

# **Infection Prevention, Outbreaks, and the Role of Public Health**

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**Centers for Disease Control and Prevention**  
**North Carolina Division of Public Health**

**Fall 2020**

## *Objectives*

- Describe legal framework for disease surveillance, investigation, and response
- Review historical outbreak surveillance data
- Discuss when to call Public Health
- Discuss role of Public Health in infection prevention and outbreak response
- Describe two outbreaks in long-term care settings

# Legal Framework

## *Public Health: Legal Framework*

- Public Health Laws and Rules:
  - General Statutes
  - NC Administrative Code rules
- Health Director's Authority (State & Local)
  - Surveillance
  - Investigation
  - Control Measures

## *Public Health Law*

### **General Statutes §130A-144: Investigation and Control Measures**

(a) The **local health director shall investigate**... cases of communicable diseases and communicable conditions reported to the local health director

(b) Physicians, persons in charge of medical facilities or laboratories, and other persons shall... **permit a local health director or the State Health Director to examine, review, and obtain a copy of medical or other records...**

(d) The **attending physician shall give control measures**... to a patient with a communicable disease or communicable condition and to patients reasonably suspected of being infected or exposed to such a disease or condition.

(e) The **local health director shall ensure that control measures**... have been given to **prevent the spread of all reportable communicable diseases or communicable conditions and any other communicable disease or communicable condition that represents a significant threat to the public health.**

(f) All **persons shall comply with control measures**, including submission to examinations and tests...



## *Public Health Law*

### **10A NCAC 41A .0103: Duties of local health director: report communicable diseases**

(a) Upon receipt of a report of a communicable disease or condition... the **local health director** shall:

(1) immediately **investigate** the circumstances... [to] include the collection and submission for laboratory examination of specimens necessary to assist in the diagnosis and indicate the duration of control measures;

(2) determine what **control measures** have been given and ensure that proper control measures... have been given and are being complied with;

(c) Whenever an **outbreak of a disease or condition** occurs which is not required to be reported... but **which represents a significant threat to the public health**, the local health director shall give appropriate control measures... and **inform the Division of Public Health**



## *Public Health Law*

### **10A NCAC 41A .0101: Reportable diseases and conditions**

- **70+ reportable diseases and conditions**
  - Timeline of reporting varies between immediately and within 7 days
- **Laboratory** reporting requirements

<http://reports.oah.state.nc.us/ncac/title%2010a%20-%20health%20and%20human%20services/chapter%2041%20-%20epidemiology%20health/subchapter%20a/10a%20ncac%2041a%20.0101.html>



## *Public Health Law*

- **10A NCAC 41A .0201**
  - General Control Measures
- **10A NCAC 41A .0202 - .0205**
  - Control Measures for HIV, Hepatitis B, STDs, TB
- **10A NCAC 41A .0206**
  - Infection Prevention – Health Care Settings; 1992



# Outbreak Response

## *When Should Public Health Be Called?*

- Reportable diseases / conditions (10A NCAC 41A .0101)
  - [http://epi.publichealth.nc.gov/cd/docs/dhhs\\_2124.pdf](http://epi.publichealth.nc.gov/cd/docs/dhhs_2124.pdf)
- When **any** disease is above normal baseline (i.e., an “outbreak”)
- Report suspected infection prevention breach



## *When Is It An Outbreak?*



## *When Is It An Outbreak?*

- Anything above what is normally seen for any given time period
- If you aren't sure, call Public Health!
- In a facility setting, an outbreak is generally defined as **two or more** individuals with the same illness
  - **Caveat to this rule:**
    - One case of certain diseases = Outbreak
    - Disease not normally seen (Avian Flu, SARS, Ebola)



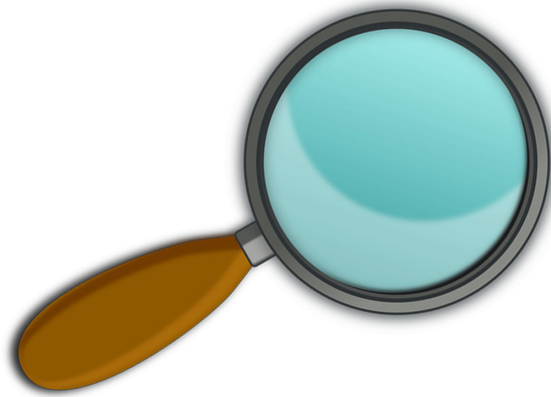
## *Who Should Be Called?*

- Your supervisor/manager
- Local health department
- North Carolina Division of Public Health 24/7 epidemiologist on call: 919-733-3419
- North Carolina Statewide Program for Infection Control and Epidemiology (NC SPICE): [spice@unc.edu](mailto:spice@unc.edu), 919-966-3242
- Local hospital infection preventionist



Role of Public Health

## *What Happens After Public Health Is Called?*



## *What Happens After Public Health Is Called?*

- Data review
- Clinical investigation
  - Case finding – looking for others who are or who have been ill
  - Interviews, specimen collection, testing
- Environmental investigation
- Control measures
- Communication
  - Assist with patient/family/public information if needed





# *Surveillance for Healthcare Associated and Resistant Pathogens Patient Safety (SHARPPS) Program*



**Jennifer MacFarquhar**  
Program Director

**Coming Soon!**  
Medical Director



**Brittany Richo**  
Program Manager



**Meg Sredl**  
Epidemiologist



**Deborah Dolan**  
Health Educator



**Savannah Carrico**  
Epidemiologist

**Coming Soon!**  
Epidemiologist



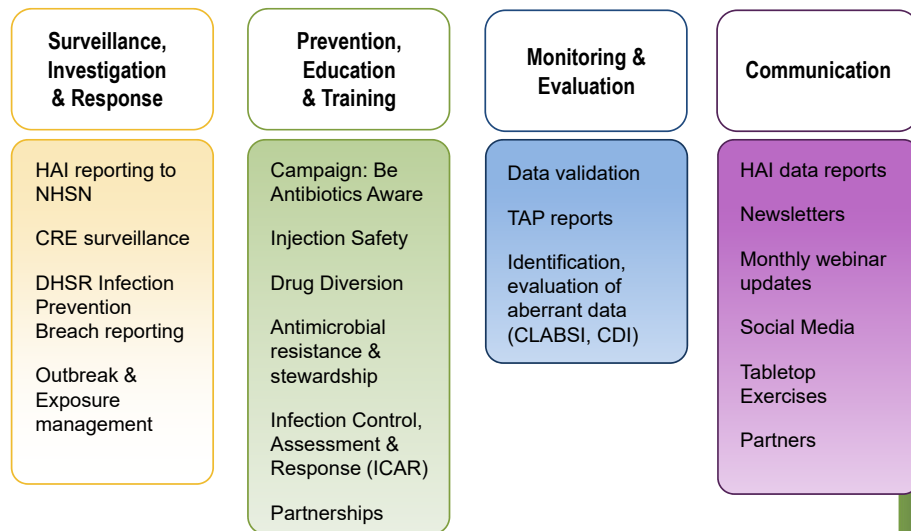
## *NC SHARPPS Program*

### **Mission**

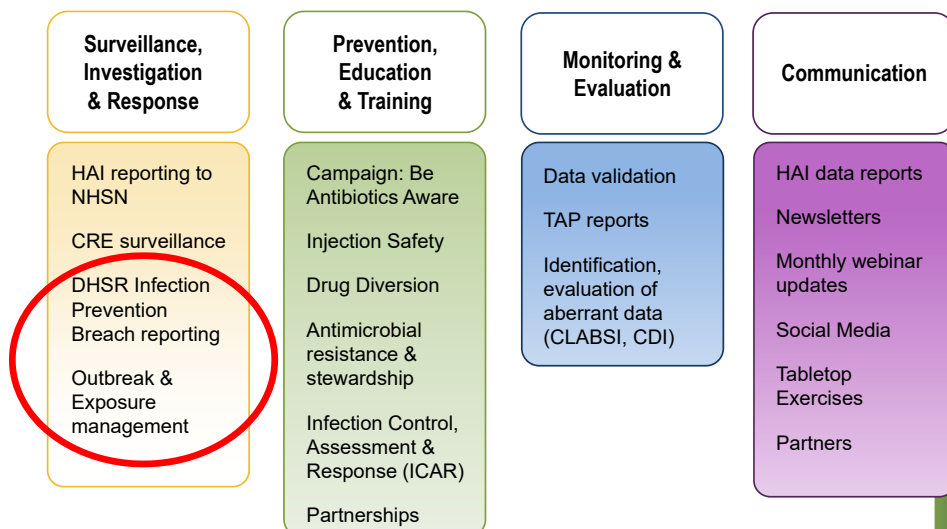
To work in partnerships to prevent, detect, and respond to events and outbreaks of healthcare-associated and antimicrobial resistant infections in North Carolina.



## SHARPPS Program Activities



## SHARPPS Program Activities



# Outbreak Summary

## *2015-2018 Outbreak Summary*



### Outbreak Report Summary: 2015 - 2018



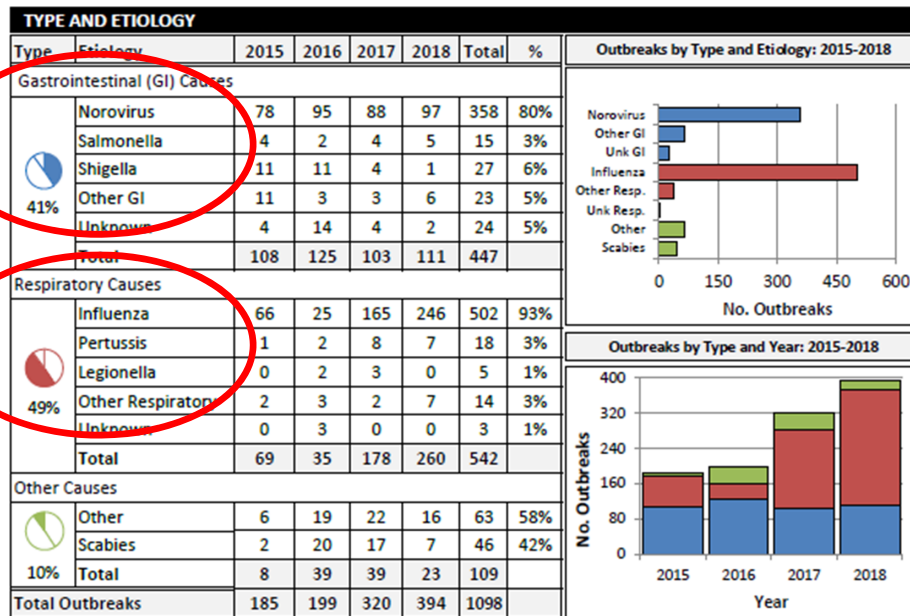
A total of 1,098 outbreaks were reported to the Communicable Disease Branch (CDB) from January 1, 2015–December 31, 2018; an average of 275 per year. Details of those outbreaks are presented below.

As required by North Carolina Administrative Code (10A NCAC 41A .0103), local health departments must submit a written report of the investigation within 30 days of the end of the outbreak. Outbreak reports were received for 89% of 2015 outbreaks 84% of 2016 outbreaks, 100% of 2017 outbreaks, and 100% of 2018 outbreaks.

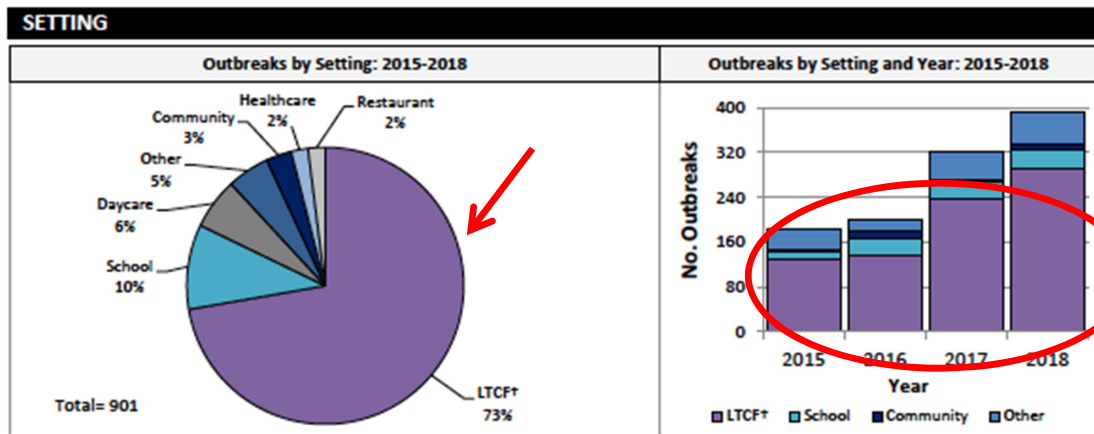
- January 1, 2015 –  
December 31, 2018
- 1,098 Outbreaks
- 275  
Average/year



## 2015-2018 Outbreak Summary

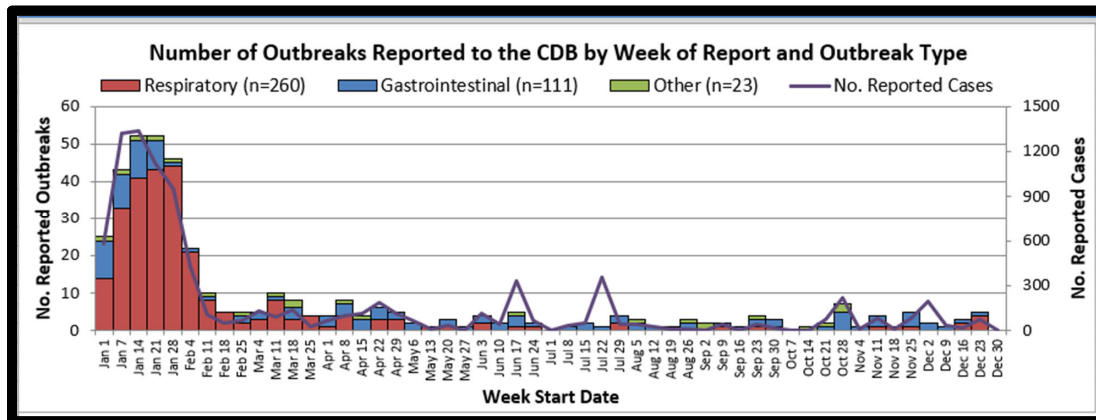


## 2015-2018 Outbreak Summary



## 2019 Outbreak Summary

- 347 outbreaks reported
- 9,028 outbreak-associated cases identified



\*Data are preliminary



## Safe Injection Practices



## *Safe Injection Practices*

- Measures taken to perform injections in a safe manner for patients and providers
- Prevent transmission of infectious diseases from
  - Patient to provider
  - Provider to patient
  - Patient to patient
- Pathogens
  - Bloodborne – Hepatitis B (HBV), Hepatitis C (HCV), Human Immunodeficiency Virus (HIV)
  - Bacterial, fungal

<http://www.cdc.gov/injectionsafety/>



## *Public Health Role in Safe Injection Practices*

- Raise awareness about safe injection practices
- Prevent disease transmission from unsafe injection practices



## *North Carolina Hepatitis Outbreaks, Non-Hospital Settings*

| Setting      | Year | Type | No. Incident Infections |
|--------------|------|------|-------------------------|
| Cardiology   | 2008 | HCV  | 5                       |
| ALF          | 2010 | HBV  | 8                       |
| SNF          | 2010 | HBV  | 6                       |
| SNF          | 2010 | HBV  | 6                       |
| Dialysis     | 2013 | HBV  | 1                       |
| <b>Total</b> |      |      | <b>26</b>               |

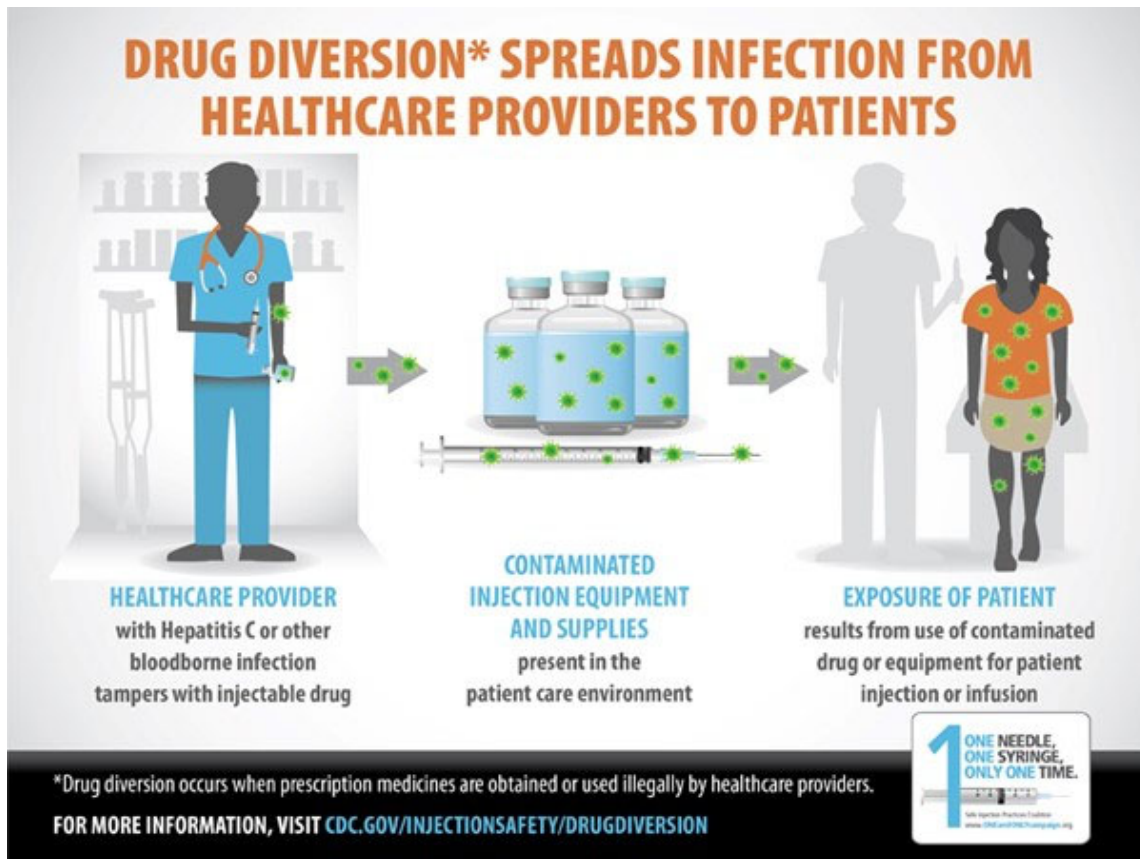


## *Drug Diversion*

- When prescription medicines are obtained or used illegally
- CDC has formally labeled it an "epidemic"
- 1983–2018
  - 7 HCV outbreaks linked to drug diversion by infected health care providers
    - 6 hospitals and 1 ambulatory surgery center
    - >156 new infections linked to these outbreaks
  - 6 bacterial outbreaks
    - 74 infections



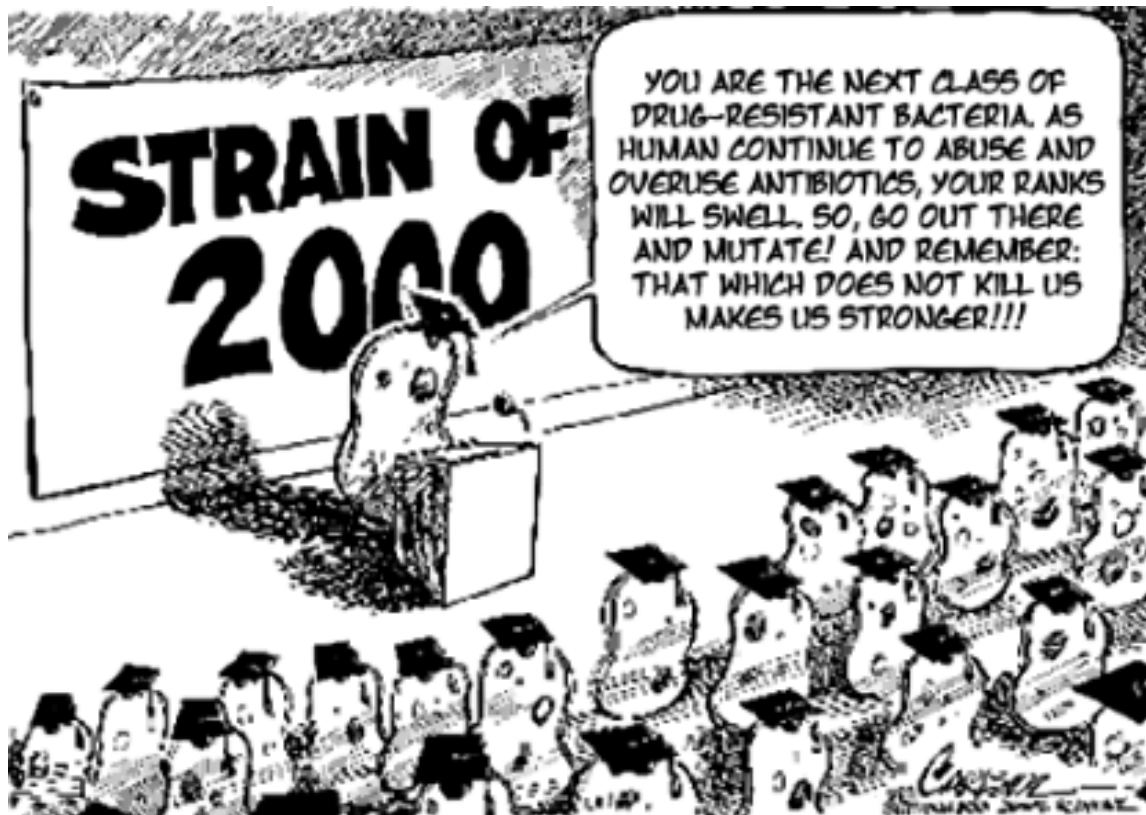
<http://www.cdc.gov/injectionsafety/drugdiversion/>



## Multidrug-Resistant Organisms (MDROs)







## *Multidrug-resistant Organisms (MDROs)*

- Resistant to multiple types of antibiotics
- Can cause infection in any part of the body
- Intra- and inter-facility spread
- Vulnerable patients at risk for infection
- Infections are difficult to treat and can be associated with high mortality rates
- Examples: MRSA, VRE, CRE



## *Public Health Significance*

- Spread facilitated by interfacility transfer of patients
- Affects vulnerable patient populations
- Difficult to treat
- Improper treatment → some organisms may produce another enzyme that makes it easier to transmit resistance

**Cause ~2.8 million infections in United States annually**

**35,000 deaths**



# #1: (Un)Safe Injection Practices



*Tuesday, October 12, 2010*

- County health department notified by infection preventionist at local hospital
- 4 cases of acute Hepatitis B
- Residents of the same assisted living facility



## *Investigation Methods*

- Evaluated infection control practices
  - Observations
  - Interviews
- Searched for additional cases
  - Serologic testing of all residents
  - Hospital records, surveillance databases
- Epidemiologic study
  - Potential healthcare exposures, risk factors



## *HBV Outbreak in Assisted Living Facility*

|                         |                   |
|-------------------------|-------------------|
| <b>Cases identified</b> | <b>8</b>          |
| <b>Mean age</b>         | <b>70.6 years</b> |
| <b>Hospitalized</b>     | <b>8 (100%)</b>   |
| <b>Died</b>             | <b>6 (75%)</b>    |



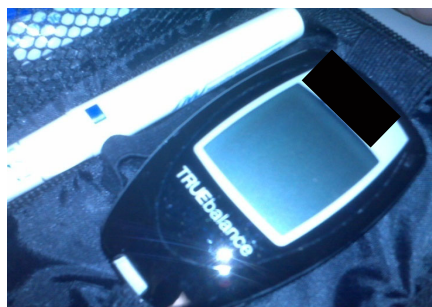
## Health Care Exposures

| Exposure                   | Attack rate (%)  |                  |
|----------------------------|------------------|------------------|
|                            | Exposed          | Not exposed      |
| <b>Assisted BGM</b>        | <b>8/15 (53)</b> | <b>0/25 (0)</b>  |
| <b>Injected medication</b> | <b>4/16 (25)</b> | <b>4/22 (18)</b> |
| <b>Phlebotomy</b>          | <b>4/25 (16)</b> | <b>4/15 (27)</b> |
| <b>Blood transfusion</b>   | <b>0/1 (0)</b>   | <b>8/38 (21)</b> |
| <b>Catheter device</b>     | <b>0/3 (0)</b>   | <b>8/37 (22)</b> |
| <b>Wound care</b>          | <b>1/8 (13)</b>  | <b>6/28 (21)</b> |



## Infection Control Observations

- Glucose meters
  - Used for more than one resident
  - Not disinfected between uses
- Adjustable lancing devices
  - Used for more than one resident



## *Recommendations to Facility*

- Use single-use disposable lancets
- Purchase and use individual glucose meters for each resident
- Vaccinate all susceptible residents



## *Direct Communication to Providers*

- Sent to all licensed facilities and providers statewide



North Carolina Department of Health and Human Services  
Division of Public Health • Epidemiology Section  
Section Office  
1902 Mail Service Center • Raleigh, North Carolina 27699-1902  
Tel 919-733-3421 • Fax 919-733-0195

Beverly Eaves Perdue, Governor  
Lanier M. Cansler, Secretary

Jeffrey P. Engel, MD  
State Health Director

December 2, 2010

TO: All North Carolina Health Care Providers

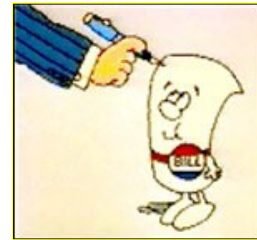
FROM: Megan Davies, MD, State Epidemiologist

WARNING: SPREAD OF HEPATITIS B THROUGH UNSAFE DIABETES CARE



# *“Act to Protect Adult Care Home Residents”*

- Signed into law May 31<sup>st</sup>, 2011
- Requires
  - Stronger infection prevention policies
  - Inspection and monitoring of infection prevention activities
  - Reporting of suspected outbreaks
  - Increased training and competency evaluation for medication aides, adult care home supervisors



## *CMS Required Reporting*

Center for Clinical Standards and Quality/Survey & Certification Group

Ref: S&C: 14-36-All

**DATE:** May 30, 2014

**TO:** State Survey Agency Directors

**FROM:** Director  
Survey and Certification Group

**SUBJECT:** Infection Control Breaches Which Warrant Referral to Public Health Authorities

### Memorandum Summary

- **Infection Control Breaches Warranting Referral to Public Health Authorities:** If State Survey Agencies (SAs) or Accrediting Organizations (AOs) identify any of the breaches of generally accepted infection control standards listed in this memorandum, they should refer them to appropriate State authorities for public health assessment and management.
- **Identification of Public Health Contact:** SAs should consult with their State's Healthcare Associated Infections (HAI) Prevention Coordinator or State Epidemiologist on the preferred referral process. Since AOs operate in multiple States, they do not have to confer with State public health officials to set up referral processes, but are expected to refer identified breaches to the appropriate State public health contact identified at:  
<http://www.cdc.gov/HAI/state-based/index.html>



# Surveyors must report to State

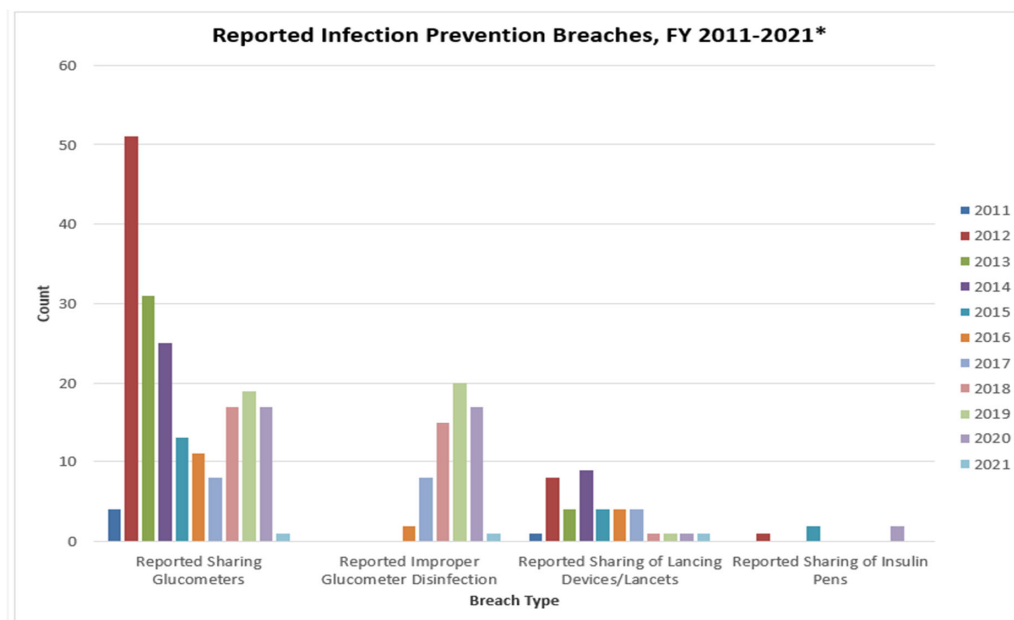
## Breaches to Be Referred

When one or more of the following infection control breaches is identified during any survey of a Medicare- and/or Medicaid-certified provider/supplier, the SA or AO should make the appropriate State public health authority aware of the deficient practice:

- Using the same needle for more than one individual;
- Using the same (pre-filled/manufactured/insulin or any other) syringe, pen or injection device for more than one individual;
- Re-using a needle or syringe which has already been used to administer medication to an individual to subsequently enter a medication container (e.g., vial, bag), and then using contents from that medication container for another individual;
- Using the same lancing/fingerstick device for more than one individual, even if the lancet is changed.



## Infection Prevention Breaches

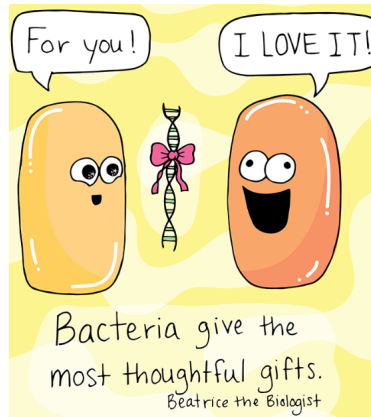


\*2021 Data Incomplete





## #2: Multidrug Resistant Organisms



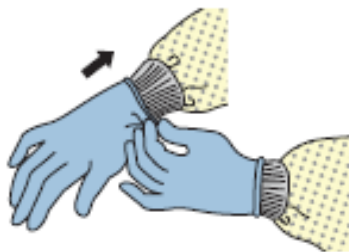
*Friday, April 21, 2017*

- Notified by LHD on April 21, 2017 (a Friday!)
  - Increase in number infections caused by a specific MDRO among patients admitted to local hospital between October 16, 2016 and April 13, 2017
- Most cases were residents of 3 long-term care facilities (LTCFs)
- Coordinated an investigation to:
  - **Assess infection prevention practices among these LTCFs, and**
  - **Prevent further intra- and inter- facility spread of disease**

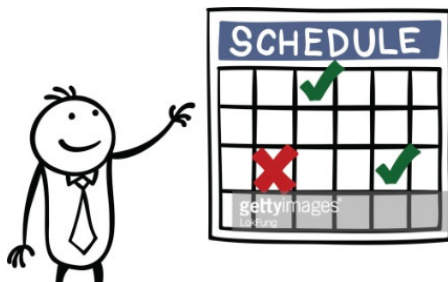
- 4 cases were discussed on Friday but > 40 positive labs were waiting for us on Monday morning!



## *Initial control measures*



Gown and gloves



Prevent opportunities for transmission



Hand hygiene



## Site Visit Findings

- **Hand hygiene:** inconsistent ✖
- **Wound care:** reusing scissors, interruptions in flow from clean to dirty ✖
- **OT/PT:** contact precautions not adequately maintained, lack of dedicated equipment ✖
- **Contact precautions:** implemented to varying degrees ✖
- **Lack of inter-facility notification** ✖
- **Outdated policies** ✖



## Control Measures

1. Staff Education
2. Laboratory notification
3. Cohort infected residents
4. Contact precautions for individuals (colonized and infected) at higher risk for transmission
5. Hand Hygiene
6. Environmental cleaning
7. Communicate CRE status to transferring and receiving facilities
8. Review, update infection prevention policies and procedures
9. Antimicrobial Stewardship



CRE alert

# Communication between Healthcare Facilities

- Useful
  - Patient status/needs
  - Care plan
- Beneficial re: MDROs
  - Protects patients/residents
  - Controls healthcare costs
  - Prevents spread of MDROs
- Required by CMS
  - Reform of Requirements for Long-Term Care Facilities
  - Revisions to Requirements for Discharge Planning for Hospitals, Critical Access Hospitals, and Home Health Agencies (final rule: September 30, 2019)



## Sections

- Facility Information
- Demographics
- Current status
- Medications
- Vaccination/test hx.
- Personal items
- Contact information

Transferring Facility Name: \_\_\_\_\_ INTERFACILITY TRANSFER FORM  
Transferring Facility Address: \_\_\_\_\_  
Transferring Facility Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

Transferred to: \_\_\_\_\_ Reason for transfer: \_\_\_\_\_  
Transfer date/time: \_\_\_\_\_ Attending physician: \_\_\_\_\_ Phone: \_\_\_\_\_

Patient/resident demographics and vital signs (date/time taken: \_\_\_\_\_)  
Last Name: \_\_\_\_\_ First Name: \_\_\_\_\_ DOB: \_\_\_\_\_ MRN: \_\_\_\_\_  
BP: \_\_\_\_\_ P: \_\_\_\_\_ R: \_\_\_\_\_ T(F): \_\_\_\_\_ O<sub>2</sub> SAT: \_\_\_\_\_ HT(in): \_\_\_\_\_ WT(lb): \_\_\_\_\_ Diabetic? \_\_\_\_\_ Glucose: \_\_\_\_\_  
Language: ☐ English ☐ Other: \_\_\_\_\_ Mental status: ☐ Alert ☐ Oriented ☐ Other: \_\_\_\_\_  
Allergies: ☐ None ☐ Yes: \_\_\_\_\_ Pain Level (0-10): \_\_\_\_\_ Site: \_\_\_\_\_  
At risk alerts: ☐ None ☐ Falls ☐ Aspiration ☐ Pressure ulcers ☐ Seizures ☐ Elopement ☐ Other: \_\_\_\_\_  
Advanced directives: ☐ DNR ☐ DNI ☐ MOA ☐ Advance Care Directive ☐ Proxy Contact

Current isolation precautions/required PPE (Check, if indicated)  
☐ No ☐ Yes, specify \_\_\_\_\_ ☐ Contact ☐ Droplet ☐ Airborne  
PPE, specify: ☐ \_\_\_\_\_ ☐ \_\_\_\_\_ ☐ \_\_\_\_\_

Organisms / infections\* ☐ None ☐ Yes, specify type/date \_\_\_\_\_

| Multi-drug resistant organisms (MDROs)   | Current infection        | Hx/Colonized             | Pending result           |
|--|--------------------------|--------------------------|--------------------------|
|  | Date                     | Date                     | Date                     |
| Methicillin-resistant Staphylococcus aureus (MRSA)   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Methicillin-resistant Enterococcus (MRE)   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Vancomycin-resistant Enterococci (VRE)   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Acinetobacter not susceptible to carbapenems   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Enterobacteriaceae resistant to carbapenems (i.e. CRE)   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Extended-spectrum beta-lactamase producer (ESBL)   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Clostridium difficile (C. diff)  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Other: _____<br>(e.g. Group A Streptococcus (GAS), lice, scabies, disseminated shingles, norovirus, flu, TB, etc.) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Current or recent (last 7 days) symptoms ☐ None ☐ Yes, specify \_\_\_\_\_  
☐ Drain wounds ☐ Concerning rash (e.g. vesicular) ☐ Cough/uncontrolled respiratory secretions  
☐ Vomiting ☐ Acute diarrhea or incontinent of stool ☐ Other: \_\_\_\_\_

Sensory status and activities of daily living

| Vision                         | Hearing                       | Speech                             | Ambulate                          | Transfer                          | Toileting                            | Meals                           | Hygiene                           | Dressing                          |
|--------------------------------|-------------------------------|------------------------------------|-----------------------------------|-----------------------------------|--------------------------------------|---------------------------------|-----------------------------------|-----------------------------------|
| Good <input type="checkbox"/>  | Good <input type="checkbox"/> | Good <input type="checkbox"/>      | Self <input type="checkbox"/>     | Self <input type="checkbox"/>     | Self <input type="checkbox"/>        | Self <input type="checkbox"/>   | Self <input type="checkbox"/>     | Self <input type="checkbox"/>     |
| Poor <input type="checkbox"/>  | Poor <input type="checkbox"/> | Difficult <input type="checkbox"/> | Assist <input type="checkbox"/>   | Assist <input type="checkbox"/>   | Assist <input type="checkbox"/>      | Assist <input type="checkbox"/> | Assist <input type="checkbox"/>   | Assist <input type="checkbox"/>   |
| Blind <input type="checkbox"/> | Deaf <input type="checkbox"/> | Aphasia <input type="checkbox"/>   | Not able <input type="checkbox"/> | Not able <input type="checkbox"/> | Incontinent <input type="checkbox"/> | Tube <input type="checkbox"/>   | Not able <input type="checkbox"/> | Not able <input type="checkbox"/> |
| Sfy: _____                     | Sfy: _____                    | Sfy: _____                         | Sfy: _____                        | Sfy: _____                        | Sfy: _____                           | Date: _____                     | Date: _____                       | Date: _____                       |

Current devices / recent (last 90 days) procedures\* ☐ None ☐ Yes, specify \_\_\_\_\_  
☐ Tracheostomy tube ☐ Hemodialysis catheter ☐ Procedure, specify type \_\_\_\_\_ and date \_\_\_\_\_  
☐ Gastrostomy tube ☐ Urinary catheter (date inserted) \_\_\_\_\_ ☐ Central line/PICC (date inserted) \_\_\_\_\_

Current medications\* ☐ None ☐ Yes, refer to attached MAR

Vaccination / test history\* ☐ None ☐ Yes, specify \_\_\_\_\_

| Vaccine/test                      | Influenza (seasonal)                                     | Pneumococcal   | Zoster   | Td   | Tdap   | Tuberculin skin test  |
|-----------------------------------|--|--|--|--|--|---|
| Date administered                 | <input type="checkbox"/>                                 | <input type="checkbox"/>                                 | <input type="checkbox"/>                                 | <input type="checkbox"/>                                 | <input type="checkbox"/>                                 | <input type="checkbox"/>  |
| Self-report vaccine/test receipt? | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Yes <input type="checkbox"/> No | <input type="checkbox"/> Yes <input type="checkbox"/> No | Result: <input type="checkbox"/> Pos <input type="checkbox"/> Neg |

Personal items sent with patient/resident ☐ None ☐ Specify (e.g. glasses, etc.): \_\_\_\_\_

Contact information  
Relative/Guardian/POA  
Name: \_\_\_\_\_ Relationship: \_\_\_\_\_ Phone: \_\_\_\_\_ Notified? ☐ Yes ☐ No  
Transferring facility representative completing form  
Name/title (print): \_\_\_\_\_ Signature: \_\_\_\_\_ Phone: \_\_\_\_\_

NC DPH - last updated 11/21/17  
☒ TRANSFERRING FACILITY COPY ☐ TRANSPORT / RECEIVING FACILITY COPY

## Highlight – Current Isolation/PPE, MDROs

### Current isolation precautions\*/required PPE (Check, if indicated)

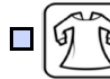
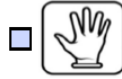
☐ No ☐ Yes, specify

☐ Contact

☐ Droplet

☐ Airborne

PPE, specify



### Organisms / infections\*

☐ None ☐ Yes, specify type/date

### Current infection

### Hx/Colonized

### Pending result

| Multi-drug resistant organisms (MDROs)   | Date                     | Date                     | Date                     |
|--|--------------------------|--------------------------|--------------------------|
| Methicillin-resistant Staphylococcus aureus (MRSA)   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Vancomycin-resistant Enterococci (VRE)   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Acinetobacter not susceptible to carbapenems   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Enterobacteriaceae resistant to carbapenems (i.e. CRE)   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Extended-spectrum beta-lactamase producer (ESBL)   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Clostridium difficile (C. diff)  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Other: _____   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (e.g. Group A Streptococcus (GAS), lice, scabies, disseminated shingles, norovirus, flu, TB, etc.) |                          |                          |                          |



## NC DPH Interfacility Transfer Form

### Benefits

- Standardized format for interfacility communication of patient MDRO status during transfer
- Information needed/desired during transfer all in one place
- Complies with CMS requirements for interfacility communication
- <http://epi.publichealth.nc.gov/cd/hai/docs/InterfacilityTransferInstructionsandForm.pdf>



# MDRO cases among local hospital ED visits and admissions, County A, October 22, 2016–November 30, 2017 (n=83\*)

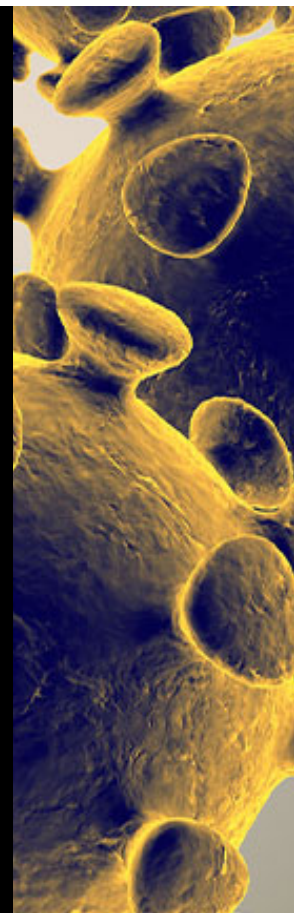
\*excluding repeat cultures (same patient/same organism)



*Early detection and aggressive implementation of control  
measures are key to prevention and control*



# Emerging Infections: Coronavirus Disease (COVID-19)



## *NC Public Health Actions*



**Identify, investigate ill individuals, conduct contact tracing**



**Develop, disseminate guidance**



**Rule change to require reporting**



**Develop and implement control measures, including self-monitoring with public health supervision, isolation, and quarantine**



**Develop laboratory testing capacity**



*NC DHHS is working with healthcare partners*



**Emergency Medical Services (EMS)**



**Hospitals, clinics and urgent cares**



**Healthcare providers**



**Laboratories**



*NC DHHS is working with local communities*



**Home care**



**Congregate living settings**



**Travelers**







## *Why Involve Public Health?*

- Investigations require communicable disease / infection prevention expertise and experience
- Uniquely qualified to assess patient risk
- Complex problem
- Threats to public's health



**Public Health**  
Prevent. Promote. Protect.



## Resources

- NC Division of Public Health, SHARPPS Program
  - <http://epi.publichealth.nc.gov/cd/diseases/hai.html>
- Safe Injection Practices
  - <http://www.oneandonlycampaign.org/>
  - <http://www.oneandonlycampaign.org/partner/north-carolina>
  - <http://www.cdc.gov/injectionsafety/drugdiversion/index.html>
- Exposure Investigations
  - NC ADMINISTRATIVE CODE, TITLE 10A, SUBCHAPTER 41A
  - <https://www.cdc.gov/niosh/topics/bbp/guidelines.html>
- MDROs
  - Management of Multidrug Resistant Organisms in Healthcare Settings, 2006
    - [https://www.cdc.gov/hicpac/mdro/mdro\\_toc.html](https://www.cdc.gov/hicpac/mdro/mdro_toc.html)
    - <https://www.cdc.gov/infectioncontrol/guidelines/mdro/index.html>
  - NC DPH CRE information for Long-Term Care Facilities
    - <http://epi.publichealth.nc.gov/cd/hai/docs/CREinfoLTCfacilities.pdf>
  - NC DPH MDRO Toolkit for Long-Term Care Facilities
    - [https://epi.dph.ncdhhs.gov/cd/docs/MDROToolkit\\_080819.pdf](https://epi.dph.ncdhhs.gov/cd/docs/MDROToolkit_080819.pdf)
- Antimicrobial Stewardship
  - <http://epi.publichealth.nc.gov/cd/antibiotics/campaign.html>



*Thank you!*

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