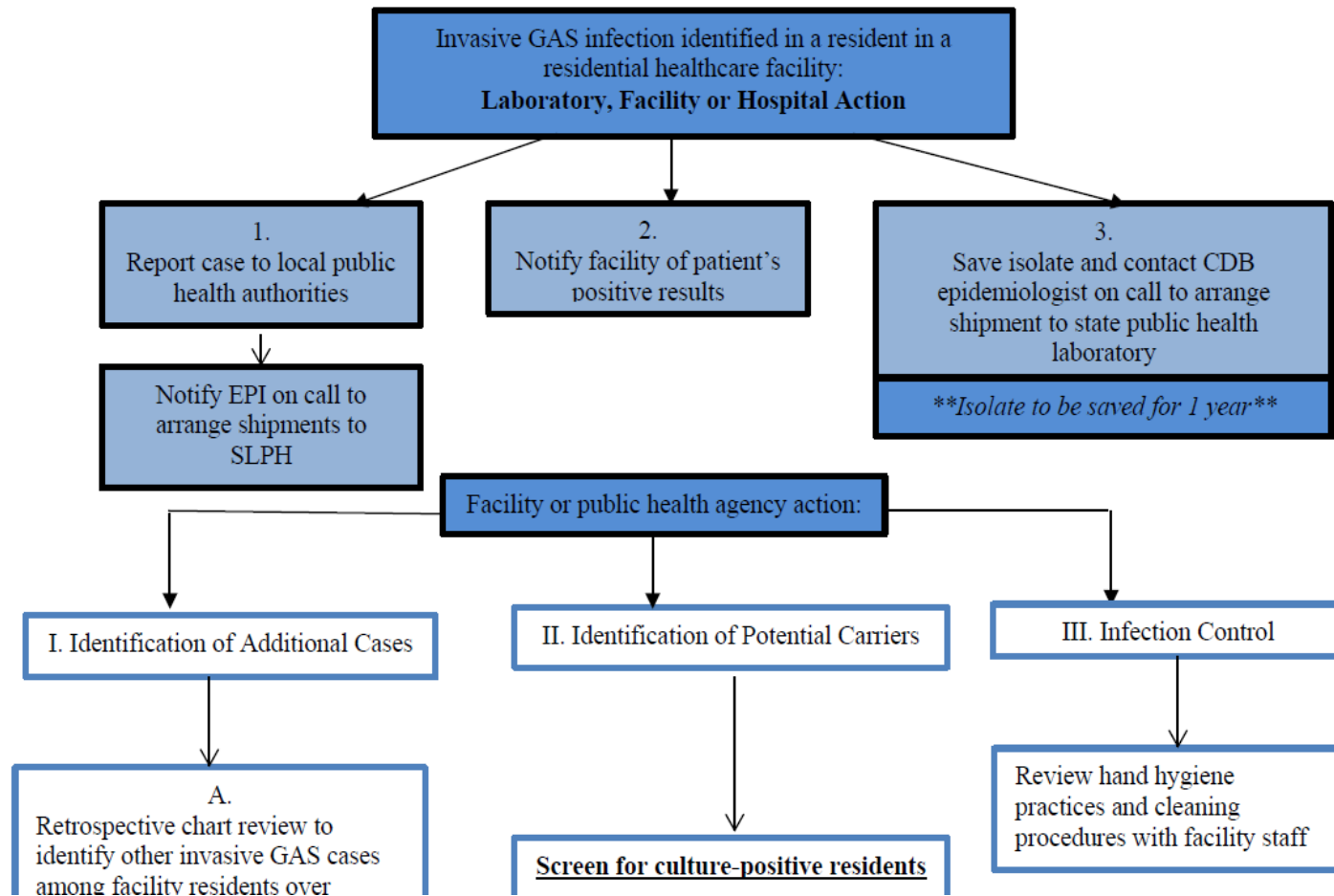
- Retrospective chart review
- Survey healthcare workers for GAS symptoms
- Culture close contacts
- 4 months active surveillance



# Public Health Response to GAS

## Investigation of One Culture-Confirmed Invasive GAS Infection

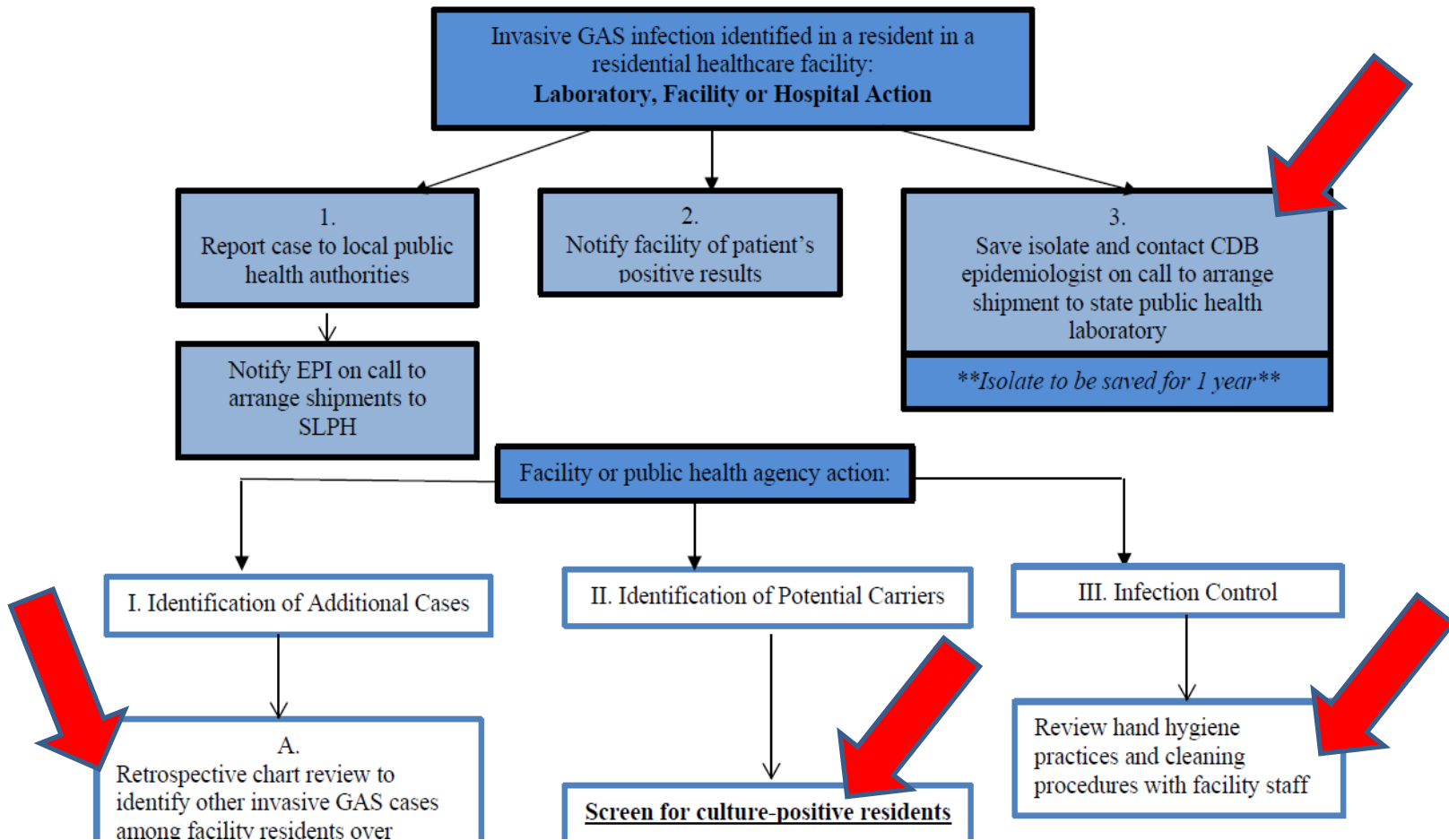
Given the potential severity of GAS in residential healthcare facilities, **even one case of invasive GAS** should prompt an epidemiological investigation by the facility and the local health department.



# The Response

## Investigation of One Culture-Confirmed Invasive GAS Infection

Given the potential severity of GAS in residential healthcare facilities, **even one case of invasive GAS** should prompt an epidemiological investigation by the facility and the local health department.



# *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





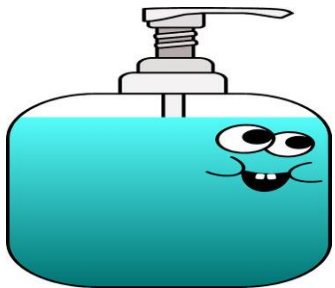
# *Masking during wound care?*

- 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